

**School of Psychology and Speech Pathology
Faculty of Health Sciences**

**Couples Education via Videoconferencing: Bridging the Demand
Gap**

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Doctor of Philosophy of
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Thesis Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number # HR157/2011.

Signature:

Date:

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List of Abbreviations

AC	Areas of Change Questionnaire
BCT	Behavioural Couples Therapy
CBT	Cognitive Behaviour Therapy
CARE	Couple CARE: Commitment and Relationship Education
CSQ	Client Satisfaction Questionnaire
DAS	Dyadic Adjustment Scale
DASS	Depression, Anxiety and Stress Scale
DSM-IV	Diagnostic and Statistical Manual of Mental Disorder 4th Ed.
GAF	Global Assessment of Functioning
GLMM	Generalised Linear Mixed Models
MHS	The Marital Happiness Scale
OCD	Obsessive-Compulsive Disorder
PTSD	Post-Traumatic Stress Disorder
RCT	Randomised Controlled Trial
SCID	Structured Clinical Interview for the DSM-IV
SD	Standard Deviation
PDSQ	Psychiatric Diagnostic Screening Questionnaire
SPSS	Statistical Package for the Social Sciences
RCI	Reliable Change Index
VC	Videoconferencing
WA	Working Alliance
WAI	Working Alliance Inventory

Abstract

Changing technology, and the pervasive demand created by the greater populations' needs to access mental health intervention, has led to the development of technologies that are shifting the traditional way in which therapy is provided. This Australian study is among the first to explore the phenomenon of couples counselling conducted via videoconferencing, as opposed to face-to-face. Thirty couples were recruited and subsequently assigned to either a face-to-face, or videoconferencing condition. They all took part in a couples behavioural education program called Couple CARE, which promotes self-change in order to increase relationship satisfaction. This was a six session manualised intervention that was offered in an identical manner to all clients, in each condition. Interviews prior to engaging in the intervention, were used to explore each couple's expectations about engaging in therapy using the technology. Through qualitative analysis several themes were identified, reflecting open-mindedness, acceptance and despite initial hesitance from some couples, no adverse effects on the overall experience. Post therapy interviews were also conducted about each couple's experience, with results reflecting not only overwhelming support for the videoconferencing medium, but also satisfaction with its use, and markedly little criticism. Also evidenced was the establishment of a strong working alliance between the therapist and each couple, with statistical analysis further supporting these findings.

Quantitative analysis was based on several questionnaires completed by each couple at pre, post and three month follow-up. This showed that alliance ratings between the two groups were not significantly different, but did significantly increase over time. This reflected a growth in the perceived alliance between couples and their therapist that was not impacted by the technology, but rather strengthened over time. Additionally, analysis of relationship satisfaction, and perceived alliance, showed no significant effect of which condition couples were placed in, and significant, positive increases in all outcome scores over time. This study uniquely contributes to the literature exploring the use of technology to provide needed therapy to otherwise unreachable populations. Specifically, the study provides evidence for couples therapy via videoconferencing as a viable alternative to face-to-face interventions, especially for those couples who may not have access to the

treatment they require. It is anticipated that the results of this study will contribute to the field of online therapy, and add to fostering confidence in agencies to allow expansion of services conducted via videoconferencing.

Introduction and Overview

As reported rates of divorce rise, the demand for psychological intervention prior to this final step has increased (Australian Bureau of Statistics, 2013c; Snyder, Heyman, & Haynes, 2005). However despite the potential to engage in specialised interventions, and a steady increase in availability and confidentiality of therapeutic interventions online, couples therapy specifically appears to be lacking in tele mental health research (Simmons, 2006). Arguably, one of the greatest advantages of online therapy is its ability to overcome geographical barriers (Alleman, 2002; Manhal-Baugus, 2001). Due to the geographical sparsity of the Australian population, the need for such an initiative is growing (Oakes, Battersby, Pols, & Cromarty, 2007; Simpson & Reid, 2014b). Especially for couples, this reflects an increased demand for therapeutic intervention, but a low supply of available services, creating a significant demand gap (Halford, Pepping, & Petch, 2015; Petch, Lee, Huntingdon, & Murray, 2014). Online services could be offered to couples, allowing them to discretely, and more conveniently, access much needed psychological assistance. However due to a lack of research having been conducted with this particular group, limited remote and online therapeutic services for couples exist (Backhaus et al., 2012). Therefore research testing effectiveness is needed before services will be further developed for couples. In particular, research that directly explores the unique dyadic relationship with a therapist through online mediums is needed.

It is the aim of this study, to explore some of the already established and interconnected, psychological and technological domains in regards to videoconferencing and therapeutic intervention. Therefore whilst existing research has explored the use of online therapies for individualised treatments, this study will focus particularly on the experience of couples using videoconferencing to engage with relationship intervention, in an effort to increase satisfaction and adjustment.

Scope of Thesis

The thesis will begin with an exploration of a number of main areas relating to the various psychological and technological domains (Chapter 1). This will provide a background to online therapies and the use of technology to provide psychological services. There will be a brief focus on each form of online

technology, as well as the continuously evolving body of research on correlated psychological interventions, with a primary focus on couples therapy. Given the lack of literature in regards to the use of couples therapy and videoconferencing in particular, a background to current uses will be provided, and linked to the present study. The chapter will also offer a background to each of the key areas explored in the current study including working alliance, expectations, satisfaction, and perceptions of the experience. This will end with a brief note about the significance of the study.

There will then be a focus on the rationale and methodology for the current study (Chapter 2). This will include the rationale for the mixed method design, and the randomised control trial methodology of the study, as well as the use of generalised linear mixed models. The chapter will then describe the aims of the study, and the research questions, as well as the hypotheses directly related to these. This will be followed by a discussion of the method, research design and data analyses.

All results will then be presented and explored for the data collected by the current study. This will begin with the results of the qualitative phase of data collection, and the analysis (Chapter 3). This will include the major themes identified in the thematic analysis, and the summary of results in regards to the appropriate research questions. The results of the quantitative analysis will then be presented (Chapter 4), and will be set out to detail hypothesis testing. Each hypothesis will be explored and all relevant results discussed. The chapter then summarises result in regards to each relevant research question.

The final chapter is an amalgamation and subsequent discussion of both the quantitative and qualitative results, and a general discussion of the research questions (Chapter 5). There is also an exploration of strengths and limitations of the current study as well as the findings, and significant contributions that can be extracted from the data. The thesis is concluded with a brief discussion of the challenges and barriers to the implementation of videoconferencing in the psychology field, and suggestions for research in the future.

Chapter One: Literature Background

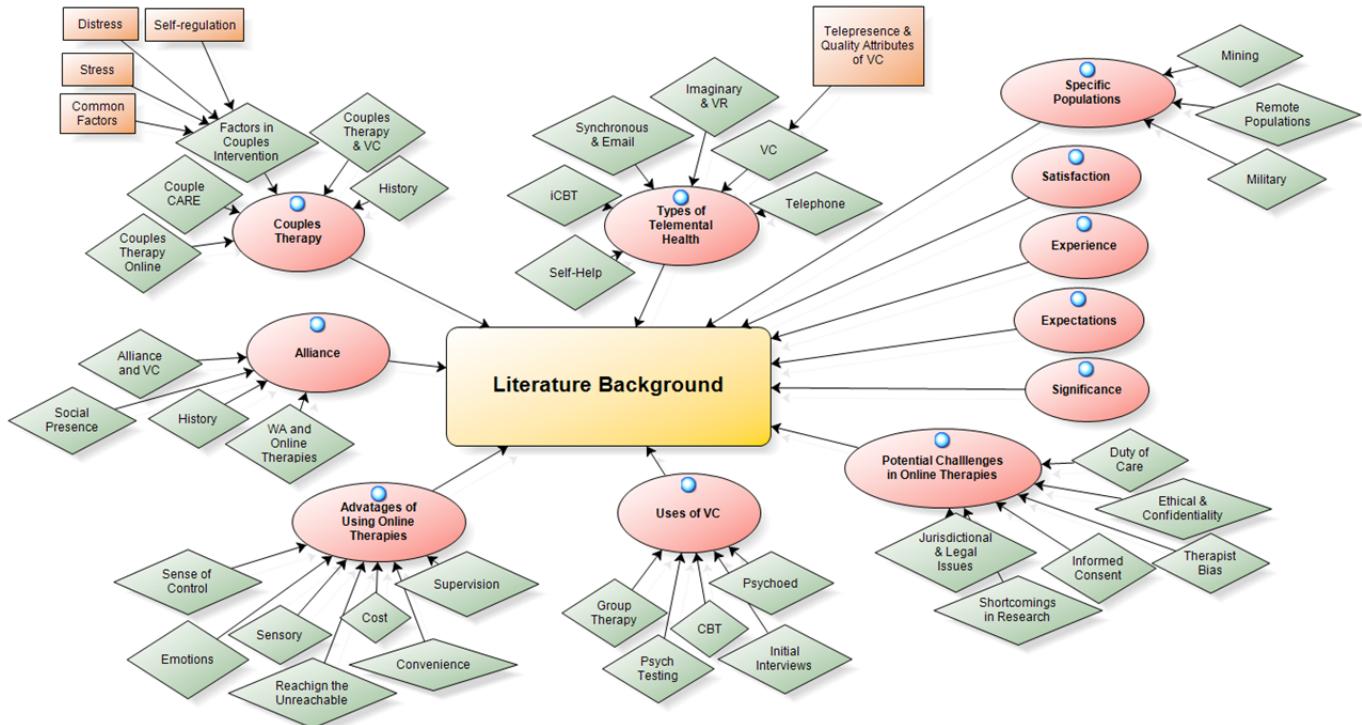


Figure 1: Visual Representation of the literature background

As noted in the introduction, this chapter will be used to provide a background to the literature on the two psychological and technological domains of couples therapy and videoconferencing. Therapy was traditionally conducted face to face, and rarely with the assistance of technology (Castelnuovo, Gaggioli, Mantovani, & Riva, 2003). However the pervasive demand created by the greater populations' need to access mental health information has led to the development of technologies that are changing this traditional medium through which therapy is conducted (Castelnuovo et al.; Stublings, Rees, & Roberts, 2015). In 2007, the Australian National Survey of Mental Health and Wellbeing, the largest statistics gathering report in Australia to date, identified 3.2 million Australians as having a mental health disorder 12 months prior to the survey (Australian Bureau of Statistics, 2007). Currently, an estimated 20% of the Australian population are effected by a mental health disorder, with an estimated 20 billion dollar annual cost of

intervention, emphasising a growing demand for effective intervention (Australian Bureau of Statistics, 2013b).

The latest statistics provided by the Australian Bureau of Statistics show that over 80 percent of the Australian population access the internet, with computer access in 83% of Australian households (Australian Bureau of Statistics, 2014). The widespread use of the world wide web has therefore allowed for the creation of a whole new industry of health provision via the internet (Australian Government, 2012).

Despite some initial hesitation and subsequent delayed development in the area of telepsychology in Australia, a number of Australians engage with web counselling services (Simpson & Reid, 2014a). In New South Wales for example, online videoconferencing involving extended families has been employed to deliver specialised mental health treatments to children and adolescents (Looi & Raphael, 2007). In South Australia the use of alternative online mediums to provide mental health care is not a new notion either, with organisations such as Appal-Link in South Australia's rural and remote areas operating for over 10 years now (Richardson, Frueh, Grubaugh, Egede, & Elhai, 2009). Once users have accessed the internet for information on mental health issues, they are likely to access the internet for this purpose again in the future, bringing these users back repeatedly to seek further mental health intervention, driving this demand for alternative service delivery (Chang, 2005; Robinson, 2009).

Tele is a Greek prefix meaning at a distance; therefore tele-psychotherapy describes therapy which is conducted at a distance rather than the traditional face-to-face interaction in a therapist's office (Oberkirch, 2002). Although previously known as telemedicine, telehealth, and more specifically 'online therapy' is an umbrella term used to describe the provision of a range of mental health services through the use of the internet (Rees & Haythornthwaite, 2004). These include assessment, diagnosis, education as well as intervention. Online therapy can be conducted either simultaneously with the client, known as synchronously, or time delayed, known as asynchronously. One of the most common forms of online therapy in Australia has been telepsychiatry, meaning the provision of psychiatric services online (Rees & Haythornthwaite). Telepsychology has however been a concurrently developing field, and refers specifically to the psychological services provided by therapists online.

Online therapy is essentially the provision of professional therapeutic intervention using technology and the internet by qualified professionals to clients (Rochlen, Zack, & Speyer, 2004). The topic online therapy itself, still somewhat in its infancy has attracted considerable attention and consequently sparked debate regarding its legitimacy and appropriate use (Cook & Doyle, 2002; Richardson, Reid, & Dziurawiec, 2015). Whilst some authors argue that online therapy can only be used in combination with traditional forms of therapy, other studies have begun to research the merits of this form of therapy used in solitude (Barak, Hen, Boniel-Nissim, & Shapira, 2008; Kraus, 2011). Much of the research that has been conducted has focused on brief, simplistic methods of presenting therapy via the internet. This includes emailing or text, and despite many studies demonstrating the effectiveness of such interventions, the main argument has been that the absence of verbal cues hinders the therapy (Griffiths & Christensen, 2006).

Botella et al. (1998) conducted a study that used this online medium to provide participants with self-help information for social phobia. The study found that despite never attending a face-to-face session, the treatment yielded improvements in clinical symptoms post treatment, and at a three month follow-up. Furthermore, Berger, Kohl and Caspar (2008) added to this conclusion by demonstrating that despite the fact that therapy was conducted via information sheets and email, and lacked nonverbal cues, it resulted in clinically significant reductions in symptoms for social phobia. More recently, Mullings (2012), and Stubbings et al. (2013) also demonstrated comparable therapeutic gains and satisfaction ratings for internet therapy as compared to face-to-face therapeutic intervention. Whilst only briefly noted here, these findings will be discussed in greater detail later in the chapter.

There is a trend, in general that has seen the evaluation of therapy or psychiatric services presented via videoconferencing resulting in positive and effective results (De Las Cueva, Arredondo, Cabrera, Sulzenbacher, & Meise, 2006; Deslich, Stec, Tomblin, & Coustasse, 2013; O'Reilly et al., 2007; Ruskin et al., 2004). However many of these studies are unfortunately plagued with small sample sizes and thus insufficient power, interventions that may be difficult to replicate, as well as small or insignificant within-group reported changes (Frueh et al., 2007; Greene, Morland, Durkalski, & Frueh, 2008). With the gold standard of research being randomised control studies, some videoconferencing researchers have aimed to

engage this methodology by assigning participants to either face-to-face conditions or video with a ‘treatment as usual’ approach (De Las Cueva et al.; Dear et al., 2015; Ruskin et al.; Stubbings et al., 2013). Consistently the results of such studies have identified few significant differences between the two conditions, allowing for conclusions to be reached reflecting high satisfaction rates with the technological medium, comparable outcomes in terms of symptom reduction, adherence to treatment, and engagement as well as strong therapeutic alliances formed. Nevertheless research remains plagued by a lack of variety of manualised treatment tested, and the lack of variety in psychological issues examined by studies in this area (Richardson et al.).

It appears that each medium of online therapy presents with its own set of advantages and disadvantages, for example clients using asynchronous therapy reflect their content with anonymity, however clients using synchronous videoconferencing express their satisfaction with the medium as it closely resembles a face-to-face interaction (Mallen, Vogel, Rochlen, & Day, 2005). Therapists often rely on nonverbal feedback to get a sense of how successful the intervention appears to be, as well as a greater understanding of client reactions, as to what they are saying or asking them (Caspar, 2005). In this way the therapist is allowed some insight into client processes, and by using certain signals, is aware of whether to soften, or continue methods of therapeutic intervention. It is an important point however that whilst studies have demonstrated the efficacy of various treatments used via videoconferencing, the idea that these are superior to more traditional face-to-face psychotherapy methods has remained a point of contention (Richardson et al., 2009; Wagner, Horn, & Maercker, 2014).

To meet the growing and perhaps more importantly varying needs of consumers, alternative modes of therapy delivery including various forms of technology have been envisaged, designed, tested and implemented (Stubbings et al., 2015). Additionally the needs of each client have been considered, with some needing less intensive or less therapeutic input than others as part of their psychological intervention. Whilst videoconferencing is perhaps the closest form of mimicking real world interactions, other forms of technology have been utilised in the provision of mental health services to those at need. To follow is a more detailed description of each of these types of technological interventions.

Types of Telemental Health Services

Telephone Counselling

The use of telephones to reach and engage clients that may otherwise not have had therapist contact has actually been used for many years prior to the literature on online therapies. This has now been rejuvenated with the use of smartphones and applications used to engage clients when not in face-to-face sessions (Luxton, McCann, Bush, Mishkind, & Reger, 2011; Mallen, Vogel, Rochlen, et al., 2005). With the first telephone being invented in 1876 by Alexander Bell, its uses for medicine were not far behind, with a child's cough being diagnosed over the phone, only three years later in 1879. One of the earliest reports of the telephone actually being used for the provision of psychotherapy was in 1949, and its uses have since grown from this (Mohr, Vella, Hart, Heckman, & Simon).

Early research by Lester (1974) into the use of telephones for psychological intervention found positive results, suggesting advantages in the use of the medium. These results reflected the client's ability to have a greater sense of control over the process, the pace of the therapy, and even the anonymity made possible through its use (Lester). Clients have since continued to report feeling a diminished power imbalance when connected via a telephone at a location different to that of the therapist (Donnelly et al., 2000). This has been related to the online disinhibition effect (Suler, 2004), discussed in reference to the online medium, and often evidenced in the use of crisis hotlines, allowing clients to share deeper, more vulnerable thoughts and feelings. This reflects a greater potential for the client to feel immersed in the experience, and allow them to talk about things they may otherwise not have, should they be faced with the therapist (Mallen, Vogel, Rochlen, et al., 2005).

Generally used for a variety of tasks, telephones in professional practice have been used more traditionally for scheduling and payment purposes, rather than consultation, psychoeducation and even more sparsely for therapeutic intervention and crisis management (Mohr et al., 2008). As noted above, a popular example of crisis management is the use of crisis hotlines which provide emergency intervention for individuals on a 24 hour basis (Mallen, Vogel, Rochlen, et al.). These hotlines allow for immediate support and risk prevention for those seeking help, that are experiencing significant distress and may otherwise not have immediate access to a therapist due to their location, time of day, anxiety, or other extenuating

circumstances. In terms of psychological intervention, this use of telephones for immediate, short-term intervention has led researchers to question whether telephones could also be used for more longer-term psychotherapeutic work (Donnelly et al., 2000). Client feedback consistently reflects satisfaction with the use of this medium, and the services provided, as well as the information conveyed (Mohr et al., 2008; Reese, Reese, Conoley, & Brossart., 2002).

Reese at et al. (2002) found in their effectiveness study that clients who engage in telephone counselling found it to be satisfactory in improving their overall functioning. When compared to the results of a similar face-to-face study, Reese at al., found strong perceived alliance, specifically when looking at the bond between client and therapist as indicated through the Working Alliance Inventory (hereafter WAI). This study indicated that the best results were found when telephone intervention was longer term. However a study by Lovell (2000) found that even a single 45 minute session of Cognitive behaviour therapy (hereafter CBT) for obsessive compulsive disorder (hereafter OCD) produced significant results. A later study by Lovell et al. (2006) further gave evidence to the use of telephones for the provision of psychological intervention, in particular CBT, for the treatment of OCD. Results reflected symptom reduction, high satisfaction rates, as well as strong perceived alliance between client and therapist despite no face-to-face contact. In more recently, Mohr et al. (2012) randomly distributed 325 patients to either a face-to-face, or telephone delivered CBT intervention for depression. Participants were then compared on pre, post and 6 month follow-up measures of depressive symptoms as assessed by the Patient Health Questionnaire and the Hamilton Depression Rating. Results found no statistically significant differences between the two conditions, however did not find telephone CBT to be identical or superior to face-to-face intervention. A potential shortcoming however of such research is that more acute cases may have been excluded from participation, enabling very limited generalisability of results. The benefits however of telephone CBT were maintained at 6 month follow-up, making it a viable option for rural client.

The telephone has also become commonly used in the delivery of psychotherapeutic intervention, for the treatment of depression (Mohr et al., 2008). This is often done as a means of overcoming common barriers that may prevent clients from both entering and engaging in therapy, such as location, time, caregiving responsibilities, stigma and transport issues. Depressive clients in particular have

been described as identifying several of these barriers in attending sessions (Mohr et al., 2008). A meta-analysis by Mohr et al. (2008) found a statistically significant reduction in depressive symptoms for participants in 12 studies that underwent psychotherapy conducted over the telephone, as compared to a control condition. Studies included randomised control trials, and involved pre to post comparisons, reflecting a reduction of symptoms. The mean effect size found for the comparison of the telephone conditions to a control was only slightly less than that reported in a meta-analysis that had compared the face-to-face administration of psychotherapy for depression to a control (Mohr et al.; Wampold et al., 1997). As a result Mohr et al., suggested that psychotherapy for depression via telephone can produce significant treatment outcomes in the reduction of depressive symptomology.

As with all other technological mediums used to provide psychological intervention to clients, the major advantages of using telephones reflect the increased accessibility for remote, isolated or geographically challenged clients, decreased costs, increased convenience, as well as greater perceived control over the therapeutic process by the client (Mohr et al., 2008; Reese et al., 2002). However, studies can be plagued by small sample sizes, a strong use of case studies, and limited randomised control trials, ultimately limiting generalisability. Nevertheless, the excess of four decades of the use of telephones to provide varying psychological intervention to clients, reflects strong evidence for its effectiveness and satisfaction with its use for this purpose, but within specific populations (Mallen, Vogel, Rochlen, et al., 2005).

Synchronous Chat and Email

One of the more recent, and commonly used forms of contacting clients using technology includes the use of emails, and then also synchronous chat (Dowling & Rickwood, 2013; Pelling, 2009). Synchronous chat in particular allows for the therapist and client to communicate via text, in real-time, however with no physical, visual or auditory contact (Holmes & Foster, 2012). Email however differs from synchronous chat in that it is not done in real-time and often has an expected time delay attached to it. In this way, only in synchronous chat do the therapist and client share the same space in cyberspace.

Email in particular falls within the broader term of asynchronous communication which essentially describes communication that is not engaged in

simultaneously (Tate & Zabinski, 2004). Therefore messages or emails can be sent or posted by the therapist to the client or vice versa, to be read by the other at varying times, and thus at a pace that is agreed upon or convenient for both. This idea however, that emails are sent at a convenient time for each individual, can become problematic with the possibility for client expectations exceeding what is possible for the therapist, and thus potentially and seriously rupturing the therapeutic relationship (Suler, 2001b). Furthermore the lack of non-verbal cues can often easily lead to miscommunication, with the inability to accurately carry emotions or feelings through the screen. The use of emoticons that reflect faces expressing certain emotions has attempted to bridge this gap, as well as typing the emotions, however this inevitably can still lead to inaccuracies (Barak et al., 2008). This again has the potential to damage the therapeutic relationship, however not necessarily inhibit the success of an online intervention.

Alternatively, advantages of both synchronous and asynchronous communications have been identified in a number of studies examining psychological interventions for various psychological disorders (Kimberly, 2005; Mallen, Vogel, Rochlen, et al., 2005; Mullings, 2012; Tate & Zabinski). In this way communications have the ability to be clear, precise and effectively reflect the questions or concerns of either the therapist or client. Communications can be well thought out, with time being spent to compose what the sender is trying to put across, and thus importantly have a better chance at avoiding misinformation or confusion. Particularly in synchronous chat, the interactive nature of communication allows for clarifications of points or questions, to be asked by the client until each concept is properly understood. Particularly in CBT the use of chat has been found to be helpful in providing on the spot examples, and allowing clients to understand what they are being asked to do in tasks, in role play, or during cognitive restructuring (Tate & Zabinski, 2004).

A literature review conducted by Rochlen et al. (2004) identified a number of benefits of online therapies including both synchronous and asynchronous chat. Many of these revolved around the actual process of writing, and expressing feelings and thoughts in the written form. They noted that not only are clients given the opportunity to more succinctly and in a deeper, more thought provoking manner, express their feelings, but because of the literal distance between the therapist and

client, this is likely to enhance a disinhibition and thus lead to faster expression of core issues (Suler, 2001).

Literature on the use of online technology in therapy has postulated that self-disclosure online is more consistent than self-disclosure in face-face sessions (Iacovelli & Johnson, 2012; Nguyen, Bin, & Campbell, 2012; Suler, 2004). The idea that people feel more liberal, and freer to express themselves openly using online mediums, has been termed as the online disinhibition effect (Suler). As further identified by Suler (2001a), the disinhibition and internalisation created by the online environment encourages the therapeutic expression by clients, of inner thoughts and conflicts, as well as strong self-reflection, both important factors in psychotherapeutic intervention. Alternatively Rochlen et al., summarised that challenges of such communication are based around the inability to express or read nonverbal cues. Thus subtleties or hidden meanings are possible, as well as the potential for misunderstanding in the absence of being able to immediately clarify, or provide reassuring cues in either auditory or visual ways.

Nevertheless, it has been argued that synchronous chat in particular creates a shared presence for the client and therapist, and thus gives the feeling of someone being present, an important psychotherapeutic variable (Suler., 2000). Furthermore, the effort exhibited in writing within an agreed upon time, and keeping chat ‘appointments’, relays a commitment to the process by each party, and a genuineness in dedication to the therapeutic process. Suler (2001a) noted, that due to the lag in response time for email or messaging interactions, this can help disinhibit participants, allowing the respondent to have time to think about a reply, and become willing and able to do so to a greater extent. However, despite this willingness traditionally being shaped by social norms, email affords more time to an individual’s thought progression towards a deeper expression, which may not necessarily fit within the social norms (Mattison, 2012). Although in today’s world of immediate gratification, and the ‘I want it now’ mentality, this may become a greater problem, with therapist perhaps taking longer than is satisfactory to the client to respond (Mattison, 2012).

Nguyen et al. (2012) added to this notion by describing the reduced cues theory which stipulates that greater disclosures are made online due to the absence of nonverbal cues. In this way, because the other person’s reactions are not visible, they may feel more liberal in being able to disclose deeper thoughts and feelings, which

one may otherwise be too embarrassed or ashamed to discuss if faced with the respondent. This disclosure is then further enhanced because of the lack of perceived judgement. Furthermore, Nguyen et al., performed a systematic review comparing online and offline disclosures. He found high online disclosure scores were prominent in comparison studies, but this was not consistent. Some factors which were noted to effect disclosure rates, included the relationship between the dyad, the mode through which they connected, as well as the context. However further support was given to the theory of reduced cues, as well as others social cues theories (Nguyen at al.).

A study by Mullings (2012) in particular directly compared face-to-face participants, to those engaged through internet chat therapy. Using a mixed methods approach 34 participants were either engaged face-to-face or via internet chat therapy with 20 psychologists. The results only identified minor statistical differences between the two groups. Participants were compared on a number of measures that evaluated their perceived sense of alliance (California Psychotherapy Alliance Scale), and both self-rated (Brief Symptom Inventory), and therapist rated (Symptom Checklist 90 Analogue) symptoms severity. Strong main effects were found for both client rated alliance, and client rated symptom severity, reflecting significant improvement over time for participants (Mullings). Conversely no statically significant results were found when comparing the two modalities.

Unique to the Mullings (2012) study however, is that it goes on to explore these results more thoroughly, in the form of qualitative data collection and analysis. This analysis found that the distance felt as a result of not having the therapist physically present, actually enhanced the experience for some participants, and therefore essentially reflected an overall satisfaction with the therapeutic relationship. Furthermore, given the slower nature of internet chat as compared to face-to-face interactions, this gives additional time for more in-depth, thorough responses (Mullings; Nguyen et al., 2012). Some challenges however included the limitations of text therapy to convey emotions, which can limit understanding and flow, a limitation already noted above. Having a limited sample size, and no follow-up measures, creates limitations in the generalisability of the study. However given the mixed methodology and unique comparative nature of this study, it significantly contributes to the effectiveness literature for online therapies, and internet chat therapy in particular.

Imaginary

The internet is littered with fantasy environments that allow users to express their deepest thoughts and fantasies (Suler., 2000). However, fantasy-based communities can also allow clients to engage in certain types of therapies such as role playing and psychodrama. Online environments can foster the use of avatars and imaginary graphic surroundings (Gaggioli, Mantovani, Castelnuovo, Wiederhold, & Riva, 2003). These can allow clients to engage in a pseudo reality and work through scenarios or crises in a more creative, and often more thought provoking way, than could be elicited from a face-to-face therapeutic intervention.

A common technique employed for a number of phobias is the use of exposure therapy (Botella et al., 2010; Muhlberger, Herrmann, Wiedemann, Ellgring, & Pauli, 2001; Opris et al., 2012). This is usually done in vivo and can cause substantial anxiety and distress for clients especially at commencement of the intervention. Due to in vivo being potentially so distressing as part of therapy, some clients will eventually cease attending (Botella et al.). In this way the use of virtual reality can be very successful in gradually increasing exposure and maximizing the benefits for clients, or as an alternative to in vivo exposure. There is a growing body of evidence supporting the use of virtual realities in the treatment of a number of phobias (Muhlberger et al.; Opris et al., 2012; Parsons & Rizzo, 2008; Riva, Molinari, & Vincelli, 2002), as well as other anxiety disorders such as post-traumatic stress disorder (Reger et al., 2011; Wood et al., 2007).

Essentially virtual realities allow for a greater degree of control (Botella et al., 2010). This means that the unpredictability of real life in vivo exposures is downgraded, and tasks can be more accurately graded and difficulty increased, as the therapist sees best for the client, as opposed to hoping for appropriate conditions in a real world exposure. Furthermore virtual realities allow for increased confidentiality as treatments are done in the therapy room or a secure location, and therefore potentially increase the number of clients who seek help (Segal, Bhatia, & Drapeau, 2011). As Segal et al., found, engaging in virtual reality can yield high satisfaction rates from users, with the greatest benefits reflecting an ability to engage in exposures that would in normal circumstances prove to be difficult, impractical or even dangerous. This was seen as particularly pertinent to those therapists using CBT, due to its use of exposure in session. A meta-analysis conducted by Opris (2012), examined the efficacy of virtual reality exposure therapy for anxiety

disorders. Through analysis of 23 studies, Opris concluded that compared to traditional face-to-face intervention, virtual reality exposure has comparable results that are sustainable over time in reducing symptoms, and managing drop-out rates. Despite the relatively small amount of studies examined, and a limited spectrum of anxiety disorders targeted within those studies, there is strong evidence to suggest that virtual reality is significantly more effective than no intervention, and has shown overall gains in reducing anxious symptoms. This essentially suggests, that give no face-to-face therapeutic option, virtual reality is a viable alternative.

However virtual reality also has a number of limitations (Riva, 2003). The limited type of client involvement is unlikely to be sufficient for a complete therapeutic intervention, with connection to a therapist needed to discuss and explore the virtual reality created and engaged in by a client (Botella et al.). Furthermore not all psychopathology may respond effectively to virtual reality, such as psychosis, thus potentially creating a greater harm to clients. The potential of motion sickness, eye strain and limited presence may ultimately limit the intervention's applicability (Riva et al., 2002). Nevertheless, this intervention is a niche form of working with clients, that is unlikely to be appropriate in all therapeutic scenarios, but instead a potential tool, or component, in enhancing the therapeutic experience and intervention success for certain clients (Opriş et al., 2012).

Self-Help Interventions

The ability for interventions to be provided online at the demand of the client, has revolutionised access to mental health care (Griffiths & Christensen, 2006; Richards & Vigano, 2013). This has further enabled clients to take part in managing their own presenting problems, and exhibit additional control over their mental health care. More recently the increased use of smartphone and tablets has created a surge of information seeking, and instantaneous information provision to the broader population (Santoro, Castelnuovo, Zoppis, Mauri, & Sicurello, 2015). The efficacy of self-help type interventions has been demonstrated consistently in literature (Apodaca & Miller, 2003; Barlow, Ellard, Hainsworth, Jones, & Fisher, 2005; Farvolden, Denisoff, Selby, Bagby, & Rudy, 2005). The research into adaptation of such programs for clients using the internet has also started to receive significant attention for a variety of mental health disorders, including randomised control trials in the areas of anxiety (Carlbring, Westling, Ljungstrand, Ekselius, & Andersson,

2001; Théberge-Lapointe, Marchand, Langlois, Gosselin, & Watts, 2015), depression (Christensen, Griffiths, & Jorm, 2004), and even self-help for eating disorders (Celio et al., 2000). These and similar studies have all identified effectiveness in reduction of symptoms related to the specific disorder as a result of engaging in the intervention (Griffiths & Christensen). In an evaluation of 16 self-help internet interventions through randomised control trials, Griffiths and Christensen found that studies were able to demonstrate at least one positive outcome as a result of the intervention, such as decrease in symptoms (Christensen et al.; Farvolden et al.), effective modification of cognitions (Carlbring et al.), and high satisfaction rates (Griffiths & Christensen; Zabinski, Wilfley, Calfas, Winzelberg, & Taylor, 2004).

Online self-help interventions have allowed clients to easily access interventions in their own time, in the most convenient locations, for a cost that is often significantly less than face-to-face consultation with a mental health professional (Griffiths & Christensen). Additionally, engaging in interventions anonymously, can also minimise any social anxiety about taking part in such a venture, and perhaps as literature has identified, allow for greater self-disclosure and more honest interaction (Iacobelli & Johnson, 2012). As Carlbring et al (2001) found when using both Likert scales and open ended questioning, participants revealed that they found online interventions personal, convenient and overall positive. They noted specifically that the lack of direct contact, and specifically eye-contact with a therapist assisted in their self-disclosures (Farber, 2003). However as noted above by Griffiths et al., there is always a possibility of losing quality of intervention through websites that may not necessarily be using the highest of standards in service delivery or interventions that may not necessarily be evidence based.

As outlined by Suler (2000), a further advantage of self-help, computer mediated programs is the accuracy, objectivity and efficiency of computers to provide succinct, well established, and programmed information, and interventions to clients. On a more humanistic side, the inability for computers to engage in countertransference can also create a more objective environment, and in some cases allow clients to express themselves more comfortably due to the lack of human contact and potential anxieties of fear or judgement. On the reverse of this is the computer's inability to convey genuine regard and empathy for the client and their experiences, and thus risk the potential of alienating the client. Additionally, Suler noted the inability of computers to pick up on any transference, or subtle changes in

psychotherapeutic situations, which may also be detrimental to the effectiveness of treatment.

Overall, whilst most self-help programs have been developed to be used in combination with some therapist contact, even emails or text, stand-alone self-help programs provided online and interactive tend to take advantage of the vast resources the internet has available (Chang, 2005; Kraus, 2011). This includes accessibility as well as a conservation of human resources such as time, costs and effort. In this way the technology also aligns itself with many psychotherapeutic themes such as education, focus on self-development and resilience building, intervention and prevention, as well as personal development (Chang, 2005).

Social Media and mHealth

As society's dependence on mobile technology increases, the ability to engage and access clients has become ever more possible (Castelnuovo et al., 2015). With this has come great potential to promote the use mobile technologies to provide information and intervention to those people who may have not otherwise accessed it in the past (Castelnuovo et al., 2015). Social media in particular has harnessed its interactive and engaging nature, to create a platform to share information in what can only be described as a 'viral fashion' (Korda & Itani, 2013; Santoro et al., 2015). Social media refers to both applications and websites that allow for its users to generate and share content, as well as engage in social networking (Moorhead et al., 2013). Mobile assisted technologies are on the very cutting edge of technological advancements for the provision of psychological assistance to consumers (Castelnuovo et al., 2014). Mobile health (hereafter mHealth) in particular can be described as the use of mobile telecommunication for the delivery of health care. This technology has allowed for increased compliance and client engagement. Furthermore, with the potential to reach more people, and disseminate important information to a wider audience, there are now over 100 000 applications that are related to health and wellbeing (Castelnuovo et al., 2015). For mental health in particular, apps allow clients to access helpful information, coping strategies, distress tolerance, meditation and mindfulness, as well as allowing clients to track and record feeling, thoughts, or symptoms, and receive feedback or instant assistance.

Many of the advantages of other types of media such as computers and telephones can be linked to the use of mobiles for health provision (Jacobs &

Graham, 2016; Mohr et al., 2012). Chronic conditions tend to have a significant economic burden on communities (Castelnuovo et al., 2015). Due to their long-term nature that requires monitoring, intervention and treatment, the use of technology could be particularly beneficial in managing some of these costs. Mhealth initiatives have therefore been used as a means of chronic care management for both clinical psychology fields and medicine. For example, a chronic and unfortunately common condition such as diabetes, has over 260 different application that have been created to assist in the management and self-monitoring, as well as provision of reminders, data collection and even links to social media (Chomutare et al., 2011). This has enabled more patients to benefit from assistance, as well as ultimately mediating some of the significant community costs experienced.

However just as traditional face-to-face interventions have been scientifically evaluated, there is a need for further studies specifically examining mHealth initiatives (Jacobs & Graham, 2016). Fortunately the evidence continues to grow, reflecting the efficacy of mobile phones and applications in behaviour change (Whitaker 2010). Several recent reviews have evidenced these behavioural changes as a consequence of using mHealth initiatives, such as smoking cessation (Jacobs & Graham, 2016; Whittaker, Merry, Dorey, & Maddison, 2012) and increased exercise (Fjeldsoe, Miller, & Marshall, 2010). These have included the use of randomised control trials to enhance validity and allow greater generalisations. However further research is needed to measure psychological constructs such as coping and symptom presentation, and well as studies with follow-up measures to evaluate sustainability of these behavioural changes. A more recent randomised control trial by Pham, Khatib, Stansfeld, Fox, and Green (2015) evaluated the use of an application targeting anxiety symptoms through the use of various relaxation and coping mechanisms. The result reflected that consumers found the application acceptable, with a reduction in symptoms such as hyperventilation, and panic, and consequent improvements in quality of life. Despite a further need for efficacy and effectiveness studies, current literature shows the significant potential of this evolving technology.

Internet Cognitive Behaviour Therapy

Internet cognitive behaviour therapy (hereafter iCBT) essentially describes guided self-help interventions, with therapeutic material delivered through websites in the form of pictures, text and audio files, and asynchronous communication with

the therapist (Andersson & Hedman, 2013). Essentially, participants are exposed to the same therapeutic materials as those in a face-to-face setting, with both psychoeducation, and behaviour change plans provided online (Hedman, Ljótsson, & Lindefors, 2012). From its beginnings in the 1980's, where Marks et al (1984) created a fully computerised treatment for phobia, CBT presented online has grown exponentially (Olthuis et al., 2015). CBT itself is aimed at identifying and challenging cognitive distortions as well as behaviours that contribute the psychological dysfunction. Several techniques as used as part of a cognitive behavioural approach including behavioural activation, exposure, relaxation strategies and problem solving (Otte, 2011). Progress is measured through a reduction in symptoms. CBT is a well-established therapeutic intervention for a number of psychological disorders including, however not limited to anxiety disorders, depression, addictions, medically related disorders, and disordered eating (Hedman et al., 2012).

Advantages are also evidenced in some specific situations such as the engagement in therapy for clients with social phobias (Botella et al., 2010), or sexual dysfunctions (McCabe, Price, Piterman, & Lording, 2008). In these instances clients can initially be less likely to engage in therapy face-to-face due to anxiety, or embarrassment when in a shared physical proximity of the therapist, or feeling stigmatized when entering the therapist's office. Here, the use of online therapy can be invaluable. A study by McCabe et al., highlighted this potential benefit for men experiencing erectile dysfunction. The study found that participants undertaking an online CBT intervention with only email contact with the therapist for erectile dysfunction, experienced significantly greater gains than those in the no treatment control condition, and expressed high satisfaction with the program. In this case many participants were identified as having the potential to never engage in psychotherapeutic intervention as their problems caused them significant anxiety and/or embarrassment to discuss their presenting issues with clinicians in a face-to-face setting. With such considerable gains from engaging in therapy for not only personal, physical, and mental functioning, but also for close personal relationships, the use of email and online CBT demonstrates the importance and advantages of such mediums.

Several studies have been conducted to identify whether the effectiveness of this intervention can also be gained when presented via the internet with no face-to-

face contact (Stubbings et al., 2013; Wagner et al., 2014; Williams, O'Moore, Mason, & Andrews, 2014). Cuijpers (2009) conducted a meta-analysis on studies assessing the effectiveness of the use of CBT in online therapy . They found that CBT delivered online is a sustainable alternative to face-to-face delivery. Furthermore Kessler et al (2009) concluded that benefits from CBT presented online have been recorded to be maintained at eight month follow up, and more recently, Théberge-Lapointe et al. (2015) found sustained benefits at 12 month follow-up. Studies such as these are continually demonstrating CBT as effective when presented via internet, and thus a justifiable means of broadening access to therapeutic intervention for clients (Andersson, Cuijpers, Carlbring, Riper, & Hedman, 2014; Simpson, 2009; Stubbings et al., 2013).

Studies focused on effectiveness aim to examine whether the intervention is effective in symptom reduction, is feasible, and whether results can be generalised. In contrast, those studies that examine efficacy focus on measuring the effects of specific intervention under strict and controlled conditions (Andersson & Hedman, 2013). Those studies evaluating iCBT tend to be efficacy based. With over 100 randomised control trials evaluating the use of iCBT since 2000, large effect sizes have been found, with comparable and equivalent results to already established face-to-face CBT treatments (Andersson et al., 2014; Hedman et al., 2012). Studies such as that conducted by Ruwaard et al. (2012) began to examine the effectiveness of CBT conducted online in a practice setting, and thus has assisted in being able to generalise results.

The Ruwaard et al. (2012) study used a large sample size of 1500 participants that compared participants on measures at pre to post intervention, six week follow-up and one year follow-up. Using a manualised, web based and therapist assisted CBT intervention, that took place over a 5 to 16 week period, participants presented to the clinic with symptoms varying from depression, posttraumatic stress, burnout and depression. Compared on a number of outcome measures including the Beck Depression Inventory, and the Anxiety, Stress and Depression Scale, large effect sizes were observed. Furthermore these were observed to be maintained at the one year follow up mark. A more recent review by Andersson et al. (2013) again examined how well effectiveness study results translate to effectiveness in regular clinical settings. Reviewing four controlled trials and eight open studies, with a total of 3888 participants, the review found promising results by replicating benefits in

clinical settings using iCBT for anxiety disorders, burnout, depression, tinnitus and irritable bowel syndrome. These results, in addition to several more recent reviews and randomised control trials, have identified the use of iCBT as effective in symptom reduction for a number of psychological disorders, with results that replicate those of face-to-face studies using identical treatments (Dear et al., 2015; Musiat & Tarrier, 2014; Olthuis et al., 2015; van Ballegooijen et al., 2014)

Videoconferencing

Once upon a time online therapy was limited to answering one question at a time using email (Maheu & Gordon, 2000). However now, perhaps the closest form of mirroring face-to-face interactions between client and therapist is the use of videoconferencing (Castelnuovo et al., 2003). In this scenario the client and their therapist reside in separate, or remote locations, and utilise this electronic medium to communicate (Manhal-Baugus, 2001). This newly emerging field of mental health online counselling, enables both the therapist and the client to both hear and see each other, in an attempt to mimic a real world setting. Nonverbal feedback from clients is an essential tool for therapists to track the effectiveness of their conversation (Caspar, 2005; Pepping, Halford, & Doss, 2015). A client's posture, tone, appearance, eye contact and verbal pace are often viewed as essential in allowing the therapist to regulate their intervention, and become of particular importance in initial assessment. Videoconferencing allows for these essential cues to be used similarly to face-to-face therapies (Deane, Gonsalvez, Blackman, Saffioti, & Andresen, 2015). Especially for clients of different cultures, nonverbal communication is significant in enabling trust to be established between the therapist and client, and to demonstrate to the client that the therapist is sensitive and capable of understanding their unique worldviews (Sue & Sue, 2003). Nevertheless the data and research based behind the use of videoconferencing for therapeutic work is now over 50 years old, with parsimonious findings reflecting high satisfaction rates, strong efficacy when compared to face-to-face therapy, and positive outcomes on clinical measures (Backhaus et al., 2012; Frueh et al., 2007; Richardson et al., 2009). However, as Richardson et al., has identified there still remain some gaps in the research regarding the use of specific interventions, their adaptation to online mediums with specific populations, and direct comparisons using randomised control trials.

The ability to not only hear but also see in a therapeutic session has long been the gold standard, however with the sprawling nature of cities, and establishment of rural communities, the need to connect clients via means other than in-person has become essential (Simpson & Reid, 2014a). In this way the use of videoconferencing allows the visual and verbal factors of a therapeutic session to be enacted and utilised. Visual cues can not only contribute to communication, enhancing cues such as turn taking, but also provide vital information for therapists regarding the presentation of their clients (Muhlbach & Ptusong, 1995). Prior to the early 2000's many studies that evaluated the use of online therapies, and particularly videoconferencing were qualitative in nature, and whilst these yielded positive results in terms of high satisfaction rates, positive overall experiences and strong perceived alliances, they were subjective in nature and thus caution was urged when interpreting the consequent results (Rees & Haythornthwaite, 2004).

According to Simpson et al (2014a) research to date has already provided us with a number of conclusions about videoconferencing. This includes strong evidence of high client satisfaction with this medium, and the reliability of clinical assessments done through videoconferencing. Conversely, there is relatively sparse evidence on the effectiveness of some specific treatments conducted through videoconferencing. In general however outcomes across a variety of studies and clinical trials have been positive (Backhaus et al., 2012; Barak et al., 2008; Théberge-Lapointe et al., 2015). Duncan, Velasquez, and Nelson (2014), provided a summary of studies that have used videoconferencing specifically, to provide therapeutic intervention to a sum of over 870 participants. They summarised that studies consistently showed significant improvements in functioning, including reduction of PTSD, depressive and OCD symptoms, as well as no significant differences between the face-to-face and videoconferencing conditions.

Simpson (2009) further identified a number of advantages associated with videoconferencing. Amongst these included convenience and flexibility in times and locations, less travel and costs, a perceived sense of less pressure and more relaxed atmosphere, a diminished sense of intimidation and intrusiveness compared to face-to-face therapies, and greater confidentiality especially in small urban communities. The potential for cost effectiveness brought about by videoconferencing, has been identified by many as undisputable (O'Reilly et al., 2007; Wallace & Rayner, 2013; Whitten, Mair, Haycox, May, & Williams, 2002). Simpson (2014a) goes on to say

that once the availability of videoconferencing increases through the provision of facilities capable of providing the service, the cost-effectiveness of this medium will increase exponentially. It is however the management of these facilities, and these services then needs to be organised and fluid, in providing the greatest saving of costs for both the providers and the clients. Disadvantages were also listed, however these were mostly overcome through the course of therapy such as the monitor initially being perceived as a barrier, and initial anxiety about the use of a new medium (Simpson et al.). Further and more detailed exploration of advantages and disadvantages will be discussed in detail later in this chapter.

One of the largest outcome studies of videoconferencing interventions to date was performed by O'Reilly et al. (2007). This involved a sample size of 495 participants who were divided into face-to-face and videoconferencing conditions, and given one clinical assessment, followed by up to four intervention sessions with a registered psychiatrist. Participants were provided with medication management, counselling, psychoeducation and triage services via video. Compared on both self-reported outcome measures, as well as post intake psychiatric admission over a period of 12 months, analysis identified significant results for the videoconferencing condition. Specifically, these results reflected high satisfaction rates, and a clinically significant reduction in symptoms when compared to the face-to-face condition (O'Reilly et al.). Additionally a saving in terms of costs, added to the conclusions reached by the study in that videoconferencing appears to be a cost-effective and no less efficient intervention for clients seeking therapeutic intervention. Essentially what this and other studies have concluded is that treatments delivered by videoconferencing result in similar, and 'no worse' clinical outcomes compared to traditional face-to-face interventions (De Las Cueva et al., 2006; Halford et al.; Richardson et al., 2009; Théberge-Lapointe et al., 2015). However what the study could not conclude was the effectiveness of the use of video in the treatment of other, perhaps more complex psychological disorders, and consequently called for further testing and research in the field.

A study by Stubbings et al. (2013) directly compared a face-to-face CBT intervention, to the same intervention provided through videoconferencing. Doing this through the use of a randomised control trial assisted in enhancing validity and significance of the study, giving added strength to the findings. The study engaged 26 participants, who were randomly assigned to either condition, with no initial

significant differences between groups allowing for more accurate comparisons. Self-report measures such as the Depression, Anxiety and Stress Scale, and the Quality of Life Enjoyment and Satisfaction questionnaire were used to measure symptom severity. Furthermore, the use of the Working Alliance Inventory-Short Form, Client Satisfaction Questionnaire, as well as the Telehealth Satisfaction Questionnaire, were used to compare clients on measures of perceived alliance with their therapist, overall satisfaction with the intervention, as well as the use of the technology. Measures taken at pre, post and at a six week follow-up showed no significant differences between the two conditions on the self-report measures of symptom severity (Stubbings et al.). Stubbings et al., concluded that the effectiveness of CBT in reducing anxious symptoms and enhancing mood was evidenced, and this significant reduction in symptoms was not impacted by the way the intervention was presented. This finding was again consistent with previous research demonstrating effectiveness in both the use of CBT and also the use of videoconferencing (Richards & Vigano, 2013; Richardson et al., 2009; Théberge-Lapointe et al., 2015)

The results of the Stubbings et al. (2013) study also demonstrated high alliance and satisfaction ratings in each condition, adding further weight to the mounting body of evidence indicating that a strong and significant therapeutic alliance can be formed and sustained through videoconferencing. Unique to this study, the therapist himself also completed alliance ratings, which were not significantly different between the conditions. Although all participants engaged with the same therapist, which creates consistency of the intervention between conditions, it also can create bias. This however is a noteworthy finding in that despite initial hypothesis regarding alliance being higher in the face-to-face condition, the therapist did not find this to be the case. Furthermore, despite engaging a limited sample size, having a sample of mixed diagnostic participants created a more real-world sample, giving greater ability to generalise results. The study therefore contributed further to similar research, demonstrating the ability of videoconferencing to convey therapeutic intervention effectively and to a satisfactory level (Bouchard et al., 2000; Griffiths, Blignault, & Yellowlees, 2006; Himle et al., 2006).

The growth of videoconferencing has been seen primarily due to advances in technology which have enabled this medium to become easier to use, and more accessible (Richardson et al., 2015; Stubbings et al., 2015). As a technology, videoconferencing has been sourced with significant promise for the delivery of

psychological interventions to a wider audience (Rees & Haythornthwaite, 2004). Using technologies already present in most homes such as computers and the internet, and simple, easy to use software, has resulted in minimal technical assistance required for (Barak, Klein, & Proudfoot, 2009; Dear et al., 2015). Therefore the convenience of delivering and receiving mental health interventions through this medium reflects some of the most obvious benefits of online therapy (Bischoff, 2004; Simpson & Reid, 2014b). Furthermore, one of the most commonly noted advantages of using videoconferencing is the increased access for specialist populations, providing clients with time and mobility constrictions with more options to engage in therapeutic interventions (Alverson et al., 2008; Rochlen et al., 2004).

Whilst most therapists will use some form of technology to communicate with clients on the odd occasion such as telephones, email, and even web forms (Backhaus et al., 2012), the use of advanced technologies such as videoconferencing tends to be more in the trial phases for most clinicians or organisations. In response to both the growing need, and the increased willingness for therapists to try and reach a wider audience, and as city centres sprawl outwards, the research and literature has tried to keep up (Backhaus et al.). Only just from the year 2000 to the year 2008 there was a triple increase in the amount of publications related to telemental health, when compared to the 30 years previous (Richardson et al., 2009). More recently this has included a greater amount of studies examining the use of videoconferencing in the provision of psychological interventions. A recent systemic review by Backhaus et al. (2012), aimed to answer a number of questions through the review of literature specifically focused on videoconferencing and psychotherapy. These included whether videoconferencing is feasible, whether differences exist in the therapeutic relationship between face-to-face and videoconferencing sessions, whether clients are satisfied with video, and whether video is overall comparable to face-to-face psychotherapy, in terms of outcomes.

The aim of the Backhaus et al. (2012) review was to present a synthesised body of evidence based on research and evidence, such as results from the gold standard of randomised control trials, and literature reviews, to ultimately allow for informed conclusions to the above mentioned questions to be reached. The review generally found videoconferencing to be a feasible means of conducting psychotherapy for a wide variety of interventions, and varying populations, in terms of decreased costs, and overall effectiveness, when compared with face-to-face

interventions. Videoconferencing was generally correlated with higher user satisfaction ratings, and able to replicate similar if not identical clinical outcomes in a wide variety of setting, interventions and client groups (Backhaus et al.). In regards to the question of feasibility in the use of videoconferencing in psychotherapy, all studies that were reviewed supported this conclusion. This included evidence that emotions can be successfully, and appropriately conveyed, and interpreted through the technological medium (Bischoff, 2004; Griffiths et al., 2006). Furthermore, consistent findings were evidenced, that showed decreased costs in terms of travel expenses, and travel time when compared to face-to-face consultations (Richardson et al., 2009).

In regards to the ability for videoconferencing to foster the development of a strong therapeutic relationships, the Backhaus et al. (2012) review identified a number of studies that evidenced this relationship being formed, and sustained via the medium (Greene et al., 2010; Simpson, Deans, & Brebner, 2001). However results varied in regards to whether alliance was perceived as strong or enhanced through videoconferencing (Simpson et al.), as opposed to feeling weaker in face-to-face therapy (Horvath & Greenberg). Furthermore, whilst alliance ratings appeared to predict therapeutic outcomes, they did not appear to mediate the condition in which clients were placed. Therefore higher alliance scores were correlated with better clinical outcomes, but did not appear to differentiate between clients that were in face-to-face conditions, from those in videoconferencing (Greene et al.).

Since the 1990s when a pilot program first trialled the use of telehealth in corrections, networks have expanded, and their use has become more varied, to a point where they now account for one fifth of the total amount of telehealth services being offered (Lowes, 2001). This has made corrections a common setting through which videoconferencing for the use of both assessment and therapeutic intervention has been explored (Ax et al., 2007). Much of the research in this area has been dominated by the need to evidence the cost benefits of using the technology to both assess, and prescribe medications to offenders, as opposed to having therapist visit the correctional facility, or(Batastini, King, Morgan, & McDaniel, 2015) transporting prisoners (Larsen, Hudnall Stamm. B., Davis, & Magaletta, 2004). Other research has focused on the effectiveness of the use of technologies for intervention, assessment and diagnosis in corrections, with consistent positive findings (Larsen et al.; Morgan, Patrick, & Magaletta, 2008a; Nelson, Zaylor, & Cook, 2004).

Interestingly results reflect the finding that offenders with thought disorders as compared to those with affective disorders, reported the highest satisfaction levels with the use of the technology. Offenders with personality disorders marked their preferences the lowest, reflecting the highest resistance to the modality. This reflects a need for further assessment to identify the features of these client's presentations that reflected the lower satisfaction scores, and thus the appropriateness of videoconferencing for various populations.

Morgan et al. (2008a) in particular, found no significant differences in prisoners' who reported high levels of satisfaction and therapeutic alliance in psychiatric and psychological services, compared to face-to-face sessions. Ax et al. (2007) concluded that whilst the potential for the technology to be used not only for more 'traditional' psychiatric and psychological intervention exists, there is greater potential for its uses in the provision of lifelike interactive scenarios, such as digital role-playing. These could be provided to prisoners in helping them engage with the community in a positive manner and help master some core psychological concepts such as empathy building and effective social skills (Paschall, Fishbein, Hubal, & Eldreth, 2005).

As Castelnuovo et al. (2003) explained, despite the use of new technologies for the provision of a well-established process such as psychotherapy, not all key features need to be re-examined, with studies showing strong support for both techniques, and relationships transmitted effectively through this medium. In this way, they asserted that the psychotherapeutic process has the ability to transcend the technology and provide a strong therapeutic relationship, as well as evidence based interventions to the client to enhance their therapeutic experience. A conclusion, which has since been evidenced repeatedly (Richardson et al., 2015).

Telepresence and Quality Attributes in Videoconferencing

The concept of connecting with another person via the use of videoconferencing allows for two people to essentially share the same space. The degree to which the person feel as if the space is being shared, is referred to as telepresence (Muhlbach & Ptussong, 1995). Strong telepresence is therefore evidenced when the two individuals involved in the communication feel that they are in the same space, despite actually being in geographically varying locations. The use of videoconferencing can enhance the sense of telepresence due to its strong

visual component. This is an extension of the idea of social presence (Short, Williams, and Christie, 1976), which reflects how well a medium is able to convey both visual and verbal communications, in addition to how real and close the communication feels.

Muhlbach and Prussog (1995) attempted to measure the degree of telepresence felt by participants that were connected with colleagues via technology. They asked participants to complete a series of tasks that replicated real life interactions, such as decision-making and negotiation tasks. They were then asked to rate to what degree, they felt they were in the same location as their counterparts, compared to face-to-face meetings. Whilst not reflecting therapist-client interactions, the study was able to provide supportive evidence for the use of videoconferencing in the connection of two people, in the most naturalistic and real-life mimicking format. This ultimately enabled them to feel as if they were connected in the same space (Muhlbach & Ptussong). By manipulating the resolution on the screens and technical features, the results also found that certain equipment can affect the level of telepresence experienced. Furthermore the angles by which the videoconferencing is setup can also be important, with vertical, eye level contact found to be more efficacious in creating a shared space.

This was further discussed by Vertegaal, Weaver and Cheung (2003) who found that having eye contact allows for better turn taking in interaction, especially when more than two participants are involved. In couples therapy, or having three individuals connected by video, eye contact allows for each member to know when they are being spoken to . Therefore eye contact can be used as a way of directing conversation, and also showing that an individual is listening. It can further be used to partially control or convey, and enhance intimacy and arousal in conversation. Therefore eye contact in combination with the topic, and physical proximity, can all affect the intimacy of the interaction (Miller & Gibson, 2012; Muhlbach & Ptussong, 1995).

The idea of telepresence was also examined in the Castelnuovo et al. (2003) study with both therapists and participants noting a perceived physical closeness with the other. Therapists noted forgetting about the camera and feeling completely enmeshed in the therapeutic process, with clients using terms such as ‘here’ to describe the shared space between themselves and the therapist. The study questioned whether the degree to which telepresence has the ability to disregard or

forget the technological elements of the medium, may be an important factor in the success of therapy presented via technological mediums. This was found to be supported, despite the small sample size and limited conclusions gleamed from the study. The study therefore gave further evidence to the notion of telepresence as an important factor in the success of therapy conducted via videoconferencing, and importance of evidence based interventions in therapy (Castelnuovo et al.).

As identified by LeRouge et al. (2002), it is important to have high standards for technology used for the purpose of therapeutic intervention with remote clients. They noted a number of quality attributes vital in the provision of a high quality service, and as such, having requirement criteria that need to be met. Examples of this included having high image resolution so the picture appears clear, and good audio clarity and synchronisation, which allows for the synchronous transition of both audio and video. These are examples of technological attributes. Secondly, LeReuge et al., goes on to describe usability attributes such as the ease of use of the technology leading to enhanced client accessibility, and convenience. Additional usability attributes include the simplicity with which staff can be trained to use the technology, and access to such training, and consequently the ability for them to then pass those skills onto clients. Finally, usability attributes include security in client information, as well as affordability, and an unfaltering focus on client care.

Thirdly, Le Rouge et al. (2002) identified physical environment attributes, including the use of appropriate décor, such as colours and furnishing appropriate to video. Specifically, colour to enrich the video, and décor to create a comfortable atmosphere, thus avoiding bright colours and surface materials such as metal, which can look blurry. A space that has adequate lighting and a suitable temperature, aims to mimic the most natural face-to-face environment. Additionally, having an environment that is soundproof or quiet is important to create privacy and security. There should be enough room in the space to accommodate for this, but not too much as to make the client feel a lack of intimacy. Although individually many of these attributes may not appear significant, when put together to create an experience in which the therapist is hoping to mimic a face-to-face meeting that is therapeutically conducive, all of these are of the upmost importance. They all aim to create the most efficacious experience for clients and foster a strong telepresence.

Finally LeRouge et al. (2002) described the importance of the human element. This outlines the collaboration between professionals in enabling the

videoconference to happen. The authors discuss something they term as ‘consultant congeniality’ in which they note the genuine care of the therapist, smiling, and efforts to put the client at ease, as essential in creating a comfortable, and engaging environment for the client. Furthermore acknowledging the use of the video can also help build rapport. For therapy, the ability to create a strong, aligned relationship is integral in providing the best possible service for clients. Disruptions in any of these criteria can cause deficits in quality of client care.

Uses of Videoconferencing

Initial Interviews

The purpose of initial interviews is very important prior to the commencement of any psychological intervention (Luxton, Pruitt, & Osenbach, 2014). This includes formulation, the assessment of risk, as well as the identification of any strategies for future management. In the use of videoconferencing for psychological intervention, one of the most common uses is for assessment (Luxton et al., 2014; Rees & Haythornthwaite, 2004; Schopp, Johnstone, & Merrell, 2000). Particularly in psychiatry, the medium is utilised to reach a wider range of patients to assess whether intervention, or further therapy is needed. Studies evaluating the use of videoconferencing to conduct assessment have tended to have significant sample sizes, and compared online participant ratings to face-to-face controls (Mallen, Vogel, & Rochlen, 2005). Particularly in reference to the use of videoconferencing for assessment, this unique medium allows for a greater amount of information to be collected, compared to other online assessments, due to the availability of both visual and audio information, and its ability for flexible and remote use.

Much of the literature on initial assessment interviews with clients via videoconferencing remains in the realms of telepsychiatry, with only limited research specifically for psychological assessment (Austen & McGrath, 2006; Urness, Wass, Gordon, Tian, & Bulger, 2006). Nevertheless the results of such studies do show support for the reliability of assessments done via this technological medium, with strong correlations between face-to-face and video assessment outcomes (Capner, 2000; Luxton et al., 2014). Even in acute or emergency situations, data has shown that assessments done via video have gleamed identical information to those conducted face-to-face (Capner; Urness et al., 2006).

Out of such research, advantages and challenges have arisen with allied health professional noting concerns that some collateral information can be missed via video, such as the presence of scars, tattoos, or even fine tremors that may not be picked up via the video link (Christensen et al., 2009). However as part of a thorough assessment, information is often sought from a variety of sources, including appropriate agencies and professionals engaged with the client, and the importance of this is potentially amplified when using videoconferencing to assess a client. Alternatively however, clients and patients themselves have shown satisfaction with assessments done via video, generally noting a positive experience with the medium (Christensen, Proudfoot, et al.). In particular clients have described the experience as feeling less intimidating and non-threatening, when compared to face-to-face assessments (Christensen, Proudfoot, et al.), whilst other research has shown that given the option clients would prefer video to face-to-face interaction (Jerome, 1993).

Kuulasmaa, Wahlberg and Kuusimaki (2004) suggest, in order to avoid any potential prejudicing of outcomes when comparing face-to-face to online interventions, regular in-person meetings should substitute a fully online relationship, in the form of an initial meeting. Specifically Kuulasmaa et al., suggest creating a schedule involving face-to-face sessions at least every six months, and as such reinforce the reality of the therapy for clients who could potentially start to experience it as too technical. They assert that this combination can help strengthen the therapeutic relationship. In their review they found that whilst families in videoconferencing conditions were generally satisfied with the therapist in the use of systems therapy, after a year they wanted to discontinue therapy as they felt they could not engage with the therapist in the same way as they could face-to-face, and preferred to discuss certain issues only in person. In this scenario, a face-to-face session was organised at the outpatient clinic and this was seen to strengthen the alliance, and therapeutic interventions actually continued for a number of years. What this illustrates is the importance of flexibility should clients wish to meet with the therapists, providing it is physically practical, and also the reality that videoconferencing, just as face-to-face therapy, may not necessarily be appropriate for all clients (Kuulasmaa et al., 2004; Miller & Gibson, 2012).

Psychometric testing

The importance of psychometric testing especially in clinical psychology is paramount in both the accurate assessment of client issues, as well as the identification of a management plan (Capner, 2000). However as noted earlier, the availability of specialist psychologists or psychiatrists in small rural communities can put this in jeopardy, and therefore leave a patient undiagnosed or inappropriately managed as a result. Whilst research has found validity in the use of technology to conduct assessment and testing (Ball & Puffett, 1998; Richardson et al., 2009), the realities of such work have also been addressed. An example of this is the need for health workers at the physical location of the patient to assist in test administration (Trott & Blignault, 1998). This may at times require collaboration between services, however continues to provide a viable alternative to clients who may not otherwise receive care. Again this is related to the issue of therapists gaining an insightful and adequate body of information regarding patients from a variety of sources. Nevertheless the prospect of providing patients, who otherwise may not have received adequate care with assessment or intervention, is an important step in the provision of a high standard of global care.

Psychoeducation

Online services provide almost limitless opportunities for therapists and other mental health professionals to provide psychoeducation as well as medical information, and thus encourage prevention and general wellbeing among clients (Mallen, Vogel, Rochlen, et al., 2005; Santoro et al., 2015). This information then can become accessible all day, every day, and provide useful and informative descriptions of symptoms, intervention, and coping as well as prevention strategies. There are two opposing outlooks as to the benefit of such initiatives. First, this allows practitioners to provide accurate, valid and empirically tested information thus helping clients to distinguish inaccurate information. Alternatively however, at the same time it allows those providing inaccurate or misleading information to make this available also. Enabling reputable therapist, organisations and groups to be established and receive attention may help limit inaccurate postings online. Having the ability to connect to, and engage with a trained therapist online will allow for such information to be provided with immediacy and accuracy, and potentially

provide much needed information to global clients not only via websites, but also using videoconferencing.

Cognitive Behaviour Therapy

Since the early 1960's the trialling of videoconferencing for intervention, assessment and follow-up has continued to expand (Simpson, 2009; Simpson & Reid, 2014b). Whilst in 1961 the trial was for group psychotherapy, one of the most common reasons for engaging the technique remains the same; to connect remote populations to specialist service providers (Simpson; Wittson, Affleck, & Johnson, 1961). This is clear in the countries that have been frontline in the online revolution such as the United States (Day & Schneider, 2002; Farmer, 2009), Australia (Griffiths et al., 2006; Rees, Krabbe, & Monaghan, 2009; Simpson & Reid, 2014b; Van Ast & Larson, 2007) and Finland (Mielonen, Ohinmaa, Moring, & Isohanni, 2000; Ohinmaa, Roine, Hailey, Kuusimaki, & Winblad, 2008), all countries that have large clusters of rural communities or islands that may struggle to access adequate mental health care. Most commonly studies that have evaluated the use of videoconferencing remain those using CBT including randomised control trials (Berger, Hohl, & Caspar, 2009; Carroll et al., 2008; Shepherd et al., 2006; Stubbings et al., 2013). This is particularly due to the strong empirical evidence base to the intervention, and thus the ability to compare it to face-to-face administration (Simpson, 2009; Théberge-Lapointe et al., 2015). Research has slowly begun to expand on the evaluation of a variety of interventions provided through videoconferencing as a means of assessing which models of psychotherapy are appropriate for the medium, and may provide superior results to that of face-to-face provision.

Barak et al. (2008) conducted a meta-analysis of studies evaluating the use of online therapies, reviewing 92 studies negating the use of over 9000 participants. Barak et al., evidenced and consequently asserted with a considerable degree of confidence, the effectiveness of online treatments for a variety of psychological disorders. It has been postulated that CBT is particularly suited for videoconferencing, as it does not rely as heavily on the therapeutic alliance as some other interventions such as experiential therapy. Rather it focuses on learning principles in an often time limited manner, likely resulting in a decreased potential

for the technology to interfere (Bouchard et al., 2000; De Las Cueva et al., 2006; O'Reilly et al., 2007).

One of the larger outcome studies conducted in this area, using CBT as an intervention, was a study by Day and Schneider (2002) in which 80 participants were randomly assigned to either a face-to-face psychotherapy intervention, videoconferencing, or two way audio. A wait list was further used as a control group. Amongst the most common presenting issues were weight and relationship issues, but generally a variety of presenting issues were noted, in an attempt to enable greater generalisation of results. In a further attempt to replicate a real world setting, participants in the video and tele conferencing conditions were not aware the therapist was in a nearby room, and never saw the therapist face-to-face. Outcome measures used included the Global Assessment to Functioning (hereafter GAF), and a tailored satisfaction scale.

Analysis of the data included a MANOVA which yielded significant differences in effectiveness between the intervention groups and the control group (Day & Schneider, 2002). Thus higher GAF rates were present in the intervention groups at session five than in the waiting list condition. Furthermore, client participation ratings identified higher participation rates in the non face-to-face conditions. Day and Schneider theorised that these higher involvement rates were due to participants making a greater effort to communicate through the technological mediums and thus taking more responsibility. Day and Schneider further concluded that the similarities between the three treatment groups were more significant than any differences, showing the perceived equal clinical effectiveness of CBT presented face-to-face, via videoconferencing and via audio.

When using videoconferencing to provide CBT to patients with anxiety disorders, Bouchard et al. (2000) found they were able to demonstrate statistically significant results in the reduction of symptoms, as well as the facilitation of a strong therapeutic alliance. Being the first to demonstrate this effectiveness for the treatment of panic disorder with agoraphobia via videoconferencing, Bouchard et al, were further able to replicate these results in a later study, and compare them to a face-to-face condition (Bouchard et al., 2004). Using a larger sample in this study, participants received 12 sessions of CBT targeted at agoraphobia, either face-to-face, or via videoconferencing. Measures used for symptom monitoring included the

Agoraphobic Cognition Questionnaire, as well as the Working Alliance Inventory to measure aspects of the videoconferencing connection.

The results of the Bouchard et al. (2004) study were both clinically and statistically significant in that symptoms decreased, and a high rating of alliance was noted by participants in the videoconferencing condition. Furthermore, these results did not significantly differ from those of the face-to-face condition, demonstrating no worse results. In fact, at post intervention 81 percent of participants in the videoconferencing condition became panic-free, and at six month follow-up this increased by another 10 percent. Despite no random assignment, the study did produce significant results, and unlike the initial study, used a control group. Furthermore, their results were consistent with similar studies, in that they found CBT via videoconferencing to be clinically efficient in reducing anxious symptoms (Andersson et al., 2014; Murphy et al., 2009; Richards & Timulak, 2013; Stubbings et al., 2013; Théberge-Lapointe et al., 2015).

Group Therapy

Literature on videoconferencing for the provision of therapeutic services to clients, has further begun to explore whether the unique dynamics online are further affected by the inclusion of extra members to the two people client-therapist connection (Greene et al., 2010). A study by Green et al., investigated using videoconferencing as part of group psychotherapy, to connect veterans undergoing anger management group therapy. The results of the study identified the videoconferencing as non-inferior to in-person delivery. This means that videoconferencing was shown to be no worse than face-to-face, or that face-to-face did not prove to be particularly better in a number of client process variables. This includes the therapeutic alliance, satisfaction and client attrition. The study showed no significant differences in client attendance to sessions, and in homework assessment completed. Furthermore, it found no significant differences in the amount of satisfaction clients experienced with the intervention in each condition, which was high in both, or the strength of alliance as rated by clients in each condition, however this on average was slightly lower in the video condition. This did not appear to affect overall outcome measures, which again were comparable between conditions. This study was particularly poignant as it was able to strengthen the assertion that

video intervention is comparable to face-to-face delivery and in this way produces clinically significant results and benefits for clients in specialised group therapy.

Intervention for substance abuse and addiction is also a field that has been explored thoroughly in regards to the presentation of interventions via online mediums (Carroll et al., 2008; King et al., 2009). These have again shown positive results in the use of computer mediated technologies such as email and videoconferencing, to produce similar outcomes as face-to-face interventions. These include positive effects on decreasing dependence and reduced alcohol or drug use. In this way patients in treatment centres have been shown to benefit from a schedule that includes enhanced intervention, such as brief periods of more intensive intervention, to account for issues with availability and time demands that may affect non adherence and patient resistance. This is done by not only increasing the provision of therapy, but also by providing group therapy, which in such a setting has been shown to enhance the intensity of treatment in a way that is relatively less expensive than one-on-one treatment (King et al.). Videoconferencing allows patients to participate from their home rather than trying to attend outpatient clinics or centres.

A study by King et al. (2009) randomised outpatients from an addiction treatment service into either an online, or onsite group counselling condition for a period of six weeks. The study rationalised that allowing patients to access the treatment from home would allow for patients to feel both more comfortable, and also enhance confidentiality as well as convenience. As with a more generalised population most participants had limited computer knowledge, and thus were given extensive IT support. This lack of experience did not appear to effect the satisfaction with the medium, or the benefits gained from the results of the intervention via video. This outcome is consistent with previous research in that a general lack of IT knowledge or non-familiarity with the equipment being used, can result in a lack of confidence (Alverson et al., 2004). This can typically be overcome through education, support, and exposure to the equipment, as well as open discussion of any issues clients may be experiencing. This can also provide an important platform for building an alliance, and subsequently a sense of autonomy, by allowing clients to gain their confidence in using the technology, as well as collectively sharing in the experience of challenges and issues that may arise (Morgan et al., 2008a). Unique to this study, patients were given low-cost microphones and provided with unique and

private log on details to enhance confidentiality and ensure they could only access their own assigned group sessions. Patients could therefore see and hear the therapist, but could only hear the other patients, enhancing each individual's confidentiality, and subsequently satisfaction ratings.

The results of the King et al. (2009) study identified no differences between conditions in regards to treatment adherence, with patients in the online group actually demonstrating higher adherence rates than those onsite. Furthermore, patients in both conditions demonstrated a significant reduction in drug use as assessed through urinalysis. Finally in regards to satisfaction with treatment, the study provided a unique finding in that all patients that engaged in the counselling online, had previously engaged in the onsite counselling, therefore allowing each participant a comparison platform. Patients consistently reported high satisfaction rates with the online medium comparable to the onsite counselling, with many also noting a preference for the online medium (King et al.). Specifically, this reflected satisfaction with both the enhanced privacy and convenience of being able to access the intervention from home. Overall patients in both onsite and online counselling showed high rates of maintained abstinence, and were able to receive a lower intensity therapy, post intervention. On a broader level this study contributed to the literature that conceptualises the use of videoconferencing as a way of engaging a large proportion of the population, especially those with substance abuse issues, and ultimately reducing the incidence of drug and alcohol abuse (King et al.).

The use of online support groups has yielded positive results in the fostering of empathy, and helping to improve coping skills and provide support for clients that may otherwise not have access (Barak et al., 2008; Mallen, Vogel, Rochlen, et al., 2005). Allowing for clients who may feel isolated, alone or feeling unsupported, to gain some sense of belonging, connectedness, support or understanding can be invaluable as part of enhancing psychological functioning, and even changing behavioural responses to challenging situation. This support can be offered online 24 hours a day, seven days a week, thus providing a constant and steady support system for vulnerable individuals (Mallen, Vogel, & Rochlen, 2005). Wright and Bell (2003) added that due to stigma that can be attached to some disorders or illnesses, clients prefer the acceptance, as well as anonymity of online support groups. They also noted however, that online groups should be safely entered into and used with

limitations by not giving any personal information, or relying heavily on any information provided that may not necessarily be accurate (Wright & Bell).

Advantages of Using Online Therapies

Telemedicine, online therapies, e-health, in fact most research related to online mediums and specifically videoconferencing now shows promising results in relation to client process variables (Frueh et al., 2007; Greene et al., 2010; Morgan et al., 2008a; Richardson et al., 2015). These include satisfaction of using the medium, attendance and adherence to intervention, and lower attrition when compared to face-to-face intervention. These have shown that clients engaging in therapy via videoconferencing have found the experience generally comparable and positive. As noted earlier, O'Reilly et al. (2007) identified a saving of 10 percent per patient, and 16 percent per visit when compared to the face-to-face interactions. This cost effectiveness finding, in addition to equivalent therapeutic outcomes of the video compared to face-to-face, positions telepsychology and the use of videoconferencing as a viable alternative to face-to-face intervention (Stubbings et al., 2015).

In the Australia statistics indicate that around one in five adults likely meet the criteria for some mental health disorder, however only about half of those adults will seek and receive psychological intervention (Australian Bureau of Statistics, 2007; Demyttenaere et al., 2004). Although there are several empirically validated treatments that can alleviate symptoms of mental health disorders, there are obvious challenges that prevent clients in engaging in these potentially lifesaving interventions (Backhaus et al., 2012). This includes the location of the client in relation to where services are actually available. In this way many potential clients do not have the means to travel significant distances, or the ability, in terms of taking time off work. This can be especially compounded when countries are experiencing economic downturns, or even when fuel prices rise.

Reaching the Unreachable

One of the major advantages noted in almost every piece of literature or research on online therapy, is the ability for therapists to connect with populations that would otherwise not have access to psychological services (Barak et al., 2008; Fenichel et al., 2002; Holmes & Foster, 2012; Richardson et al., 2015). This often features the use of the technology in geographically remote populations (Farmer,

2009), however other populations may also benefit significantly from this service. These include those requiring additional privacy (Fenichel et al.), those that may have a disability or may be caring for someone with a disability (Rochlen et al., 2004), those they may need to travel for work consistently (O'Reilly et al., 2007), those with social phobias and strong anxieties that may prevent them from seeking help otherwise (Christensen, Griffiths, & Farrer, 2009), or even those concerned about stigma or their own safety (Hassija & Gray, 2011).

Those clients in studies from rural areas have identified specific benefits of engaging in the research, and ultimately benefits of distance technology (Hassija & Gray, 2011; Richardson et al., 2015). As noted earlier, and worth noting again, this includes a reduction in travel times and distance, related to this is the reduction in dangers associated with driving or travelling long distances. Further difficulties cited included the personal incapacity to travel or operate cars, and similarly personal as well as situational difficulties with public transport such as a lack thereof (Sumner, 2001). Additionally this includes savings in not having to take time off work, and related to this a lack of time lost due to work and therefore less backlog at work, and finally shorter waiting times to access services (Simpson et al., 2001). Such clients have also identified the increases in perceived sense of control, and a feeling of less intimidation when engaging with a therapist via an online medium. If a client lives more than 100 kilometres away from the therapists, travelling time is likely to be five or more hours, thus reflecting a whole day of travel, and perhaps even an overnight say. For those clients that need the intervention, or families that may be taking children or adolescents to see a professional, this can reflect a particularly high cost (Kuulasmaa et al., 2004). Making it more likely that both, the client will not engage the service provider they actually need, or that they may settle for someone that may not be as appropriate or most effective for them, especially if their needs are complex or specific.

Supervision

In general, supervision is an essential and required element of psychological practice (Miller & Gibson, 2012). However in certain circumstances this may be complicated. This includes when supervisees are in areas that a supervisor may not be available, such as country, or rural areas (Miller & Gibson). Being able to connect with specialised therapists as well as supervisors in these areas allows for supervision

to be provided, and clinical competence to be enhanced (Deane et al., 2015; Fenichel et al., 2002; Kraus, 2011). Common to most studies on the provision of therapy via videoconferencing is the focus on two primary components, teaching and working alliance (Fenichel et al.,). These are the two elements also identified as key in clinical supervision (Miller & Gibson). Kobak, Craske, Rose, and Wolitsky-Taylor (2013), explored whether CBT training could effectively be conveyed in an online format, and observational supervision conducted via videoconferencing. Trainees were observed in this way conducting CBT, and given interactive guidance, as well as feedback in real time, at critical moments, to enhance practice, skills and overall competence. Kobak et al., found a significant increase in the understanding and provision of CBT concepts, and clinical skills in general. The study reflected an overall satisfaction with the use of the videoconferencing for the provision of training and supervision.

A study specifically evaluating the use of video in connecting supervisors and psychologists in rural Victoria, Australia, was conducted by Miller and Gibson (2012). Semi structured interviews were conducted with 26 psychologists that had used videoconferencing to connect with supervisors to attain full registration. The feedback gathered identified videoconferencing as a viable, however less desirable method to obtain supervision. Issues included technological problems with decreased audio and visual quality, and gaps in transmissions. Subsequently, this raises the issue of the type of videoconferencing used, as some studies use Skype and call it videoconferencing, whereas others use better quality systems. Therefore complaints about audio and visual quality will be dependent on the system being used, and these are not the same across the board. This therefore needs to be considered when reviewing literature, and implementing real world supervision. The Miller and Gibson study however did assert that given limited options, videoconferencing is a viable method of providing supervision, which sustains the teaching and working alliance components.

This finding was also found in an earlier study by Gammon et al. (1998), however these limitations were actually seen to increase communication and develop greater insight. Participants noted that due to deficiencies in the transmission of non-verbal cues, a stronger focus on verbal communication was developed, and thus enhanced perceived listening (Gammon et al.). This helped enhance the working alliance, and for supervisees, it was seen to force greater introspection prior to, and

whilst speaking. There was however a preference to meet prior to engaging in the videoconferencing, and thus create the early beginnings of a working alliance face-to-face. Both supervisors and supervisees viewed videoconferencing as an acceptable substitute to face-to-face interaction, and some even expressed surprise at the ease or comfort with the use of the technology. Studies have consistently concluded that videoconferencing is a viable option for engaging supervisors and maintaining quality of supervision, however largely preferred when face-to-face alternatives are unavailable (Deane et al., 2015; Gammon et al.; Miller & Gibson, 2012).

Convenience

A study by King et al. (2009), compared a face-to-face, and online group counselling program for drug addiction. As discussed earlier, the study found comparable rates of program adherence, marked drug use reduction, and high satisfaction rates. Clients consistently identified convenience and accessibility as a central contributing feature to their higher levels of satisfaction, and subsequent preference for the online medium. Primarily, clients that engaged in full-time work would in the past struggle attending groups, and thus could attend the groups from home more easily. More specifically, clients that had children and limited child care options, or those experiencing significant social anxiety, also noted high satisfaction rates with this added convenience to access groups.

As opposed to rural clients, or those that may not have access to a specialist in their vicinity, are those that have relocated or are travelling, that may have both physical as well as language barriers (Rochlen et al., 2004). Those clients that may have a physical disability or be carers for those with some form of disability may struggle to get to a therapist's office during certain times. As Richards and Timulak (2013) found in a qualitative review of participants in their online CBT treatment, the convenience and flexibility in location and times the participants were offered to engage in the program, provided a critical determining factor for them participating. Participants noted high satisfaction as a result of this, and would recommend the program to others. As noted, the use of online videoconferencing also creates convenience in the timing of therapy, with the ability to connect various time zones and therefore also cultural contexts (Shore, Savin, Novins, & Manson, 2006).

Cost

Research continuously shows that the costs associated with therapeutic intervention face-to-face, are considerably higher than when compared to the use of online mediums to reach clients (Dear et al., 2015; Richardson et al., 2009; Stahl & Dixon, 2010; Whitten, Mair, Haycox, May, & Williams, 2002). Summarising the literature in relation to cost can be difficult as studies have varied focus points. For example from the client's perspective, online therapy and in particular the use of videoconferencing can result in less travel expenses, little to no loss of income, and proving they own a computer, a minimal cost overall to engage with a therapist (Garcia, Ahumada, Hinkelmann, Muñoz, & Quezada, 2004; Griffiths & Christensen, 2006; Persaud et al., 2005). From an organisational perspective, there can also be a significant savings in terms of travel, and travel associated costs such as accommodation and loadings for the therapist, as well as arranging transportation for clients (Simpson, 2009). For example Jong (2004) found that the costs of transporting patients from a rural community for the assessment of suicide risk face-to-face, far outweighed the cost of engaging with the patient and conducting the assessment via videoconferencing. A total of almost \$141 000 was saved for the assessment of 71 patients via video. Additionally the videoconferencing patients reflected high satisfaction rates with the medium, and this was equally found in the feedback from clinicians.

Furthermore, as the use of technology in the general population expands, the establishment costs of videoconferencing such as new networks, equipment and so on, has decreased significantly (Richardson et al., 2009; Shore, Savin, Orton, Beals, & Manson, 2007). A study by Shore et al., compared the costs of conducting the Structured Clinical Interview for DSM (SCID), over a period of 2 and a half years for veterans either face-to-face or via videoconferencing. The results found that the implementation of these interviews via video cost the service \$8 000 less per clinic in the year 2005, when compared to face-to-face assessment, ultimately reflecting a significant saving. It should be noted that in 2003 the costs of implementing these assessments via video actually cost each clinic \$1700 more, than their already established face-to-face assessments. By 2005, this cost actually became a saving of a total of \$12 000. What this reflects is the reduction in administration and transmission costs, the increased use and frequency of technology , and the relatively stable travel, equipment and personnel costs (Shore et al.). Therefore as these

implementation costs fall, and research continues on the expenses associated with the use of video, it has been demonstrated that the cost of providing face-to-face consultations can be up to four times greater than engaging the use of online technologies (Harley, 2006; Simpson & Reid, 2014a).

Emotions

A review conducted by Backhaus et al. (2012) identified a number of studies that generally found that emotions can successfully be transmitted through the technological medium of videoconferencing. They found in their review that clients felt they could convey emotion through the screen, and this was correctly interpreted by the therapist. Furthermore they concluded that the absence of touch and smell appeared to be the only limitation of videoconferencing, however these are often unlikely to be a central part of psychotherapy. Despite some limitations in the quality of either audio or video when connecting with clients, this does not appear to have a detrimental effect on the therapeutic relationship. Instead these potential issues allow for discussion and alignment with clients prior to starting psychotherapy, and thus can furthermore help built rapport.

Sense of Control

Research in online therapies appears to have found a trend that reflects client feelings of increased autonomy and control, as well as improvements in the ability to make decisions and enhance interpersonal skills (Fenichel et al., 2002). In the case of videoconferencing in particular, this not only allows for clients to feel more control, but also to perceive there to be less pressure (Lewis, Coursol, & Wahl, 2004; Simpson, Bell, Knox, & Mitchell, 2005). Simpson et al. (2005) found that therapy conducted via videoconferencing for eating disorders can be particularly effective as it happens in a more neutral space, which is not necessarily the therapist's territory. The client therefore feel less intimidated and pressured, and the therapy, less intrusive.

Videoconferencing further allows a greater control to clients in the form of allowing the client their own space and control over the monitor including the picture, sound, and even an ability to leave the room without any apparent repercussion, all essentially empowering the client in their own therapeutic experience. Especially those clients that may be experiencing lack of control in their

own lives and their own relationships, may benefit particularly from the use of videoconferencing and the subsequent extra control they have over the process. Furthermore those that may feel shame or self-consciousness when speaking may also embrace the distance and control afforded by video. Simpson et al., in particular identified a client that felt empowered to speak about her emotions as she perceived it to be less likely to lose control over her emotions, when compared to face-to-face therapy. This was attributed to the client feeling less scrutinised or embarrassed, a finding echoed by participants in similar studies (Lewis et al., 2004; Mitchell, Myers, Swan-Kremeier, & Wonderlich, 2003).

Sensory Cues

Perhaps not an advantage when compared to face-to-face therapy, but when compared to other forms of online therapies videoconferencing has a number of major comparative benefits (Suler., 2000; Wallace & Rayner, 2013). In this way important sensory cues are available to be conveyed via videoconferencing such as tone of voice, verbal expression, body language and appearance. These can all be important and even critical in therapy and all can be conveyed through the screen. Furthermore this can help avoid ambiguity and any contradictions between how the client is presenting, and what they are actually saying (Suler.). This can then increase the felt presence of the therapist and ultimately strengthen the therapeutic relationship, as well as enhanced outcomes for therapy. In this way videoconferencing in particular is seen as superior to that of asynchronous and even synchronous chat, that have in the past been found to decrease the felt sense of presence (Castelnuovo et al., 2003; Suler., 2000). Despite these well documented advantages, the growing plethora of research that exists regarding the use of the many forms of online therapies, has also identified some potential challenges that also need to be discussed as part of an objective review.

Potential Challenges in the use of Online Therapies

As with many scientific fields, advances in technology have forced certain guidelines, principles and even habits to be re-examined and newer, often potentially better ways of conducting ourselves and reaching a wider audience have been implemented (Manhal-Baugus, 2001). To follow is a brief review of potential challenges in the use of telepsychology identified in the literature.

Jurisdictional and Legal Issues

One of the major legal issues remaining with videoconferencing is the jurisdictional difference in the legislation of the provision of psychological intervention (Baker & Ray, 2011; Kramer, Kinn, & Mishkind, 2015). In this way, licencing and regulation issues may arise when therapists engage clients that may be in different states or even countries (Callahan & Inckle, 2012). This can further relate to the qualifications of the therapist, and their abilities in what they can actually provide, and what they are versed in being able to provide. This extends to their duties and requirements such as mandatory reporting and disclosures, and what this means or what their duties are as stated in their regulatory code. These can all differ in each county and state, and clients as well as therapists must be made aware of these potential differences, before an interaction can occur and intervention be allowed to continue (Koocher, 2007). Agreement should always be sought between client and therapist regarding the nature and scope of the therapy. The therapist must ensure the client that the provision of services through the videoconferencing is identical therapeutically, to the provision of service from their office and thus the same binding agreement must stand (Capner, 2000; Thorp et al., 2015).

The licencing of professionals is also an issue unique in the use of video, in that this may be different in varying states or countries. In this way the problem occurs if the therapist is practicing out of their location. If they are seen to be providing a service out of their office, their licencing and registrations is intact, however if they were providing a service from Australia to the United Kingdom, the therapist may be forced to apply for appropriate registration in the UK to cover themselves professionally when engaging with clients from that area. As Seeman and Seeman (1999) concluded, just as a client would travel to a therapist's office in a face-to-face scenario, using this technological medium, the client is seeking out the therapist, and entering their virtual office.

Additionally, legal issues related to consent, reimbursement and liability are also flagged in the videoconferencing literature (Capner, 2000). In this way it may be more difficult to define payment for such services when compared to face-to-face therapy. Although videoconferencing is often quoted as being cost-effective (O'Reilly et al., 2007), some practitioners may take advantage of the fact that rural clients, or those that may be time poor may use such services and thus increase prices, knowing clients will pay to access their services. The policing of such

practices is just as difficult as with face-to-face therapy. In the past payment for these services was also looked upon hesitantly as this would reflect the provision of services, and could potentially leave the therapist open to legal action if harm occurred following the session. Alternatively however there is growing consensus among insurance providers that recognise therapy via videoconferencing as a legitimate way of engaging in psychological intervention. This does not however include the issues of rebates, medicare, and what constitutes therapy with a clinical psychologist if connecting via videoconferencing.

Informed Consent

Consent in particular must be obtained from clients engaging in videoconferencing, and especially because the use of the technology provides a number of unique challenges (Nelson, Bui, & Velasquez, 2011; Thorp et al., 2015). This reflects both the potential benefits, as well as challenges or risks, as well as clients rights and responsibilities within the process. This includes the possibility that due to the use of videoconferencing, certain client details, transmissions or even sections of sessions may be stored. Additionally, clients may be aware of the idea that videoconferencing is still a relative new and emerging phenomena and thus there is potential for issues to come up that the therapists may not be aware of currently. Therefore certain efficacious treatments presented face-to-face, may elicit responses or outcomes via video that may not be identical. Nelson et al., suggests that clients be at least offered face-to-face alternatives to online therapy to allow them a choice of which method to engage in. Consent essentially explains the expected role of the mental health professional that is discussed clearly, and agreed upon with the client.

Thorp et al. (2015) have provided examples of a consent form tailored specifically to the use of technology in therapy. This includes suggestions of how to store information on the personal computer, any challenges or issue specific to using online therapy, as well as an agreement between therapist and client detailing the process in case of a crisis including an emergency contact. Furthermore despite the use of technology, and specifically the internet, it must be made very clear that appointments need to be made with the therapist, and whilst the client has 24 hour access to the internet, the therapist also has limited availability (Mallen, Vogel, & Rochlen). This therefore assists in limiting clients' unrealistic expectations.

Duty of Care and Crisis Management

One of perhaps the most important issues that has arisen in regards to any psychological intervention, is the duty of care in online therapy (Kramer et al., 2015). It has been postulated that because of the quick and convenient ability for a client to leave an online session when distressed, even when needing emergency care or intervention, without the ability to follow the client, detain them, or even hospitalise immediately creates some risks (Fenichel et al., 2002). It has however been argued, in defence of crisis intervention online, that those clients experiencing emotional distress can be engaged effectively just as those through telephone crisis helplines. In this way videoconferencing also offers immediate as well as direct communication, allowing for support and intervention. Fenichel et al., attributes the disinhibition effect of online therapy to being able to engage with a therapist on a deep and honest level, allowing for the therapist in turn to engage the client and put firm boundaries and crisis management strategies in place.

As Rochlen et al. (2004) noted there is much debate whether clients in crisis can be intervened using online communication. Within the emergence of videoconferencing where the client can be seen and engaged with visually, as well as verbally, this use has not necessarily been negated. However suggestions to have adequate supports available with the client, therefore only engaging in secure locations such as hospitals have been made to mitigate some risk.

Some loose guidelines, and lack of research into adequate crisis management regarding clients connected via distance technology, has raised an important challenge in the provision of such services (Maheu & Gordon, 2000). Some suggest this may be a result of the inability to accurately assess crisis clients with suicidal risk, and additionally their overall suitability for online treatment (Heinlen, Welfel, Richmond, & Rak, 2003). In this way challenges directly related to telepsychology such as technical difficulties, may potentially isolate clients in times of need and thus create a further risk. In the worst case scenario a session may be terminated prematurely due to technical difficulties making the provider or the client unavailable for an extended period of time. This has the potential to cause the client significant distress, ethically placing the client under undue risk. Therefore the proper and thorough assessment of clients is needed, with the suggestion by some researchers that the initial assessment should be conducted in person, with further session done

online, and even intermitted face-to-face sessions during the course of treatment (Capner, 2000).

Ethical Issues and Confidentiality

Similar to the varying legal, and legislative issues identified in each state and territory, ethical codes by which professionals, especially psychologists, are bound by are also varied (Gamble, Boyle, & Morris, 2015; Maheu & Gordon, 2000). This can include issues such as which regulatory body has jurisdiction, and therefore whose ethical guidelines the therapist needs to abide by, depending on which area they are conducting therapy. This may significantly differ to the guidelines of the regulatory body from which the client is connecting. In Australia, the Australian Psychological Society has released a number of “*guidelines for providing psychological services and products using the internet and telecommunications technologies*” (2011). Ethically these need to be discussed with the client to allow them to make an informed decision on their participation (Thorp et al., 2015).

In a traditional face-to-face session a client is informed directly of their rights to confidentiality and the specific circumstance in which the therapist has a right to breach that confidentiality. This can become much more complicated with the use of computers, as clients need to be provided sufficient information regarding the limitations of the technology being used (Gamble et al., 2015). The storage of recorded video for example for research or therapeutic purposes, can both elicit anxiety from clients, and have the potential to discourage clients from reengaging or continuing therapy. This can be especially significant if the client is involved in legal proceedings, such as custody battles or illegal activity. Clients will seek to be reassured that they still can rely on confidentiality in session, and that they are not being overheard or recorded without their consent (Simpson et al., 2005). In such cases it must be ensured the information is inaccessible by anyone other than the appropriate authority. Websites that store client information have the possibility of being hacked and information stolen, thus encryption software as well as fire walls, and use of hard-drives need to be sufficiently employed to ensure the highest possibility of care and safety in regards to the client’s information.

Breaches in confidentiality can happen at a number of junctures in the therapeutic process, including during the transmission with the client, at the client’s end by someone accessing their information from their computer or laptop, or the

therapist's end by someone other than the therapist viewing session transcripts or video (Manhal-Baugus, 2001). Fenichel et al. (2002) referred to this as the myth of online clinical work. They asserted that it is possible to maintain a client's privacy and furthermore confidentiality by employing some of the above measures.

Comparing the ability to breach privacy through cyber hacking, is similar to breaking into a therapist's office. Although both are unlikely, they remain possible. Similarly, Simpson (2009) noted that the provision of soundproof rooms is essential in both face-to-face intervention, and especially when using videoconferencing. In order to hear the client, and enhance quality of audio, the volume when using technology may at times be quite high, potentially creating a further risk in breaches of confidentiality. It is the treating therapist's responsibility to discuss possible limitations to confidentiality with the client, including the potential for third parties to access information (Mallen, Vogel, & Rochlen, 2005; Thorp et al., 2015).

Shortcomings in Research and Training

Potential shortcomings in the research on videoconferencing includes small samples, as a result inadequate power, interventions that may be difficult to replicate, and the inability to blind participants or therapists to conditions (Kraus, 2011).

Despite certain strategies put in place to limit the potential effects of these, such as repeated measures, randomised control trials, evidence-based interventions and aggregated results, interpretation must be done carefully of results, which themselves remain somewhat mixed. In this way a combination of qualitative and quantitative exploration could help illuminate results and enrich clinical and descriptive data.

Kramer et al. (2015) suggests that therapists who chose to engage in online therapeutic intervention should complete training, to ensure they are competent and proficient in using the medium. This would allow therapist to gain experience in using the specific software, as well as the computer, and camera itself, and to ensure a smoother process. Furthermore clinicians would be educated on the particular ethical, legal and practical limitations or issues with online therapy, and in this way instil a sense of need for habitual reassessment of client needs, and maintained suitability for online work (Australian Psychological Society, 2011; Mallen, Vogel, & Rochlen, 2005)

Therapist Bias

Traditionally the harshest critics of the use of telepsychology have been psychologists themselves (Cowain, 2001). They have identified concerns around the development of a strong working alliance, limiting the scope of intervention appropriate for presentation through this medium, issues with confidentiality and preference for videoconferencing only if face-to-face intervention is absolutely impossible (Austen & McGrath, 2006; Cowain; Jones, Leonard, & Birmingham, 2006). Studies conducted in the field have found mixed, yet promising results, providing evidence for the provision of these concerns.

Interestingly, Rees and Stone (2005b) highlighted the issue of therapist bias, against videoconferencing. In this study clinical psychologists were asked to rate the therapeutic alliance between a client and therapist, in a previously recorded session. Raters were randomly allocated into either a video or face-to-face condition which determined which client-therapist clip they viewed. Findings reflected significantly lower ratings of working alliance for those psychologists that watched the session of videoconferencing, as opposed to those who watched the sessions of face-to-face contact. This was found to reflect the bias therapists held regarding the ability to portray warmth and empathy through a videoconferencing screen, and ultimately negatively affect the potential for the development of a strong working alliance. What this highlighted was that despite consistent findings reflecting participant satisfaction in videoconferencing mediated therapy (Berger et al., 2009; Hassija & Gray, 2011; Kraus, 2011), the issue remains with convincing therapists that it is a viable and effective means of presenting therapy to clients.

Essentially what the literature appears to be saying is that like most technological advancements in our society, the use of this medium can be anxiety provoking for both clients and therapists, and despite resistance from therapists to use the medium, it may take some time to get used to (Simpson & Reid, 2014a). Although the availability, and more pertinently, the use of technologies for the provision of mental health intervention is steadily rising, perhaps the most effective measure in increasing its use is simply to raise awareness, and ultimately, acceptance among therapist and providers in general (Rees & Haythornthwaite, 2004).

Specific Populations and the Use of Online Therapies

Geographically Remote Populations

With the low cost of service provision and increasing availability of internet access, online therapy has seen a steady increase in its use by mental health agencies (Well et al., 2007). Arguably, one of the greatest advantages of online therapy is its ability to overcome geographical barriers (Alleman, 2002; Manhal-Baugus, 2001; Simpson & Reid, 2014a). Due to the geographical sparsity of the Australian population, where over half a million of Australians lives in remote areas (ABS, 2010), the need for such an initiative is growing (Oakes et al., 2007). In Australia, it has been documented that rural populations have a higher recorded incidence of suicide, drug use, and violence, overall reflecting higher rates of mortality and morbidity (Australian Institute of Health and Welfare., 2003). Indigenous populations in such areas have a between two to four times higher rates of the same (Pink & Allbon, 2008).

The significant geographical distances that separate towns within Australia create challenges in reaching rural clients. Therefore, when rural clients do find therapists that appear appropriate and qualified to assist in intervention, it is often the lack of affordable or adequate transport available to them to connect them to the therapist (Simpson, 2009). In this way it is the travel between home and office on a regular basis that creates issues in terms of costs, time in travel not spent on work, and time away from family. Therefore, as significant shortages of specialist psychologists plague rural and regional areas, the alternative of using videoconferencing to provide evidence based interventions has become a possible solution for many (Nelson et al., 2011; Rees & Stone, 2005a; Richardson et al., 2015).

Online counselling provides is a greater choice for clients, as well as catering for cultural issues that may arise as a result of client preferences or background (Mallen, Vogel, & Rochlen, 2005; Shore et al., 2006). Therefore therapists that speak two or more languages can be sought out by clients, and their services can be utilised to a greater degree (Mallen, Vogel, Rochlen, et al., 2005). Australia in particular has a significant Indigenous population, many of whom live in communities in which culture and tradition are momentous (Trott & Blignault, 1998). Issues such as the ability of videoconferencing to pick up hand gestures, especially when dealing with Indigenous populations can allow for a deeper understanding of what the client is

trying to convey, and its importance (Capner, 2000). Trott and Blignault further noted that an enormous advantage of videoconferencing is not having to dislocate patients from their communities, and still have the opportunity to provide these populations with the services they require.

De Las Cuevas, Arrendonzo, Cabrera, Sulzenbacher & Meise (2006) conducted a larger scale effectiveness study in the Canary Islands where the lack of accredited psychiatrist in remote and rural areas is creating a growing need for the provision of services, and adequate support for psychiatric patients. The study was aimed at exploring the effectiveness of, as well as satisfaction with, the use of video in therapy in this rural population. They compared psychiatric clients in traditional face-to-face therapy, to therapy presented via videoconferencing. This involved eight sessions of consultation, and CBT based interventions over a 24 week period, with the same intervention for clients in both conditions. Prior to, and after 24 weeks of intervention for ICD-10 diagnosed mental health conditions, the participants were scaled on a number of indices and symptom checklists including the Clinical Global Impressions (CGI), and the Symptom Checklist-90 revised (SCL-90R). Importantly this was a randomised control trial in which the 140 participants were randomly placed either in a face-to-face or videoconferencing condition. Results were compared on two levels, firstly the results of the face-to-face group were compared to that of the videoconferencing groups as a whole, and then participant scores were individually compared also.

The results of the De Las Cuevas et al. (2006) study found that clinical changes on both the CGI and the SCL-90R identified telepsychiatry was effective in the significant reduction of clinical symptoms, and demonstrated statistically significant improvements in functioning. Alternatively, no significant differences in the mean change of these scales were found when comparing the face-to-face to the videoconferencing condition, instead both reflected such improvements. Participant mean scores in the SCL-90R decreased reflecting a reduction in psychiatric distress, with the majority of participants reflecting reliable improvements. The study noted a preference by participants for videoconferencing as it allows for live, two-way interaction that is in full colour video, as well as audio. Importantly, no clinically significant differences were found between the two conditions, indicating the same level of efficacy between the face-to-face treatments and the videoconferencing condition (De Las Cuevas et al.). Uniquely to this study, the same psychiatrist

implemented the intervention in both conditions, therefore controlling for some extraneous variables, however also creating a potential for bias. Nevertheless it allowed for some extra control over possible variables that could influence outcome given that therapist influence can have such a significant effect. Being one of the first larger scale, and randomised control trials in psychiatry to directly compare face-to-face and videoconferencing participants, it adds evidence to the efficacy of the use of video in therapeutic intervention.

In Australia, and Northern Queensland particularly, specialist mental health providers are scarce and struggle to meet the demands of the growing needs of the community. A study conducted by Griffits, Blignault and Yellowlees (2006) explored the feasibility, as well as the wider acceptability of using videoconferencing as a medium to provide CBT to participants with depression and anxiety in this part of Queensland. Each participant attended a weekly session of CBT for an average of seven weeks, after which two clinical outcomes measures were administered to rate potential improvements in reported symptoms. The results mirrored those of several larger scale studies (Day & Schneider, 2002; O'Reilly et al., 2007) in that CBT delivered by videoconferencing was as efficacious as the face-to-face treatment, and decreased symptoms. Improvements in participants' depressive and anxiety symptoms reflected the potential for videoconferencing to deliver effective treatment for mental health issues.

In general it is difficult to find specialists in rural and isolated areas, but to attract psychologists to work in such areas is equally as difficult (Simpson, 2009). Specialists graduates are essentially being tasked to work in isolated areas, with little to no opportunity for supervision, training, or even professional development (Simpson, 2009). In this way, again the use of technology has been utilised to try and overcome some of these challenges via telephone, emails and more recently online methods such as videoconferencing (Castelnuovo et al., 2003). More commonly, providers of evidence-based interventions tend to be centred in urban areas, such as clinics or outpatient accessible centres, often inaccessible to those living in communities located in rural areas (Hassija & Gray). Other possible reasons that have been cited include geographical barriers including transportation costs as well as more personal factors, poor health as well as unemployment can all effect access to specialist medical care (Hassija & Gray; Jameson & Blank, 2007). As noted earlier there is the possibility of stigma that is associated with accessing mental health care

in smaller communities. The use of telehealth has in the past assisted in breaching this disparity between demand and supply (Richardson et al., 2009).

One particular area of research is the evaluation of videoconferencing in the provision of treatment and intervention for PTSD (Hassija & Gray, 2011). Specialist service providers such as psychologist skilled trauma intervention, can be particularly scarce in rural areas, and thus the access to these can create a worrying, demand gap (Hassija & Gray). One study in particular by Hassija and Gray focused on the provision of trauma intervention to rural participants using videoconferencing. With the initial sessions devoted to information gathering and alliance building, followed by individualised, evidence based trauma intervention based on cognitive processing theory and prolonged exposure therapy, therapy totalled an average 13 sessions.

With assessments conducted, pre, post and intermittent throughout, the results of the Hassija and Gray., (2011) study reflected significant reductions in the symptoms of PTSD, as well as depressive symptoms. Additionally all 16 clients noted significantly high levels of satisfaction, adding to the evolving body of evidence reflecting the effective capabilities of this technological medium, especially in trauma-focused intervention (Hassija & Gray, 2011). It is this distinction that makes this study so important, in that the seeking of services for trauma victims is often a deeply personal experience and thus public stigma, has in the past dissuaded victims from seeking help in smaller communities. Videoconferencing therefore allows these clients to benefit from trauma-focused interventions in a more user-friendly manner. The results of this study in particular found comparable gains were evidenced in the high levels of satisfaction participants reported with the treatment.

What should however be noted is that studies such as the Hassija and Gray (2011) study and similar research into the provision of specialist services to rural clients have often not compared their results to face-to-face interventions (Hassija & Gray, 2011; Richardson et al., 2009). This has mainly been due to a lack of available specialists, and other initial challenges. Nevertheless the results of this study contribute to the literature reflecting on effectiveness of videoconferencing as a medium to connect specialists and clients. Particularly those that have experienced trauma and may be in violent or abusive relationships, and provide them with a service they may otherwise not have access to due to their geographic isolation (Hassija & Gray).

Military Applications

Military personnel have also been dubbed as a population in need of specialised health care from therapists with specific skills, and a better understand the military context (Richardson et al., 2009). One of the largest reviews conducted on the Australian Defence Force (hereafter ADF) in regards to mental health issues, found that in the 12 months leading up to data collection, 22 percent of members met criteria for diagnosis of a mental health condition (McFarlane, Hodson, Van Hooff, & Davies, 2011). This drastically increased to 54.1 percent, when examining lifetime prevalence. This means that in their lifetime, more than half of ADF members will experience a mental health condition such as an anxiety, affective or alcohol abuse disorder. As military personnel in remote locations, and those on deployment overseas have reported even higher rates of psychological problems such as anxiety, as well as affective and substance use disorders, the defence department has invested time and resources into the investigation of electronically delivered therapies and their effectiveness (Baxter & Jack, 2008; Pietrzak, Pullman, Campbell, & Cotea, 2010).

Changes in the size, resources and nature of missions, has meant personnel have been tasked to engage in more frequent and often geographically dispersed activities as part of their general duties (Wallace & Rayner, 2013). Therefore, the expansion of services to cater for the demands of these personnel have also had to adapt (Hill et al., 2004). A study by Grady and Melcer (2005), conducted analysis on data comparing soldiers receiving psychological intervention face-to-face, to those engaged via videoconferencing. Participants were gathered from two remote army bases in America where access to specialist mental health providers is scarce, travel is costly and time consuming, and engagement in therapy is stigmatised by the greater defence community. Using measures such as the GAF, the study found no significant differences between the two conditions, and furthermore found that the videoconferencing condition yielded higher GAF scores, compliance with medication, and treatment plans, as well as follow-up attendance rates. This means that soldiers who underwent therapy via videoconferencing had overall higher scores in social, occupational and psychological functioning than those who underwent traditional face-to-face counselling (Grady & Melcer). In fact positive outcomes have been demonstrated for as little as one session of CBT via videoconferencing for

military personal experiencing combat related PTSD (Deitsch, Frueh, & Santos, 2000).

A later study by Germain et al. (2009) yielded similar results in that CBT administered through videoconferencing was found to elicit comparable benefits to that presented a face-to-face. This study however also contained questionnaires directly related to videoconferencing including the Videoconferencing Telepresence Scale and the Videoconference Therapy Questionnaire, evaluating participant perceptions of the technology, and the therapeutic intervention itself. Overall participants in both conditions improved significantly in the reduction in severity of PTSD symptoms. Importantly, the study also found that certain factors directly related to the use of the technology do not appear to negatively affect outcomes, or alliance. These include perceptions of presence and initial expectations, a finding which has since been repeated (Germain et al., 2009; Germain, Marchard, Bouchard, Guay, & Drouin, 2010). The study did find that despite some techniques being challenging using distance technology, such as the inability to accompany clients during in-vivo exposure, these appear to be insignificant when comparing outcomes to face-to-face intervention. Despite a relatively small sample size, perhaps one of the greatest strengths of this study was its use of a sample comprised of severe pathologies and comorbid disorders. This allowed for greater generalisation of results, with the effectiveness of videoconferencing being evidenced, despite a number of severe pathologies within the sample. Interestingly, a more recent study by Pelton et al. (2015), whilst producing similar effectiveness findings, went on to show the flexibility of videoconferencing in therapeutic intervention.

Pelton et al. (2015) began a face-to-face prolonged exposure intervention for PTSD with an active soldier, but given the real-world demands of warfare, sessions 7 onwards were completed at a remote combat outpost. As Pelton et al., noted, the need for timely intervention with PTSD is pertinent, with exposure for symptom reduction being strongly supported in the literature. Therefore overcoming challenges typical to the defence force such as geographical barriers, and pending future operational deployments, is essential. Using the PTSD checklist to compare scores pre and post, significant improvements in symptoms were evidenced. Despite being a single case, the study not only highlighted the effectiveness of technology assisted intervention for PTSD in military populations, but also the ability to

combine traditional intervention with technology to enhance care and treatment effectiveness (Pelton et al., 2015).

Military interventions, especially those from the psychiatry division have always attempted to abide by the acronym PIE (Hill et al.). This means *proximity* in treating either within, or close to the primary area. *Immediacy* in the treatment being enacted promptly, and finally, *expectancy*, in that there is an expectation that operations return to normal promptly following the event. An early example of this was the former Division Psychiatrist of the 2nd Infantry Division in Korea that provided behavioural health intervention via telephone. This allowed immediate intervention to soldiers involved in traumatic incidences, and provided stress management using the PIE principle. Effective follow-up and continued care without excessive travel time, or high costs, resulted in military medical manuals in 1923 describing the use of the telephone being as important as a stethoscope for medical practitioners (Starr, 1982). Videoconferencing has also been used by the psychiatric division in several locations within the United States, Bosnia, Sinai, Korea, Guam and more. This allowed medical specialists to connect with defence personnel and provide assessment, intervention (Hill et al., 2004), providing interventions based on the PIE principal in locations all around the world.

With documented cases of personnel willing, or planning to jeopardise their duties to be taken off deployment, the provision of general family videoconferencing, or professional intervention has become more common (Hill et al., 2004). This has allowed members to resolve family issues, and continue their duties and finish deployment. Military literature shows this method of connecting personnel with health specialists and loved ones, as relatively inexpensive method of providing intervention, despite quality of both audio and video tending to vary (Hill et al.). The use of this modality has included the provision of psychoeducation, family and marital therapy, assessment, individual intervention , and even discharge planning (Hill, Allman, & Ditzler, 2001). One such trial in particular is the Triple Army Medical Centre Hawaii, where personnel were frequently deployed or stationed in isolated areas, videoconferencing was used by doctors and therapists to engage and connect family members on the mainland and personnel in the inpatient ward. The results of this trial showed that this connection contributed directly to faster recovery times and discharge (Hill et al., 2001).

Specifically in relation to the Australian military, the Australian Defence Force for Mental Health in New South Wales was established in order to provide a wider range of services to serving members, in a timely and cost effective manner (Wallace & Rayner, 2013). In this effort, literature was reviewed, and the videoconferencing capabilities of military bases around Australia were evaluated for their abilities to sustain telepsychiatry. The installation of networks and software was completed in 2011 and subsequently evaluated. This was in an effort to connect specialists and personnel in different states, and then compare costs of each conference, to the travel time and cost of the member flying interstate to receive equal intervention. Analysis of this found positive results in both time and cost saved. This has led to the provision of consultations to members from both psychiatrists and clinical psychologists, individual intervention for complex conditions, and supervision for other health professions, as well as case meetings.

In an effort to expand services to those members that may be deployed overseas, trials have begun to test the effectiveness of videoconferencing in connecting a specialist in NSW to Australia Defence Force bases in United Arab Emirates, Tarin Kot, Afghanistan and Al Minhad Airbase (Wallace & Rayner, 2013). This would allow for members to receive intervention for both individual or couples whilst on active duty in an overseas base, where the availability of psychiatrist or psychologists may be scarce, or have a significant waiting periods due to demand (Wallace & Rayner). To date, many members when faced with mental health issues have had to be flown back to Australia rather than receiving proper and immediate intervention, or even assessment at the time. Therefore, providing immediate, and effective intervention to personnel, ultimately leading to increased effectiveness, and importantly the retention of members in the force due to their increased abilities to cope, could see videoconferencing become essential to military effectiveness (Hill et al.).

The Mining Sector

The mining sector in Australia has doubled since 1961, with one in six people employed by the mining industry between 2001 and 2006, and a peak in 2012 of over 275 000 individuals employed (Australian Bureau of Statistics, 2013a). The rapid growth of this industry has seen husbands and fathers having to travel great distances for work, and return home for only short periods of time (Vojnovic, Michelson,

Jackson, & Bahn, 2014). This discrepancy between time spent home and at work has led to increasing tensions when the partner returns home (Storey).

Videoconferencing allows for partners who frequently travel as a result of their employment to continue therapy, and maintain contact with their counsellor rather than seeking alternative help, or stuttering the process of therapy, especially couples therapy (Tambling & Johnson, 2010). Individuals in long distance relationships have a unique set of stressors associated with the geographical scarcity of contact, such as separation and travel tensions (Pistole, Roberts, & Chapman, 2010). With the increasing growth of the mining sector, the amount of long distance relationships are rising, and with some rosters reflecting more time away then reunited, these stressors are a significant part of mining relationships.

A study published by Pistole, Roberts and Chapman, (2010) assessed the impact of long distance on relationships, and the maintenance and attachment behaviours involved in these relationships. The results were then compared to participants in geographically close relationships. A total of 473 participants all in serious romantic relationships were asked to fill out several measures including attachment, maintenance behaviours, and global stress measures. Results of the study reflected a significant difference in attachment styles and maintenance behaviours in long distance relationships, compared to those that were geographically near. It was reflected that in long distance relationships the attachment security is constantly threatened, therefore individuals react in reflective ways to cope; this can include stress, anxiety and distancing or avoidance behaviours (Pistole et al.). Essentially what these results reflect is that relationships with a geographical factor such as those experienced by mining sector workers, military personnel and remote couples can result in greater relationship pressures (Pietrzak et al., 2010; Pistole et al.; Storey, 2001). Therapy and couples interventions may become essential to help address these, and the medium of videoconferencing creates the capacity to provide this intervention with greater accessibility. DuBois (2004) found when examining the average characteristics of clients seeking online therapy, that clients were predominantly female, and between the ages of 20 and 50. Interestingly the majority of these clients were seeking intervention for relationship issues, showing a clear demand for couples intervention via this medium.

Couples Therapy

With divorce rates reaching nearly 50 percent in Australia, relationship distress is seen as an increasingly central factor for couples engaging in relationship therapy (Australian Bureau of Statistics, 2013c; Snyder et al., 2005). Despite a decline in the marriage rate since 1970, a strong commitment to get married still remains in most western countries (Halford & Snyder, 2012) with 65 percent of adults getting married before the age of 50 (Organization for Economic Development and Cooperation Social Policy Division, 2010). The correlation between relationship distress and disruption to an individual's emotional as well as physical wellbeing, further highlights the need for intervention, with many of those entering mental health interventions citing relationship distress as a significant concern (Halford & Snyder, 2012). Essentially negative communication in a relationship impacts not only on the health of the connection, but also others including children, dependants, and other aspects of each individual's life, such as work and general coping (Suler, 2001a). Research has consistently shown that couples therapy effectively reduces the conflict experienced in relationships, and reportedly increases satisfaction (Beckerman & Sarracco, 2002). Furthermore, conjoint treatment with both individuals in the dyad has been found to be superior to individual treatment (Wilson, Charker, Lizzio, Halford, & Kimlin, 2005).

History

With its beginnings in the 1950's couples counselling took form in Australia as a response to the patterns of social change occurring at the time, such as the effect on post-World War II relationships (Simmons, 2006). The stresses, common to those experienced by those in today's military, included dealing with loss, separation, and often geographical relocation. Stressors more unique to the period included changes in gender expectations and the cultural meaning of marriage, with relationship dissolution seen in a negative and threatening way to the morals (Martin, 1998; Simmons, 2006). Therapy or 'marriage guidance' as it was known at this time, became a method of supporting couples, and encouraging them to remain married. With facilitators having no tertiary training, and such interventions being run mainly by churches, emphasising community and collaboration, marriage guidance councils were set up to provide guidance and advice to couples who reported or were observed to be experiencing distress, in Sydney, Melbourne as well as Adelaide. The

focus remained on repairing marriages, with counselling done separately for partners, and usually with the wives through support and advice as key factors.

Following this church led initiative, combining education and counselling, the 1960's brought a separation of both church and state, as well as the separation in the provision of education and counselling to couples (Simmons, 2006). With a clear distinction being made between family and marriage counselling, the good of the state was starting to be placed second to, the satisfaction of the couples in their relationships. This growth in the sector continued, and therefore started to be overseen by government with a psychologist monitoring the development of 16 marriage counselling organisations in Australia, and legislation for such organisations to receive government funding. Still known as marriage counselling, organisations started to charge fees, and train employees rather than relying on volunteers. This era also saw the beginnings of couples therapy, and counsellors using more specialised techniques as opposed to just advice or support (Wetchler, 2003).

The 1970's was a time where couples became more empowered with recognition of same sex relationships, gender role diversification, as well as increasing awareness and legislation regarding domestic violence. This time saw an expansion of rights and legislative abilities of the family law act, and recognition of 'no fault divorce'. As the views of the society became more complex, so the demand for paid counsellors and educators increased, and in turn funding and provision of pre-marriage education. This then saw a slow progression to private practice, as well as an increase in accountability for therapists as well as organisations.

These services continued to expand in Australia in the 1980's, but with fluctuating financial abilities of the government, these organisation began to employ more entrepreneurial methods (Martin, 1998). Additionally, governmental funding started going back to family counselling initiatives, rather than couples counselling. As the demand for such services grew, and organisations began to market themselves, the increase in training and quality of services began to become the norm. This then lead to the 90's and the 2000's, where there was again a focus on privatising the provision of couples therapy and counselling. Similarly the emphasis on providing a high quality of standard, and the evaluation of services began to take emphasis. In the society at the time, multiculturalism, technology, and the effects of separation on children, became the topics of research.

Growing from being run by volunteers who were chosen based on life experience, and their own marriage status, to having formal qualification and registration with a national body, the provision of counselling in Australia has seen a long but positive evolution (Martin, 1998). Additionally there has been the establishment, and subsequent increase in the powers of the Family Law court, who often endorse mandated counselling, or mediation for couples through Family Relationships Centres. An interesting cyclical pattern has evolved in Australia in regards to family and relationship counselling, with its beginnings in the 50's, and focus on the societal and community context of the family, to a focus now being given to increases in programs for the family unit, and child focused interventions.

Overview of Couples Therapy Interventions

Although couples therapy can be comprised of a number of various interventions and therapeutic styles, some of the commonly used approaches include Behavioural Couples Therapy (hereafter BCT), Cognitive Behavioural Couples Therapy (hereafter CBCT), Emotionally Focused Therapy (hereafter EFT), and Solution Focused Couples Therapy (hereafter SFCT). Given the current studies' focus on couples education, it is important to briefly introduce these approaches, as many of their components are used as part of educational interventions.

Solution Focused Couples Therapy

For shorter, more basic interventions CSFT is useful to enhance satisfaction and positive interactions (Corcoran & Pillai, 2009). The intervention is goal orientated, and is primarily aimed at enhancing focus on solutions, and a 'relationship vision' of what couples would like to work towards (Murray & Murray, 2004). Its use of take-home exercises assists couples in using skills and strategies to make appropriate changes that lead to their shared vision. Having a focus on a collaborative approach can actually enhance engagement and commitment to therapy. It can be particularly useful in couples therapy where partners present with comorbid presentations such as issues with alcohol, or even parenting problems. A meta-analysis by Kim (2007) found that out of 22 studies, small but significant changes were evidenced post intervention for decreasing anxious and depressive symptoms, and relationship problems. However given its relative simplicity, SFCP

compared to more in-depth types of therapy such as EFT, is often not sustainable for sole use in couples intervention (Murray & Murray).

Emotion Focused Therapy

EFT has gained much interest in the past three decades since its inception in the 1980's (Johnson, Hunsley, Greenberg, & Schindler, 1999). EFT is primarily about altering the distressed couples dysfunctional interactional patterns and subsequent emotional responses, often characterised by hostility and anger, in order to develop a more secure emotional connection (Johnson & Greenberg, 1988). EFT follows nine specific steps to identify these interactional cycles, and then integrate newer, more effective patterns of engaging. Several studies have evaluated the efficacy of EFT in reducing couple distress and enhancing adjustment. Using self-report measures such as the Dyadic Adjustment Scale, couples who have engaged in EFT have been shown to be 'improved' or even 'recovered', meaning they no longer met criteria for a distressed couple. Most studies have identified a positive shift compared to waitlist conditions, with the effects of EFT in enhancing relationship satisfaction in as little as eight sessions (Johnson & Talitman, 1997). Despite some findings that EFT is more effective than BCT, studies lack the use of longer follow-up periods, which BCT studies have been able to evidence (Christensen, Atkins, Baucom, & Yi, 2010; Wesley & Waring, 1996).

Cognitive and Behavioural Couples Therapy

The behavioural component of BCT specifically emphasises the importance of altering unhelpful interactional behaviours between partners, such as attacking or blaming, defensiveness, and minimising (Halford & Osgarby, 1996). Intervention becomes about teaching couples how to engage in more functional and helpful communication exchanges, and therefore assists couples in enhancing problem solving and intimacy. A review conducted by Wesley and Waring (1996) found BCT to be effective in reducing negative communication patters in couples compared to waitlist conditions. These improvements have been shown to be sustainable for at least a year post intervention (Christensen et al., 2004; Dunn & Schwebel, 1995). However some reviews have suggested that relationship outcomes can be enhanced and sustained for longer, by adding a cognitive component to alter expectations, beliefs and therefore behaviours (Benson, McGinn, & Christensen, 2012).

CBCT therefore includes both the aforementioned focus on behavioural patterns, but also cognitive restructuring (Wesley & Waring, 1996). Therefore intervention become about teaching partners to not only engage in new behavioural patterns but also adopt realistic beliefs and expectations, to reduce conflict and enhance functioning. By allowing each partner to be vulnerable, couples can engage on a deeper level and enhance intimacy and connectedness in a relationship. The success of CBCT in reducing relationship problems, enhancing satisfaction and adjustment, as well as reducing conflict patterns has been evidenced in several studies (Baucom, Shoham, Mueser, Daiuto, & Stickle, 1998; Shadish & Baldwin, 2005; Wesley & Waring, 1996). These have found superior results when compared to individualised interventions, and waitlist conditions, with improvements sustained at two and five year follow-up (Christensen et al., 2010). Some of these reviews however have several methodological limitations. These include studies over several decades being grouped together, despite significant advances in each therapy over that time.

Couples Therapy and Relationship Education

As the scope of psychological intervention widens through literature and research, the provision of services to couples to create strong, satisfying and resilient relationships has received more attention as well as resource allocation (Cicila, Georgia, & Doss, 2014; Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Whilst couples therapy can provide intensive psychological intervention, with long term therapy and one-on-one, or conjoint sessions of tailored psychotherapy, adjunct to such interventions is marriage and relationship education (Hawkins, Stanley, Blanchard, & Albright, 2012). Relationship education is comprised of two major components including the establishment of core pillars of good communication and problem solving skills, and then also the provision of information in a didactic way, to create alignment and a shared outlook (Hawkins et al.). This can often be generalised, and whilst used in adjunction to couples therapy can be tailored, it tends to be briefer and conducted prior to serious problems developing in a relationship. In the past, the major distinctions between traditional couples therapy, and education, including therapy being tailored to couples currently significantly distressed with the aim of decreasing this distress. Additionally it is delivered one-on-one rather than in a workshop setting, and finally relationship education tends to be more often

manualised when compared to therapy (Markman & Rhoades, 2012). It is argued that using manuals can help increase effectiveness, due to inclusive research based practices, making interventions accessible to a wider number of therapists.

To date the distinction between relationship education and couples therapy has begun to blur with many interventions, especially those that are cognitive-behavioural, that have begun to combine traditional therapy, with skills training and education (Markman & Rhoades). The major deficit of couples therapy identified in literature is its potential to reach a very small proportion of couples, as relatively few couples who actually need intervention, tend to seek out a therapist (Markman & Rhoades). Alternatively, relationship education is much more successful in reaching a wider audience (Doss, Rhoades, Stanley, & Markman, 2009; Halford & Bodenmann, 2013). It is argued that relationship education can have just as significant effects as couples therapy, if it is tailored to couples experiencing risk factors, and couples with mild distress as opposed to significant distress (DeMaria, 2005; Halford & Bodenmann, 2013).

Couples relationship education (hereafter CRE) is an interventional approach to working with couples currently experiencing satisfaction in their relationship, in an effort to furthermore increase the satisfaction and develop skills, knowledge, and general positive attitudes (Halford & Snyder, 2012). This strengthens each partner's commitment, and the positive interactions that ultimately help increase communication, and satisfaction. It is often this that distinguishes couples education to pure therapy in that couples experiencing high levels of satisfaction are targeted, as opposed to those that are significantly distressed. There is a strong emphasis on curriculum and structured session details, and a specific focus on variables that have a correlation to significant relationship outcomes (Gottman, Coan, Carrere, & Swanson, 1998). CRE programs, are therefore modelled on the theoretical rationale that suggests the quality of conflict management, as well as general communication at the onset of the relationship, has a significant impact on the quality of the relationship overall (Markman & Rhoades, 2012). The premise of such programs thus becomes modifying any deficits in these areas, therefore ultimately reflecting a preventative approach (Halford, Lizzion, Wilson, & Occhipinti, 2007).

The notion of effective communication skills is one of the fundamental pillars of satisfying and engaging relationships, and has motivated studies to explore the effects of negative communication pattern such as denigrating, or withdrawing, as

predicting and exacerbating the incidence of separation and relationship distress (Markman, Renick, Floyd, Stanley, & Clements, 1993; Stanley, Rhoades, Olmos-Gallo, & Markman, 2007). As is done in behavioural marital therapy, the therapeutic exposure to high conflict situation, such as the simulation of an argument, helps couples both identify negative patterns, and practice using more effective and constructive conflict management strategies. This is done to help generalise skills in session, to their more naturalistic setting (Behrens, Sanders, & Halford, 1990). Studies have shown support for the use of signalled interactions, in reducing negativity during sessions, compared to non-clinical settings (Behrens et al.). Therefore the goal of relationship education becomes not only to increase satisfaction rates, but also to alleviate relationship distress (Markman & Rhoades, 2012).

Varying programs have a different point of focus, for example universal prevention programs are aimed at couples in the early stages of a relationship, with the aim of sustaining satisfaction in the relationship over time. Other intervention programs however maintain a focus on couples that are actually at the stage of experiencing distress (Markman & Rhoades). As a result, CRE often covers all these areas with an overlap between education, communication, enhancement and even prevention. It has been suggested that effective couples relationship interventions has seven key components including; thorough assessment, inclusion of high-risk couples, education about aggression in relationships, education about dealing with future stresses, intervention for couples experiencing distress prior to future relationship dissatisfaction, provision of services to diverse couples, and an increase in accessibility (Halford et al., 2003).

One criticism of couples intervention studies, is the narrow sample sizes used, with most comprised of middle-class, married couples that were at the time not significantly distressed in their relationships (Hawkins et al., 2008) . Methodologically, studies on CRE are now beginning to incorporate a wider variety of couples including those that have lower incomes, are unmarried and cohabitare, or have children, step-families, as well as defence couples (Amato, 2014; Markman & Rhoades, 2012). This is allowing results to be generalised to wider populations, providing evidence of interventions not only reaching more couples, but also consistently replicating positive outcomes. Furthermore evaluation of programs conducted with same-sex couples, couples from culturally diverse backgrounds, and younger populations has expanded the audience and possible uses of CRE. In

addition to this, strong, methodologically sound studies involving randomised control trials with the use of control groups have provided support for many programs and their effectiveness in increasing satisfaction levels in couples (Halford, Sanders, & Behrens, 2001).

Meta-analysis research on marriage and relationship education, correlates intervention outcomes with increases in the quality of relationships, including better communication and overall satisfaction (Hawkins et al., 2008; Hawkins et al., 2012; McAllister, Duncan, & Hawkins, 2012). A meta-analysis by Hawkins et al., included only studies with higher population samples, studies that used control groups, and those that found strong effect sizes.

Nevertheless Hawkins et al (2008) compared studies on two common outcomes of, communication skills and relationships quality, and most of the studies included ($k=112$) already established and standardised measures such as the Dyadic Adjustment Scale (hereafter DAS), or the Marital Adjustment Test. Overall, educational interventions evaluated showed promising and positive effectiveness trends, and tended to produce larger effect sizes for communication skills outcomes, as opposed to relationship quality. This can commonly be explained by the strong focus of many programs on improving communication skills (Hawkins et al.). Being a targeted focus in intervention, communication skills are then likely to improve due to the amount of pure emphasis placed on them. Furthermore, as noted throughout the couples intervention literature the use of self-reports can create bias in the data. Analyses of these tend to yield greater effect sizes as it is often correlated to the reactivity principal where couples consciously demonstrate recently acquired skills. Whether these are enacted in the couples natural environment is then not necessarily reflected long term (Heyman, 2001). A combination of observational measures, self-reports and longitudinal repeated measures has the ability to mediate such potential deficiencies (Hawkins et al., 2008).

Overall, Hawkins et al. (2008) identified a strong positive effect of relationship education on communication skills, and relationship satisfaction and quality. The intervention produced moderate but reliable effect sizes. However the narrow sample used, only allows generalisability of results for middle class, and white couples. This has become the focus of some more recent studies, with benefits from relationship education such as increased satisfaction and better communication skills, being demonstrated for minority couples, and those from low socioeconomic

backgrounds (Allen, Rhoades, Stanley, Loew, & Markman, 2012). The importance of such research is linked to the discussion of risk factors for relationship distress and dissolution, in that low socioeconomic couples tend to have greater stresses related to financial issues, which can effect relationship stability (Hawkins et al., 2012).

A criticism of outcome studies in relationship counselling and education remains the limited follow-up periods in the repeated measures designs. Most commonly the follow up periods of three to six months are employed. As a result Halford et al. (2001) looked at developing a longitudinal analysis of outcomes after relationship intervention. This study however will be discussed in further detail later. A 10 month follow up study by Braithwaite and Fincham (2009), looked at participants engaged in an individualised relationship education program undertaken completely online, and showed strong positive improvements in general mental health outcomes, such measures as the Beck Depression Inventory, as well as relationship outcomes such as satisfaction as measured by the Couples Satisfaction Index. Importantly, these benefits were maintained for almost a year post intervention, showing strong positive results for not only the intervention, but also the medium through which it was presented.

New research into common factors in the efficacy of couples education, has shed light on the most important elements in a successful intervention (Hawkins et al., 2012). The identification of such factors has the potential to create moderators to increase the impact of such interventions, and the positive outcomes for couples (Halford et al., 2003). This could furthermore establish a comprehensive framework for the implementation of couples education. Some of the most important therapeutic factors to come out of the literature so far, include program length, use of instructional manuals, and the use of formalised settings for program implementation (Hawkins et al., 2008). A more recent meta-analysis by Hawkins et al (2012), further strengthened these findings, identifying that the most significant results for couples are gained with programs containing over 9 sessions. However significantly higher dosages of therapy do not appear to create better program effects, with the greatest results from interventions between 9 to 20 sessions. The general CBT focus of educational programs yielded significant results in their ability to enhance communication, particularly because of their focus on effective problem solving, and good communication skills in couples' interactions. This also then lead to greater

satisfaction and relationship quality levels in post-intervention evaluations (Hawkins et al.).

A significant component of many CRE programs is the use of take home exercises or homework. As was noted earlier, the assumption is that couples engaging in behavioural intervention will generalise the skills learnt in session to a more naturalistic setting, and therefore begin to use the skills out of session (Behrens et al., 1990). It has now been found that homework produces significantly strong effect sizes in the use and retention of skills (Gattis, Sevier, & Christensen, 2014; Halford & Bodenmann, 2013). Conversely, the lack of structure related to not having homework may contribute to higher attrition rates, with couples not feeling as involved or accountable (Duncan, Steed, & Needham, 2009). It has therefore been suggested that having a curriculum, creates motivation for clients, with goals to achieve and responsibility to complete work between session, ultimately allowing clients to gain greater benefits (Duncan & Goddard, 2011). Having a curriculum, in addition to homework, may help clients to better understand the concepts presented in session, internalise these, and increase the ease with which skills are drawn on in future situations. This coupled with regular therapist or educator contact, helps strengthen the involvement, motivation and the overall benefits of the intervention (Halford, 2004).

Factors in Couples Intervention

In any couples intervention there are a variety of factors that require consideration when treatment planning (Davis, Lebow, & Sprenkle, 2012). These include the couple's presenting issues, background, appropriateness of intervention, as well as common factors of therapy such as client and therapist variables.

Distress

One of the major distinctions between traditional couples therapy and relationship education has in the past been the treatment of distressed versus adjusted couples (Cicila et al., 2014). Labelled as more of a myth, it has been proposed that distressed couples are not appropriate for couples education programs (DeMaria, 2005; Pepping et al., 2015). Despite the literature commonly suggesting that couples experiencing significant distress are more suited to one-on-one intensive couples therapy, the characteristics of couples that seek and furthermore engage in couples

education, are also actually reflective of those that are experiencing distress, and have considered relationship dissolution (DeMaria). In reality, when working with couples, these interventions tend to overlap, as more than one type of intervention may be integral to alleviating relationship distress (Cicila et al., 2014). Whilst reporting on study results has yielded mixed findings, traditionally literature has argued that when compared to couples in the general population, couples seeking educational intervention are less satisfied in their relationship (DeMaria; Sullivan & Bradbury, 1997). However when compared to those couples seeking couples therapy, those couples enrolled in educational interventions do not appear to be as distressed.

In a study by DeMaria (2005), the specific characteristics of couples seeking couples education and enrichment intervention were analysed. In this study, a pre intervention test battery was distributed to 129 couples participating in a marriage education program at various locations throughout the United States and Canada. This included a revised version of the popular DAS, the ENRICH inventory which assesses couple agreement on 13 subscales, the Adult Attachment Scale, Marital Status Inventory and the Conflict Tactics Scale. The analysis of these measures at pre to post intervention, reflected that couples seeking such interventions are in fact distressed, and a significant proportion have considered divorce or dissolution at some point in the relationship. Essentially the results of this study, in addition to the efficacy studies of relationship education on relationship quality and satisfaction (Halford & Bodenmann, 2013; Hawkins et al., 2008), provide a platform to suggest the appropriateness of such interventions for a greater variety of couples, including those that are currently distressed (DeMaria).

A significant contributor to relationship distress includes infidelity, often cited as one of the more problematic issues to address in couples therapy (Allen et al., 2012). Nevertheless a study by Allen et al. (2012) evaluated the use of a couple education program for the increase in satisfaction and communication in military couples that had experienced infidelity in their relationship. After completing the intervention, couples that had significant distress in their relationship as a result of infidelity, showed significant improvements in satisfaction, and almost identical positive communication patterns as a no-fidelity control group. However it was noted that satisfaction rates for those couples that had experienced infidelity did remain somewhat lower than a control of couples that had not, despite the significant increase pre to post. This reflects support for the appropriateness of couples

education as an intervention for a greater audience including those couples that have significant distress in their relationship (Allen et al.).

Stress

Whilst the potentially detrimental effects of stress in daily life have been researched and well documented, the role of the residual effects of stress in intimate relationships has only received noteworthy attention in the past decade (Pepping et al., 2015; Randall & Bodenmann, 2009). Psychological literature links a stressor, being stimuli, to its effect, being the manifested stress, to distress being the reaction (Randall & Bodenmann). These reactions are individualistic and thus subjective to each person's interpretation of the stressor. However these reactions are embedded within each individuals' social context, and the way an individual copes with stress can be proportionately related to the social consequences. Therefore dyadic stress represents a specific category of social stress, such as the regulation of the relationship, and common concerns and emotional wellbeing of the dyad. Dyadic stress involves stress encountered as a result of the relationship, or stress encountered outside the relationship that effects the dyad directly (Bodenmann, 2005).

Bodenmann, Ledermann and Bradbury (2007) proposed that stress plays a unique role in the deterioration of a relationship, in the process of 'growing apart', or partner alienation. This model proposes that whilst stress has a unique impact on both individuals in the dyad, the effect and subsequent lack of coping, can lead to partners spending less time together. This can therefore result in less joint experiences, weakening the bond between partners, and decreasing communication, self-disclosures and general closeness (Bodenmann et al.). This literally reflects a 'growing apart', as couples start to exist more as individuals rather than as a dyad. A lack of positive communication and a decrease of disclosures about individual needs, thoughts, feelings and goals is therefore often cited as a predictor of relationship dissolution in divorce literature (Bodenmann, 2005; Halford et al., 2007). This model reflects the potentially devastating effects of dyadic stress on relationship functioning. Couples therapy, and education in particular places emphasis on positive communication skills, coping with difficult situations, and managing conflict, with ultimate goals to increase relationship satisfaction. The high economic and personal cost of relationship stress has increased the need, and consequently at times funding, to providing such intervention to couples (Markman & Rhoades, 2012).

Stress on an individual level is commonly, and most simply measured by psychologists and general practitioners alike using the Depression, Anxiety and Stress scale 21 or 42 item (Lovibond & Lovibond, 1995). With the manifestation of psychological symptoms due to stress experienced by both individuals in a relationship, and these being mediated by the existence of the relationship, the impact of an intervention of one partner, on the other, must be taken into account when treatment planning. The DASS can be used as an indicator of stress and its increase or decrease over time, and this can be given to both partners. In a more joint context, the Dyadic Adjustment Scale (DAS) is often also given to both partners to measure distress, with low scores by couples reflecting low adjustment in the relationship. The DAS has particular emphasis on satisfaction, time spent together, and shared goals, all reflected as important elements in relationship satisfaction, and all factors that may become impacted by dyadic stress (Bodenmann et al., 2007).

Along with the obvious positive effects of couples interventions on relationship outcomes, the effects on general psychological functioning have also been noted (Snyder et al., 2005). In this way couple therapies explore and deal with the way in which the relationship can influence individual functioning and vice versa. An example of this includes if one partner experiences severe anxiety, this can manifest in the relationship through less communication, withdrawal and a marked decrease in couple activities (Baucom, Stanton, & Epstein, 2003). Alternatively constant arguing and conflict within a relationship can result in increased stress and eventual anxiety for partners. In this way couple interventions provide psychoeducation, encourage communication regarding the possible effects of the anxiety on the relationship, and the implications of these effects including issues not necessarily related to the individual's condition (Baucom, Porter, Kirby, & Hudepohl, 2012). This is in a holistic effort to address relationship issues that have led the couple to seek intervention, as well as specific individual psychological issues. In this way joint interventions can motivate partner support, and coping as a way of strengthening the relationship. As noted by Baucom, Porter, Kirby and Hudepohl (2012), the 'common variables' of couples therapy are just as important as they are in general therapy, and can have a profound effect on the effectiveness of the intervention.

Common Factors

It is argued that a certain combination of factors from couples therapy, couples education, as well as assessment and feedback, is the most effective and holistic way of working with couples ranging from satisfied to severely distressed. The aim of this is creating stronger and more satisfying relationships, based on the most efficacious treatment (Halford & Snyder, 2012). Whilst some researchers assert that therapist variables, are crucial in the success of an intervention, others that engage the model-driven paradigm of change, argue it is the intervention itself that determines success (Davis et al., 2012; Pepping et al., 2015). Undeniably, client variables also contribute significantly to therapy outcomes. This includes the client's motivation and willingness to engage and take responsibility for change. Specific to couples therapy, when one partner is less engaged, or just 'coming along', and where distress is evident and divorce commonly threatened, there is likely to be a poorer outcome from the intervention. This is in comparison to those instances where both individuals are committed to the process of change. Nevertheless if the therapist is unable to engage each member of the dyad, or is perceived to be siding with one partner, an alliance rupture may occur and result in withdrawal, and ultimately a negative outcome (Davis et al.).

Alternatively, static variables such as a therapist's age, race and gender are not seen to account for significant variance, and arguably neither is the experience level of the therapist (Blow, Sprenkle, & Davis, 2007). Instead an empathetic, friendly and positive therapist that is attune with the individualistic needs of each partner, is more likely to account for the successful engagement of a couple and positive intervention outcomes (Schade et al., 2015). Additionally cultural sensitivity allows the therapist to cater the intervention in the best way to each individual couple, and competence to interrupt negative or destructive interactions within therapy, contributes to engagement (Blow et al.). In this way the therapist is able to foster and encourage hope within the couple, which is seen as an important common element in the successful enhancement of romantic relationships.

Additionally factors common to individual therapy have also been noted as having importance in couples intervention (Benson et al., 2012). Whilst this research is still somewhat lacking, positive correlations have been suggested between the working alliance and the outcomes of couples therapy interventions (Davis et al., 2012). In this way, the empathy the therapist is able to display towards the couple

equally, is important as part of an effective and engaging intervention (Hawkins et al., 2012). In couples therapy the issue of a strong therapeutic alliance is seen as equally important as individual therapy, however much more complex (Davis et al., 2012). In this context, the therapist must not only foster and monitor their alliance with each client, but also alliance between the partners, and the overall alliance between the triad. This is a complicated dance for the therapist as validation of each partner may be interpreted by the other as a siding, or a rejection of the other's feelings and cognitions. This therefore involves keeping a delicate balance between partners. Specifically in the context of couples therapy, this may involve the therapist listening to each partner, and reframing their thoughts in a way that the other partner may find easier to hear. In this way the therapist fluctuates between each partner, taking sides, and allowing partners to feel heard, accepted and understood, in this way validating each other's views (Davis et al., 2012). As part of an individual working alliance, the belief that the intervention is targeting the goals of the couple, and tasks are directly related to presenting problems is paramount. This also becomes essential in couples therapy (Johnson & Talitman, 1997). Therefore establishing, evaluating, maintaining and if necessary repairing, the working alliance through client feedback and intuition is an essential common factor in successful couples therapy.

One area identified by the Hawkins et al. (2012) meta-analysis as a deficiency in the exploration of common factors in couples interventions, was the personality characteristics of the individuals who engage with such programs. Interestingly this identified the potential for another common factor in couples counselling and education, as commitment to the program itself. The act of committing and attending an intervention may have a strong effect on satisfaction and quality outcomes (Hawkins et al.; Pepping et al., 2015; Stanley, Rhoades, & Whitton, 2011). It is presumed likely that the act of attendance to a program to enhance the relationship, will strengthen the commitment to be in the relationship itself. This will in turn reflect an observable intention to remain in the relationship, and thus enhance security, trust and ultimately the satisfaction and quality of a relationship (Stanley et al.). This can closely be linked to the idea of *self-regulation* used as a key component of intervention in such programs as Couple CARE (Halford, Moore, Wilson, Farrugia, & Dyer, 2004).

Self-regulation

Effort exhibited by an individual as part of their intent to create a fulfilling and satisfying relationship, is often seen as directly proportional to therapy outcomes (Halford & Snyder, 2012). Essentially this reflects the principal that committed relationships take work (Levine & Markman, 2001). This involves not only having insight into the functionality of the relationship, but also taking active steps to identify and improve any strained, or dysfunctional areas. An important concept in couples counselling and especially in couples education is therefore self-regulation (Halford et al., 2007). An idea first offered by Halford, Sanders and Behrens (1994), it asserts on a broader level that individuals have the ability to modify and control their own behaviour, and thus have the ability to influence, and alternatively enhance their relationships positively. This reflects the notion that responsibility to create a mutually satisfying and functional relationship is placed on each individual, who must exert effort in order for the relationship to be sustained.

Self-regulation theory proposes three elements in regards to effort needing to be exerted, these include appraisal, the setting of goals, as well as the implementation of change (Halford et al., 1994). Appraisal is the ability of one partner to identify their own relationship behaviours and the effect these may be exhibiting on the functioning of the relationship, as well as how these can be altered to enhance functioning. Secondly, goal setting involves identifying clear objectives in behaviour change. The focus remains on what the individual can do, or how they can change their own behaviour to enhance the relationship. Therefore maintaining emphasis on one's own actions, rather than placing blame or emphasis on the other's behaviour. Finally, change implementation is the actioning of these goals, meaning the measurable steps the partner takes to enact the goals identified, or the self-change the partner engages in to enhance relationship functioning. Often this can result in a fourth element of self-regulation, which involves self-evaluation. This is the evaluation of the effects of the goals enacted, and whether these changes have sufficiently influenced the relationships to increase mutual satisfaction (Wilson et al., 2005).

The idea of giving couples responsibility for their relationships, and their own actions and behaviours within them to create functional relationships, promotes the use of self-regulation skill enhancement within couples therapy. This can be particularly helpful for number of reasons in couples therapy (Fincham & Beach,

1999). This includes scenarios where one partner blames the other's behaviour for deficiencies in the relationship, resulting in a felt sense of powerlessness by the partner. Therefore using the self-regulation principal, the partner would be motivated to make the appropriate changes to enhance relationship satisfaction, and ultimately empower them to start making behavioural goals. Alternatively self-regulation could also provide the skills and encouragement to the partner exhibiting distress, to make changes in their own behaviour or coping, and ultimately help increase satisfaction, and strengthen the relationship through self-change (Halford et al., 2004; Halford & Snyder, 2012). As has been discuss previously, positive communication skills have been linked to high satisfaction levels in relationships, these specifically includes smiling, empathy and humour (Gottman et al., 1998). In relation to self-regulation, motivating couples to exert more control over these behaviours can directly result in healthier, more satisfied partners that exhibit positive and constructive forms of communication between each other (Wilson et al., 2005).

As noted earlier, a study by Halford et al (2007) used data from 191 couples that were recently married, for a longitudinal study of couple satisfaction. Measures completed by couple included the DAS, as well as the Behavioural Self-Regulation for Effective Relationships Scale, to directly measure self-regulation of each partner within the dyad. Using a repeated measures design, couples completed assessments annually for five years. The correlation between DAS scores and the SR slopes were analysed within a multilevel modelling framework. Results showed some support for the proposed relationship between self-regulation and relationship satisfaction. Whilst a causal relationship was not identified, a correlation was demonstrated between the amount of self-regulation exhibited by the individual, and the intercept of dyadic satisfaction. Being composed entirely of self-reports some bias may have existed in the data, and thus results must be interpreted with caution. However the results of this study do support literature that shows an association between self-regulation and satisfaction. Therefore whilst Halford et al., have shown self-regulation may impact on relationship satisfaction, it has not been concluded this is a direct determinant of relationship satisfaction.

Another longitudinal study that included an 11 year follow-up by Hahlweg and Richer (2010) found strong positive results of a cognitive behavioural education intervention for couples in distress. Specifically the evaluation of whether couples retain the specific skills learnt as part of the intervention, such as listener and speaker

skills, as well as conflict management skills in a long-term follow up. Some previous longitudinal studies have demonstrated consistently positive effects with lower separation rates in 5-year (Markman et al., 1993), 4-year (Halford et al., 2001) and 5-year follow ups (Thurmaier, Engl, & Hahlweg, 1999), with higher positive communication, and general satisfaction rates when compared to controls. The Hahlberg and Richer study exposed 67 couples to a ‘Couples Learning Program’, and compared these, to couples in a control condition at pre, post, and a number of follow-up assessment points, including an 11 year follow-up. Results specifically related to the retention of skills showed that almost 50 percent of couples remembered the use of positive speaker skills, and nearly 60 percent of couples remembered effective listening skills. The hypothesis that even after a significant amount of time, couples who undertook a couples education program would have lower relationship dissolution rates was therefore supported. Furthermore although couples in the intervention group did not have lower distress rates than those in the control, they did both have significantly high satisfaction rates, ranging from 70 to 81 percent. The findings of this longitudinal study therefore gave support to the notion that these often brief, yet structured interventions, can have long lasting positive effects on a relationship quality for couples.

Couple CARE

As noted earlier relationship education in particular, whether as part of a more in-depth therapy or singularly as a treatment, has received increased attention (Hawkins et al., 2008; Markman & Rhoades, 2012). Studies have shown high efficacy rates, and lower relationship discord and divorce rates, as well as increased satisfaction and communication skills post intervention (Braithwaite & Fincham, 2009; Jakubowski, Milne, Brunner, & Miller, 2004). Despite this research, two criticisms of education intervention remains, this includes that most couples engaging in the research are relatively well adjusted, and not significantly distressed, and secondly it appears benefits gained from the intervention tend to dissipate over time, according to longitudinal data (Braithwaite & Fincham). One intervention that appears to have addressed these deficiencies in couples relationship intervention, is Couple CARE (Halford et al., 2004). In line with traditional behavioural couples therapy, the program focuses on changing certain behaviours. In this way there is a set learning of skills, such as the decrease in negative behaviours such as

demoralising, or arguing, and increase in positive behaviours such as active listening and caring.

Couple CARE is comprised of six units covering topics of self-change, communication, intimacy and caring, managing differences, sexuality and adapting to change (Halford et al., 2004). These are all common areas of relationship functioning, and effect relationship satisfaction and distress. Couples are asked to watch a short segment on a DVD accompanying the program, and then complete a series of tasks individually, and together throughout the week. Tasks are then evaluated each week with the help of the psychologist or counsellor (Halford et al.). This most commonly takes the form of self-change plans, where the participant is asked to come up with a task to enhance the area of relationship functioning in review that week. The role of the therapist is to not only review how successful they were in completing their self-change plans, but also to demonstrate and discuss the concepts pertinent to that week's relationship area. Furthermore, their role includes helping the couples to then implement their plan, and troubleshoot any difficulties that may arise in completing their tasks, or deciding on the inappropriateness. The time frame of completing the program is commonly six weeks, with sessions taking place once a week, and couples watching the DVD and completing tasks in their own time, between sessions.

The uniqueness of the Couple Care program is that it allows couples to access and complete the majority of the program without necessarily entering the therapist's office. Instead couples can engage in telephone sessions, in addition to work completed at home. Studies evaluating Couple CARE using face-to-face controls found that couples in the intervention condition have increased satisfaction rates post-intervention, and thus show clear beneficial outcomes. This essentially gives greater weight to the efficacy of relationship interventions that do not involve face-to-face therapist contact (Braithwaite & Fincham, 2009).

This became one of the major advantages of Couple CARE, as its flexible delivery option in that it does not necessarily need to be presented face-to-face, as it has been proven to be efficacious when engaging with the facilitator over the phone (Halford et al., 2004). As identified in some of the original studies evaluating Couple CARE, there are enormous benefits for offering a program that has ability to be delivered in such a flexible manner, and even fully online (Halford 2004). The opportunity for the couple to be able to exhibit such control over their engagement in

couples therapy gives them the ability to decide when and where they engage with the program, and even their choice in counsellor. Ultimately, this autonomy is likely to enhance their overall engagement in the intervention as well as their review and completion of set tasks (Gattis et al., 2014). As noted earlier stigma, especially in rural communities can dissuade couples from engaging in intervention, this program therefore has the unique ability to bypass such challenges.

Couple CARE was originally designed as an educational manual for couples experiencing distress, in an effort to assess relationship strengths and weaknesses, define points of perceived improvement, and develop key skills to strengthen them (Halford et al., 2004). Couple CARE is strongly based on principles of behavioural couples therapy (hereafter BCT), which is a skills based therapy approach using instruction, behavioural rehearsal, homework and feedback (Kelly & Iwamasa, 2005). Research has identified BCT as an efficacious treatment, in that couples who undergo this therapy report higher positive outcomes than those in control conditions (Baucom et al., 1998; Powers, Vedel, & Emmelkamp, 2008).

Halford et al. (2004) attempted to further enhance the effects of BCT by emphasising the self-regulatory component of each partner. Through the use of rehearsal and homework review exercises, the Couple CARE intervention places responsibility for change with both partners, and thus has been found to increase intervention adherence, and consequently relationship satisfaction. The flexible delivery of the program allows for clients to establish a mutually convenient time with the therapist to review weekly tasks, and in this way does not allow for clients to leave sessions and ‘forget’ about the program. Instead it motivates them to keep working on the relationship without letting themselves lapse back into a comfortable lull.

As noted earlier, self- regulation emphasises each partner’s responsibility at working towards a satisfying relationship. It therefore aims to enhance BCT by teaching specific behaviours to self-directed change. Assessing couples on self-regulation through the use of SRERS measure at pre and post intervals has shown positive results in Couple CARE enhancing self-regulation levels (Halford & Snyder, 2012). When compared to a waitlist group, those couples in the intervention condition show significantly higher levels of self-regulation and overall satisfaction (Halford et al., 2004). Apart from the focus on self-regulation, couple CARE maintains an emphasis on positive contact, including effective communication,

physical contact, sexual relations, affection, shared couple time, commitment, and expectations of the relationship that are realistic (Halford et al.).

As identified by Halford et al. (2013) to show efficaciousness, a psychology evidence-based intervention must be proven to show significant results in two or more randomised control trials. Couple CARE is one intervention that has shown positive effects on relationship outcomes through several trials, and benefits that have been found to be sustainable through follow-ups. Overall the research shows the efficacy of the Couple CARE program in teaching couples important relationship skill such as effective listening and speaking skills, and caring behaviours to sustain mutually satisfying relationship in the long term. Additionally the program has been shown to be equally effective when delivered face-to-face as well as in a more flexible ways, by couples in their own dwelling, with regular check-ins with the therapist. The ability for Couple CARE to be tailored to the needs and goals of each couple, enhances the effects as a means of what is called as a ‘stepped approach’ (Halford & Bodenmann, 2013). In this way a program can be varied on intensity, cost and length, according to resources available to the couple and the therapist.

One of the major and initial studies to evaluate the Couple CARE program and its flexible delivery, was conducted by Halford et al. (2004). This employed the use of 59 couples who were randomised to either the Couple CARE or a control condition. The program was offered in a flexible deliver mode where couples completed tasks at home, and would have weekly reviews with a psychologist over the phone. Participants in the control condition had the ability to complete the program following their waitlist period, totalling 47 couples who eventually completed the program. All couples were either married or defacto, and in the satisfied or mildly distressed category as measured by the DAS. Through a series of ANOVAS, significant change was demonstrated from pre to post intervention in satisfaction levels and higher levels of self-regulation. This reflected a general increase in satisfaction in those couples who completed the Couple CARE program, as well as a significant decrease in measurable relationship instability. The results of this study have since been replicated to show not only high levels of participant satisfaction, but also general improvements in relationship contentment and durability (Halford et al., 2010; Petch, Halford, Creedy, & Gamble, 2012).

In a more recent review, Halford et al. (2013) specifically looked at the effect of couples education on satisfaction, and found that out of 17 randomised control

trials reviewed, 14 showed a positive correlation between increase and maintenance of couple satisfaction, and relationship education. These results add to the body of research showing that couples education, and the flexible delivery of such interventions, is a feasible initiative (Halford et al., 2004). Interestingly however, those couples that reflected a low level of satisfaction at pre intervention, appeared to benefit more in the short-term, with significantly higher levels of satisfaction post intervention (Halford et al., 2004; Pepping et al., 2015). In allowing couples to access relationship interventions more easily, a greater population can be encouraged to participate, potentially creating more satisfied couples within communities, with overall increases in mental health and functioning. Arguably having the program available online could make relationship education generally more accessible for couples who may need such an intervention and could benefit significantly, but may not have the money, or the time available to access a therapist's physical location.

Couples Therapy Online

As a means of reaching the wider population and satisfying more demand for psychological interventions, couples therapy can provide interventions through technology-mediated means (Braithwaite & Fincham, 2011; Cicila et al., 2014). As the ownership and use of computers in households grows, so has the acceptance of this technological medium in accessing mental health services (Cavanagh & Shapiro, 2004; McAllister et al., 2012). The flexibility of such delivery may encourage a wider range of participants, and for those that perhaps would not have considered going to a therapist face-to-face, this then becomes a viable and even acceptable option. Furthermore, it allows therapists to reach those that may have an adverse opposition to face-to-face treatments, or younger populations, to encourage development of good communication skills and strong relationship pillars thus potentially avoiding relationship discord later (Braithwaite & Fincham). In relation to couples education initiatives, research has found that perceived barriers such as high costs and time commitments are likely to decrease attendance for women, with men also decreasing attendance based on the existence of significant time interference (Blair & Cordova, 2009).

The biggest problem here is that there still remains a stigma for couples in accessing couples therapy (Cicila et al., 2014). As psychologist often specialise in couples intervention, as noted earlier, especially in more scarcely populated areas,

this can lead to the community being aware of when a couple enters therapy, for this reason. This can be a strong incentive for not engaging with a professional, and can therefore lead to more serious distress, and eventual dissolution of the relationship, which can have potentially detrimental personal effects on psychological functioning. Research has proposed that distressed couples in particular, may benefit from the ability to access couples interventions that are alternative to face-to-face, allowing them to feel more comfortable (Doss et al., 2009).

Some relationship and family therapists have already taken steps to develop their skills in computer technology and thus capitalise on the growing opportunities provided by the internet (Cicila et al., 2014; Jencius & Sager, 2001; Robinson, 2009). DuBois (2004) conducted an online survey of over 200 internet users, and asked their main purpose for accessing online counselling. The majority reported relationship issues with their partner were the primary reason for seeking online help. In Australia organisations have already begun using videoconferencing as a medium for providing mental health interventions for clients in rural and remote areas and those simply preferring to use the online medium (Cowain, 2001; Hunt, 2002; Robinson, 2009). Relationships Australia (Queensland) have also begun to provide clients and organisations a new form of intervention (Hunt, 2002; Robinson, 2009).

As consumer demand increases, supply of counsellors and experts in areas such as relationship counselling is stretched. To meet this demand, Relationships Australia began to investigate the pros and cons of providing an online service (Hunt, 2002). A report on this provision of service, presented several advantages, as well as disadvantages, and suggestions to overcome these. The advantages of online couples counselling included the client's ease with which they could engage with the therapy and the greater speed with which clients and their therapists could connect. Ultimately this was seen to result in a faster rate a rapport building, and thus positive outcomes (Hunt). They also found that the costs associated with online couples counselling were on average lower than face-to-face therapy. Alternatively, one of the major disadvantages of online therapy was found to be client deficiencies in technology skills (Hunt, 2002). It was suggested however, that training courses and the simplification of the online therapy process has helped to counteract this problem. Furthermore screening clients prior to the commencement of the online intervention, also helped assess suitability. Overall, as a means of accessing a wider audience of couples, interventions have entered the online arena, and have been

shown to be equally effective as face-to-face interventions (Braithwaite & Fincham, 2011; Cicila et al., 2014).

Whilst relationship education has been established as an important tool in increasing satisfaction levels and good communication, as well as decreasing aggression and separation rates in couples, it is slowly becoming recognised as an important intervention during high-risk periods such as first time parenthood (Kalinka, Fincham, & Kirsch, 2012; Petch et al., 2012). Looking more specifically at one of these programs known as the Power of Two online, a study by Kalinka, Fincham and Hirsch, performed a randomised clinical trial to compare couples completing the program online, to a control condition. Latent growth curve analysis evidenced the intervention to be viable in preventing relationship dissolution and functioning decline, at the transition to parenthood stage. When compared to participants in the control conditions, couples who undertook the program showed lower levels of satisfaction decline, and better communication skills, specifically in conflict management (Kalinka et al.). Despite only short follow-up periods of one and two months, the intervention couples displayed markedly improved trajectories of relationship satisfaction and functioning.

Jedlicka and Jennings (2001) conducted a small study in which they provided brief solution focused therapy to 11 couples using email. The study was of a qualitative nature to allow the researchers to gain deeper understanding of the experience, for the couples. They hypothesised that through the use of only words, a focus could be made on the reasons and cognitions behind their emotions, and subsequent ways of interacting with the other person. Therefore the absence of physical gestures, which can cause emotions to be heightened and logical thoughts to be distorted, thoughts as opposed to emotions could dominate the discourse. As a result allow the person to reflect on what they are saying and perhaps even gain a greater self-understanding, and understanding of the other.

The results of the Jedlicka and Jennings (2001) study, based on semi-structured interviews, reflected a satisfaction with the medium, and a confirmation of the study hypothesis. Clients found the emails assisted in diverting from aggression, even resulting in a reduction in tension between the couples. It then allowed couples to explore alternative ways of dealing with problems that were not detrimentally clouded by emotions. The term used to describe this cathartic nature of emails was e-catharsis. Additionally the use of the internet was seen to reduce the anxiety that may

in a face-to-face session interfere with the process. Ultimately the researchers concluded that email therapy can be useful for couples that otherwise would not seek out therapy, and as an appropriate alternative to talk therapy in enhancing outcomes and decreasing conflict. The study had a clear limitation of a small sample size, and as many similar studies have done, excluded the most serious, difficult, disordered populations, ultimately limiting the ability to generalise the findings. Nevertheless because of its qualitative nature, the study was important in adding strength to the evidence that reflects upon the use of technologies as an acceptable means of providing therapeutic intervention to couples that may otherwise chose or be unable to engage in therapy.

Not only has the provision of couples therapy through the internet increased access to such intervention, but also where it is offered has diversified (Markman & Rhoades, 2012). This has allowed for the provision of services in communities where couples are located, with facilitators who understand the specific issues associated with such areas. The ability for the therapist to understand such issues allows for the couple and therapist to connect on a deeper level and for a more accurate assessment and furthermore effective intervention, specifically tailored to the couple's individual as well as social context.

Couples Therapy via Videoconferencing

Videoconferencing allows for couples whose schedules are varied, or geographically dispersed, to be involved in couples counselling (Pollock, 2006). For couples therapists especially, the use of this medium over other internet technologies is greatly advantageous as it allows them to not only hear the couple's interactions, but to also physically see them (Pollock). Essentially however this area of research is scarce, with almost no documented studies exploring couples experiences of relationships therapy online, and more specifically via videoconferencing.

Nevertheless, some attributes typically cited as limitations of videoconferencing may in this case be seen as positive attributes for couples therapy conducted via this medium. An example of this is turn taking, in that only one person may speak at a time, as speaking simultaneously interrupts the audio connection (Rees & Stone, 2005a). Videoconferencing is particularly useful as it forces clients to listen fully and intentionally, this encourages turn taking which has been found to be conducive to many family therapies (Rees & Stone). Conversely, if individuals do

speak over each other, it may be important for a therapist to explore whether this happens outside of sessions, and how the other partner reacts to this (Kuulasmaa et al., 2004). Turn taking however can also have negative consequences (Capner, 2000). Whilst turn taking allows for more task-orientated work, and for all parties to feel heard, it can also potentially depersonalise the process.

Nevertheless, taking time to discuss the technical aspects of videoconferencing within therapy, may also serve to strengthen the alliance between a therapist and their client, by establishing an early cooperative relationship (Kuulasmaa et al., 2004). An alliance is a process variable that is just as important for couples counselling, as it is for individual therapy (Symonds & Horvath, 2004). Symonds and Horvath (2004) performed research into how an alliance is established, maintained and most importantly perceived, by a couple dyad prior to, and during couples therapy. They found that when the couple perceives the alliance as strong, and both partners agree on this strength, the positive outcomes of therapy are significantly greater (Symonds & Horvath).

Alliance

Therapy as an intervention has been studied extensively, and what has emerged is that relationship factors between the therapist and the client can account for up to 30 percent of a client's improvement in symptoms (Asay & Lambert, 1999). This therapeutic relationship has been found to be efficacious when characterised by empathy, genuineness, unconditional positive regard and congruence, as expressed by the therapist (Asay & Lambert). Najavits and Strupp (1990) found that clients perceived therapists who possessed these attributes to be more effective. Forming a meaningful and strong relationship with a therapist can also impact significantly on whether a client continues treatment, and thus can be instrumental in symptom reduction and intervention effectiveness (Beattie et al., 2009).

History

The relationship between therapist and client has been a strong focus in psychological intervention, with its origins grounded in the work of Freud, who originally addressed this subjective connection (Ardito & Rabellino, 2011). Freud asserted that the client was a collaborator in the therapeutic process. In this way despite the client seeking help, little progress can be made if the client wholly and

unconsciously does not want relief, or improvement (Ardito & Rabellino). It is the therapist's role to try and align with the ego, or the unconscious and form what Freud termed as an 'analytic pact' with the client, to recognise and empower their subconscious needs or wishes. Freud saw this as a form of positive transference, which is characterised by an emotional connectedness taking place between a client and therapist, which is not directly related to the actual situation or interaction taking place at the time. Again this reflects the deeper, more unconscious reality the client is experiencing, therefore creates a situation where a client's unconscious feelings are reflected on a conscious and real scenario. The correct identification of transference by a therapist allows for a collaborative, and heavily involved relationship to evolve, creating a strong working alliance between the therapist and their client, to ensure client progress and ultimate improvement.

It was Zetzel who went on to elaborate on this idea of Freud's transference, by identifying the concept known as therapeutic alliance (Arnd-Caddigan, 2012). The focus remained on the actual relationship between the therapist and client, as well as the attachment needs that were being addressed as a result. However this working idea of the therapeutic alliance defined by Zetzel was found to be somewhat lacking in its applicability, as it focused too rigidly on early child attachment, and thus again was refined and defined by a different name.

Greenberg went on to describe the term working alliance as a collaboration based in reality between a therapist and their client (Horvath & Greenberg, 1989). This emphasised the role of the therapist, in working collaboratively in the therapeutic situation, more clearly distinguishing transference from alliance. The alliance allows for a client to gain perspective over their psychological processes, by using the interpretation the therapist provides them as a means of better distinguishing between the real relationship between the client and the therapist, and previous relational experiences. Again focus was placed on the client, as having considerable responsibilities for their own progress, and furthermore this capacity to fulfil these in session.

Carl Rogers in some ways moved away from the traditional psychoanalytic emphasis on the working alliance theology, and to a broader perspective (Rogers, 1957). Whilst he agreed with the overall importance of the therapeutic relationship, he went on to define three major and specific aspects of the alliance that determine its strength and effectiveness. The provision of these elements by the therapist allows

for a strong working alliance to develop, and thus places an emphasis on this connection as a driving force in client change. These three aspects include a genuine interest in the client; genuineness, positive regard and empathy. Positive regard for the client must be unwavering, without condition, and free from judgement, only then can a client trustingly, and more vulnerably reveal themselves to the therapist. Genuineness requires the therapist to be authentic in their desire to work with the client, and sincere in their efforts to interact with, and understand the client. Finally, and arguably most importantly, is the notion of empathy. The therapist must have empathy for the client and their experience, which involves an accurate understanding of the client's experience, their point of view, and furthermore the therapist's ability to then communicate this back to the client. This confidence in the therapist is significant for the client to make further and more personal disclosures in future sessions. This cycle then allows for the client-therapist relationship to strengthen, and as Rogers conceptualised, lead to better treatment outcomes, a finding supported by many studies (Ardito & Rabellino, 2011; Asay & Lambert, 1999; Horvath, 2001); (Asay & Lambert, 1999).

Again putting emphasis on the collaborative element of the therapist-client relationship was Bordin (1979), who took fundamentals from Greenburg's notion of working alliance (Horvath, 2001). It was Bordin who characterised the concept of the working alliance into three, measurable elements. These include the task, bond, and agreement. More specifically, this involves a shared agreement between the therapist and client on the goals of the intervention, as well as mutual agreement on the tasks to be completed in sessions, and finally the progression of a bond between the therapist and the client characterised by the interchange of positive feelings (Ardito & Rabellino, 2011). As a result, a strong working alliance is evidenced when a client has a mutual understanding, and furthermore is in absolute agreement with the therapist regarding the objectives for each session, and the ultimate goals to be achieved as a result of intervention. Through this, a strong bond is likely to be perceived, with the client developing trust in the abilities of the therapist, and ultimately belief in the success of the intervention. Basing the Working Alliance Inventory, now a popular measure, on these three concepts, has led to studies being able to comparatively evaluate the amount of overall perceived working alliance between participants and their therapist, and for this to then be compared between groups (Horvath & Symonds, 1991a).

Research has identified two types of a working alliance that can exist in amalgamation (Horvath, 2001). The first type represents the client's perception of the therapist as being helpful, caring and supportive. The second type is based around the client's perception of the therapeutic process being a joint venture, and thus indicates reciprocal effort and responsibility. Horvath et al. (1993) postulated that the combination of these, is correlated with the increased likelihood of psychological improvement.

Ogden (2004) spoke about the idea of the 'analytic third' in psychoanalysis. This concept is particularly interesting to consider in the realm of online therapies. The 'analytic third' refers to the subjective space that is created between therapist and client. Essentially the space is the psychological place between the self and the other, in this case, the client and the therapist. Studies in the online therapies field have grappled with this idea of the subjective space, and how it is perceived by clients, and more importantly how it is rationalised and encompassed by each individual (Jarome & Zaylor, 2000; Muhlbach & Ptusson, 1995). Some studies have noted that the uniqueness of the technological medium actually contributes to the client's ability to rationalise and engage with the therapeutic experience more fully (Krum-Heller Roe, 2002; Stubbings et al., 2015).

It is the unique ability of this medium to confront the client with a number of realities (Krum-Heller Roe, 2002). This encourages the client to confront and evaluate the issue of closeness mediated by the technology, in contrast to the physical distance. Similarly, it prompts reflection on the concurrent presence and absence of the therapist in the room, and consequently the client's decision to expose themselves, or retreat from the therapeutic process. Having these issues exposed so early in the therapeutic process is unique to online interventions, and consequently the exploration of these and the subjective shared experience the therapist-client relationship, can intensify the experience, and ultimately have the potential to enhance the relationship (Krum-Heller Roe). The issue of scepticism among practitioners and researchers themselves, regarding the ability to build a therapeutic alliance in an online medium has been discussed at length by Rees & Stone (2005a) and Simpson et al. (2005).

Working Alliance and Online Therapies

Because the amount of impact a therapeutic relationship has on the process of

change in therapy, the impact of the modality with which therapy is delivered on this relationship becomes crucial to examine (Amichai-Hamburger, Klomek, Friedman, Zuckerman, & Shani-Sherman, 2014; Halford & Simons, 2005). A study conducted by Cook and Doyle (2002), investigated this notion of establishing a strong working alliance in an online forum using text, with 14 female participants seeking assistance with depression and relationship issues. The results showed no significant differences between the online condition and a face-to-face condition for working alliance scores. Essentially, clients in the online condition demonstrated a collaborative and bonding relationship with their therapist, much the same as those who communicated with a therapist face-to-face.

As discussed earlier, one setting that has allowed researchers to study this amply, is the prison system (Steel, Cox, & Garry, 2011). A study conducted by Morgan, Patrick and Magaletta (2005), aimed to examine how online counselling can impact on the therapeutic alliance, as well as client mood and satisfaction. The study divided 186 adult prisoners between a face-to-face condition and an online therapy condition. The majority of these participants presented with mood disorders such as bipolar and major depressive disorder, and underwent assessment and brief psychological or psychiatric intervention. The ratings yielded by the participant responses found no significant differences between the two modalities in terms of perceived alliance. Participants perceived the therapeutic alliance to be strong, and rated satisfaction with treatment similarly in the face-to-face conditions, compared with the online therapy condition. Mair and Whitten (2000) however caution against the interpretation of such studies due to the use of limited population, and the conflicting variables for incarcerated populations. Morgan et al. (2005) concluded that based on these results, the way in which therapy is presented does not influence the key aspects of the therapeutic experience for clients in either a positive or negative Furthermore, online therapy appears to be an efficient and efficacious means of providing therapy, without potential decreases in quality of the therapeutic alliance (Morgan et al.). As discussed in detail earlier, these results mirror those of the Day and Schneider (2002) study, and more recently Stubbings et al. (2015), who went on to conclude that a functional working alliance could be established regardless of the medium by which the therapy is presented.

In an effort to ascertain whether therapeutic alliance can be developed and strengthened through the use of technology for the presentation of an intervention,

Hanley and Reynolds (2009) completed a meta-analysis of online studies. Through the analysis of over 161 clients, in five studies that compared their online treatments with previously established face-to-face interventions, they were able to provide evidence that reflected the ability for formation of a therapeutic alliance, through various online mediums used to present psychological intervention. Furthermore, three out of the five studies actually demonstrated higher therapeutic alliance ratings in the online conditions, when compared to previously established face-to-face comparable groups.

Social Presence and Alliance Online

The idea of successful social presence in the online context, essentially reflects a constant awareness by the client that the therapist is present, thus a constant engagement with the other, mimicking the process that would usually be expected of a face-to-face encounter (Holmes & Foster, 2012; Simpson & Reid, 2014b). Social presence therefore is the degree to which the therapist is perceived as a real person when mediated through an online medium, and sharing cyberspace with the client (Gunawardena & Zittle, 1997). Research has identified adequate feelings of social presence by participants using videoconferencing, with many noting that they eventually felt as if the therapist was in the same location as them (Capner, 2000; Miller & Gibson, 2012). Obviously this can be markedly different as it is dependent on the media being used, for example synchronous chat as compared to videoconferencing (Amichai-Hamburger et al., 2014). It has been noted that establishing social presence is an important pillar in building relationships and alliance in online communications, and thus even more important in conveying a successful psychological intervention (Holmes & Foster). In this way studies that have examined the therapeutic alliance, have attempted to replicate the attendance or ‘being there’ of the therapist in a face-to-face psychotherapy session, to that of ‘being there’ in cyberspace (Holmes & Foster; Pelton et al., 2015). In a study by Holmes and Foster this objective was explored by comparing a number of outcome measures of counselling clients in a face-to-face condition, to those placed in an online condition. These included a social presence measure (The Networked Minds Social Presence Measure), as well as an alliance rating measure (WAI-short form), and a General Health Questionnaire.

The results of the Holmes and Foster study (2012), reflected no significant differences between conditions in the general mental health functioning of clients in either group. Alternatively there was a significance difference between groups in the therapeutic alliance ratings from clients in the face-to-face condition, as opposed to the online clients. Despite a small effect size, clients in the online condition rated their alliance with the therapist as significantly stronger. More specifically, these differences appeared to come from the goal subscale of the working alliance measure. This reflected that online clients had a stronger understanding and agreement with their therapist about the goals of the treatment. This allows for supporting the notion that a therapeutic relationship can in fact be established between a client and therapist despite them never sharing a physical space (Cook & Doyle, 2002; Holmes & Foster). In regards to social presence, clients in both conditions rated social presence at a similar rate, with no significant differences. Thus suggesting that clients who formed a relationship with their therapist online, perceived similar rates of engagement and even awareness with their therapist as those who had only seen their therapist in the traditional face-to-face way. It has been reported that online technologies used to present psychological intervention to clients, include all emotional, behavioural as well as psychological components that would be involved in the same face-to-face interaction, and thus contribute to the degree of social presence felt. The Holmes and Foster study further gave weight to this evidence in that results reflected no significant differences in the ratings of the social presence felt by clients in the face-to-face, to the online conditions.

Alliance and Videoconferencing

It has been shown that nonverbal communication is an essential way of communicating with those around us. It is a means of conveying undertones or messages we could not, or would not always verbally (Fussell, 1995). In particular eye-gazing and hand gestures are seen as significant in facilitating the rhythm of conversation, as well as assisting in the conveying of verbal fluency and meaning. Studies examining the establishment and maintenance of a working alliance in online therapies have persistently demonstrated one limitation; the absence of nonverbal cues (Cook & Doyle, 2002). The use of videoconferencing however has managed to eliminate this as a short coming of online therapy (Manhal-Baugus, 2001; Simpson & Reid, 2014b). Furthermore, research has shown that relationships online have the

potential to be just as strong, and emotionally vested as those formed on the computer (Amichai-Hamburger et al., 2014; Cook & Doyle; Richardson et al., 2009).

As discussed earlier, the therapist bias that exists in regards to the formation of an alliance in videoconferencing therapy is rooted in a disbelief that empathy, genuine regard, warmth can be transmitted adequately through the screen, therefore potentially creating a barrier for the development of a meaningful relationship between the therapist and client (Simpson et al., 2005). Despite these strongly held assumptions, studies of a qualitative and quantitative nature alike have consistently shown that therapeutic alliance ratings appear comparable across video and face-to-face conditions (Cluver, Schuyler, Frueh, Brescia, & Arana, 2005; Mitchell et al., 2003; Simpson et al.; Stubbings et al., 2013). Furthermore studies have postulated that it appears to be the individual characteristics of clients and therapists that influence their attitudes to, and about the therapy, rather than the technology itself (Jones et al., 2006; Simpson & Reid, 2014b).

One study in particular that evaluated perceived alliance and the use of videoconferencing, referred to as distance-technology, was conducted by Simpson, Deans and Breber (2001). This study asserted that the development of therapeutic rapport would be possible through videoconferencing due to the availability of visual cues and gestures. The results showed a significant satisfaction with this mode of therapy and furthermore participants actually showed a preference for it, perceiving videoconferencing as less confrontational (Simpson et al., 2001). Clients also noted experiencing a greater sense of freedom to discuss issues they may have otherwise felt inhibited to disclose. Scores gained from the Penn Helping Alliance Questionnaire, found that the ability to form a meaningful and sustainable alliance was also not hindered by the technological medium.

In 2005, Simpson et al. (2005) again looked at whether satisfaction with videoconferencing as well as perceived therapeutic alliance could be established via this technological medium. The study used a CBT intervention for the treatment of eating disorders, in particular bulimia. Baseline measurements were compared with post and one month follow up measures, with the results reflecting consistent levels of satisfaction with the medium as well as strong alliance ratings for all six participants. In a mixed method approach, qualitative interviews were conducted with all participants post the intervention to gain a greater understanding of the client's experience, as well as factors that may be important when engaging in

videoconferencing. This offered a unique perspective as many participants had previously engaged in face-to-face therapy, and these interviews allowed them the objective ability to compare the experiences. Whilst all participants rated satisfaction at either medium to high, a number of participant added that they felt less self-conscious, and less intimidated compared to face-to-face therapy. This perhaps makes video particularly suitable for use with patients presenting with eating disorders, especially those with strong feeling of self-consciousness or shame, encouraging them to engage and continue treatment, which they may otherwise discontinue (Simpson et al., 2006). Importantly, the results also found that participants did not perceive the video as distracting, or as interfering with their ability to focus on session material. However, initially some participants did note some anxiety about the use of the medium, and the idea of the monitor feeling like a barrier, all of which subsided after the initial few sessions.

In regards to the therapeutic alliance specifically, overall participants in the Simpson et al. (2005) study rated levels of therapeutic alliance as high. When comparing results of each of the subscales of bond, openness, initiative and partnership, to those attained from a face-to-face sample in a study also assessing the use of CBT, all except for initiative, were slightly higher in the videoconferencing sample of this study. In this way the findings are generally comparable with results of similar studies since (Germain et al., 2010; Simpson & Reid, 2014b; Stubbings et al., 2013), and have given light to the idea that a meaningful therapeutic alliance can in fact be established through intervention conducted via videoconferencing.

Participants noted that whilst the relationship felt different, when compared to their own face-to-face therapeutic experiences, they could not conclude it was any better or worse. Additionally, although it may have taken a few sessions to adjust to the technological element, it did not appear to impede the development of this relationship. This again is consistent with previous research that identifies the video as allowing the therapist to still use various audio and visual cues to enhance the experience, much like face-to-face (Capner, 2000; Gammon et al., 1998; Hassija & Gray, 2011). As with much research in this area, the small sample size of the study as well as no long-term follow-up measures, or a traditional control group, limitations in the ability to interpret and generalise these findings exist. Nevertheless, the results however do contribute to the growing body of evidence suggesting videoconferencing is a viable alternative to face-to-face psychotherapeutic

interventions, having the capacity to foster meaningful and effective therapeutic alliance.

A more recent review by Simpson and Reid (2014b) found support for the ability of a therapeutic alliance to be established via videoconferencing across a range of client presentations and diagnoses. For particularly anxious clients or clients exhibiting doubts, where engaging in videoconferencing may mean a greater chance of attrition, an initial face-to-face consultation is recommended. In reference to the components that characterise therapeutic alliance, the review found that bond and presence were rated as strong across studies, and were found to develop relatively early in the intervention process. Ratings in the 23 studies reviewed, consistently highlighted that videoconferencing has the ability to transmit warmth and thus facilitate the development of a collaborative relationship between client and therapist. Simpson and Reid concluded that face-to-face therapy may no longer be the gold-standard of therapy, with clear benefits for clients, evidenced across a wide variety of studies.

Overall, telepsychology studies have been capable of demonstrating that psychological interventions presented via videoconferencing have the capacity to develop and subsequently sustain a strong alliance between client and their therapist (Jones et al., 2006; O'Reilly et al., 2007; Simpson & Reid, 2014b). This is despite no face-to-face contact with the therapist (Théberge-Lapointe et al., 2015). Moreover, the issues specific to videoconferencing such as an interrupted feed, and practical realities such as adjustment of picture and volume do not appear to impede this relationship in its establishment or maintenance, or even the clinical outcomes expected from the intervention, if presented equivalently face-to-face (Amichai-Hamburger et al., 2014; Griffiths et al., 2006).

Alliance in Couples Therapy

As noted earlier, the alliance a therapist is able to establish between themselves and their client can to some degree be predictive of therapy outcome (Anker, Duncan, Owen, & Sparks, 2010). This is also the case for couples therapy, where studies have also found a strong causal link between alliance and therapy outcome (Anker et al.; Knobloch-Fedders, Pinsof, & Mann, 2007).

Studies examining the relationship between alliance and therapy outcomes have found that perceived alliance explains between 2.5 percent (Horvath & Bedi,

2002) to 7 percent (Horvath & Symonds, 1991b) of variance in outcomes. This has been found to be applicable to many clinical presentations and across various modalities (Castonguay, Constantino, & Holtforth, 2006). Nevertheless the complexities of couples therapy bring their own individual issues with rapport, and the way the therapist aligns with both individuals of the dyad. Having been presented with two individuals as well as the dyad, the therapist must negotiate their way to create a collaborative relationship, ensuring they do not align with one client more than the other, or more importantly, do not ‘appear’ to align with one more than the other. Should this happen, it can result in what is known as split alliances (Anker et al.). In alliance splitting, it is the aim of one partner to align with the therapist to a greater degree than the other. The therapist must be aware of this tactic, as this can contribute towards either the effectiveness of an intervention, or its failure (Anker et al.). Studies have also found that gender differences can be a factor in couples therapy, in regards to the strength of the link between alliance and therapeutic outcomes, although the extent of this is mixed in the findings (Knobloch-Fedders et al., 2007). It has been found that when women perceive the alliance to be strong, this appeared to predict the outcomes of therapy.

One of the larger studies to examine the relationship between alliance in couples therapy, and treatment outcome was conducted by Anker et al. (2010), who compared 250 couples in a clinical setting that were seeking psychological intervention for marital distress. The study utilised a naturalistic sample of couples from community based centres that had been on average together for 11.8 years, and aged around 38.5 years. All couples engaged in at least 4 sessions with a therapist and were given pre, post, during, and follow-up measures including the Locke Wallace Marital Adjustment test and Sessions Rating Scale for alliance ratings. Analysis of the entire sample found a strong positive relationship between client rated alliance, and outcomes of the therapy. A more controlled sample that involved clients that had at least 4 sessions, found a strong relationship between both the last and third sessions, and final outcomes. When the alliance scores of couples were greater than the mean alliance scores, this was reflective of those couples who achieved reliable or clinically significant change. This reflected a strong relationship between high alliance scores and significant improvements in relationship functioning.

In regards to gender, analysis of results in the Anker et al. (2010) study revealed that men's alliance scores attained in the final session were a stronger predictor of outcome, than those of the female clients in the sample, mirroring the results of similar studies (Anker et al.; Knobloch-Fedders et al., 2007; Symonds & Horvath, 2004). This yielded some interesting conclusions, in that the authors suggest that therapists may need to pay more attention to the male partner and their engagement in the therapeutic process throughout treatment, since their engagement appears to be the strongest predictor of outcome. The study also found that in 62 percent of couples, it was the woman who initiated therapy, leading to an interesting conclusion in that perhaps the therapist focus may not necessarily need to be on the man, but the partner who may not be as engaged and who did not initiate the therapy (Anker et al.).

Expectations

A well-researched area in face-to-face counselling is client expectations, and furthermore the relationship between these expectations, attitudes toward counselling, and client's willingness to engage in and then sustain therapeutic intervention (Jacobson & Truax, 1991; Kimberly, 2005; Rochlen et al., 2004). Both therapists and clients have expectations when they enter into therapy (Tambling & Johnson, 2010). Therapists expect their clients will speak about their issues, feelings and their experiences, whilst clients expect their therapist to be competent, trustworthy, empathetic and genuine (Tambling & Johnson). It has been argued that positive expectations may enrich a client's experience, as they commonly reflect motivation and willingness to engage in treatment (Caspar, 2005).

Clients who have engaged in therapy previously, especially face-to-face, are likely to have formed expectations due to their impressions of their initial experiences (Suler, 2001a). In videoconferencing, many of the features of face-to-face therapy are replicated, however the superficial distance between therapist and client may be used as a comparison point by clients, and thus potentially begin to influence their motivation or willingness to engage (Suler). It is therefore important to discuss these features prior to the commencement of therapy (Suler). Notably, data however does suggest that expectations, as a client variable, can fluctuate and change throughout the therapy process (Asay & Lambert, 1999; Rochlen et al., 2004).

A study by Tambling and Johnson (2010) in particular examined client expectations about couples therapy. Twenty six couples were interviewed four times during the process of their therapy using semi-structured interviews. Many clients reported little to no expectations pre-therapy. Expectations regarding the therapist were relatively standard in that clients expected their therapists to be warm, empathic, trustworthy and experienced (Tambling & Johnson). Whilst many of the clients reported that their expectations were met, it was also evidenced that clients could adjust to unexpected experiences, which did not impact negatively on outcomes (Tambling & Johnson). Tambling and Johnson hypothesised that this was due to participants having their partner present in the therapy, and therefore took the opportunity to discuss the unexpected at depth with them.

In this way, studies that have examined client expectations have linked these to attitudes, willingness to engage and utilise therapeutic services, as well as preferences for types of intervention (Beattie et al., 2009; Constantine & Arorash, 2001). Especially in the examination of client expectations of online therapy, given the comparative novelty of therapy presented via this medium, expectations about what to expect from the process, or the therapist may be largely inaccurate (Nguyen et al., 2012; Rochlen et al., 2004). In relation to this medium, as well as psychological intervention in general, the effectiveness of psychoeducation and information provision to help shape realistic expectations have been found invaluable (Rochlen et al.). Interestingly however, Germain et al (2010) found when researching the use of videoconferencing to convey intervention for PTSD, that discomfort with use, and initial negative perceptions did not impact overall on the development of a therapeutic alliance. In addition to investigating the client's expectations, many studies have also begun to explore client's overall experience of online therapy (Kimberly, 2005).

Experience

The study of client experiences is essential in understanding the implications on therapeutic processes, and subsequent outcomes (Elliott, 2008). Specifically to this review, the understating of client experiences in regards to videoconferencing, can identify positive elements, and mitigate any challenging aspects, to ultimately enhance outcomes. Prior to this section, the studies described inevitably reflect participant experiences, therefore only be a brief overview will be provided here.

A study conducted by Lewis, Coursol and Wahl (2004) investigated the experiences of clients who engaged in cyber counselling using videoconferencing. Clients were then interviewed using probes and follow-up questions to elicit a number of themes. Through thematic analysis, they identified a number of important themes generated by the client responses. These included the notion that clients found videoconferencing more comfortable than traditional face-to-face counselling, in that they felt less intimidated and less awkward in the experience due to the lack of physical presence by the counsellor. They experienced less pressure than is commonly generated by being in the same physical presence as the counsellor, and instead noted feeling comparatively more comfortable. Another theme identified was that the experience elicited a deeper emotional experience than the client had initially expected, with the client feeling deeply immersed in the counselling process. Furthermore, what the interviews revealed was a sense of empowerment felt by the client that they and the therapist shared a common space that belonged to neither, and thus gave a sense of control over the process to the client. As with similar studies (Mallen, Vogel, Rochlen, et al., 2005), the client described the technology became less of a feature, as the therapeutic process began. In this way the focus became about the actual session and the therapy, rather than how it was being delivered. These findings have been echoed in online therapy literature (Day & Schneider, 2002; Lewis et al., 2004; Simpson et al., 2005(Richardson et al., 2015)) and provide strong evidence of the therapeutic experience of videoconferencing as not necessarily being subpar to that of face-to-face therapy, but instead ‘different’.

Alternatively, the Lewis, Coursol and Wahl (Lewis et al., 2004) study also aimed to identify important issues with the online medium for counsellors. The counsellor in this study identified feeling that the experience was not equal to face-to-face interaction, and instead felt very two dimensional. She noted that once she was able to accept that the experience did not ‘feel’ the same, she was able to engage in the experience easier, and found there to be a heightened focus on the therapeutic process. This was similar to the client experience, in the clients reflected a strong focus on listening skills despite non-verbal cues being available. This helped them engage in the therapeutic process and give focus to the work. This focus on counselling however did not necessarily enhance the emotional connection with the therapist, and continued to feel something was lacking. Furthermore, the therapist identified that with face-to-face counselling, silence can be used as a tool in

facilitating the therapeutic process. The experience of online therapy did not appear to give the same effect, instead prompting the receiver to attempt to distinguish whether the silence was genuine or a time lag, and thus a technological interruption.

Another theme identified by the Lewis et al (2003) study, and similar studies (Simpson et al., 2005), was that the clients felt empowered by the process, as they perceived to have more control over the sessions. A direct quote from a client was “I don’t come into her office...she actually comes into mine”. Even normally trivial things such as the ability to adjust volume created a greater perception of control. This has been supported in other research that has allowed the voice of the client to articulate just how important this feeling of control is to them (Capner, 2000; Zilliacus et al., 2010). In this way not only can the client adjust volume and picture, but ultimately terminate the session by switching off the camera, or turning off the monitor without any direct repercussion from the therapist. An overarching theme however was that as the therapy process progressed, the client became less aware of the technology and more absorbed in the counselling process itself, describing the technology as non- problematic, and rather a ‘vehicle’ to reach the counsellor (Lewis et al.). This was reflected in client feedback describing the overall experience as novel but positive. Overall, clients that are not tasked with directly entering a therapist’s office, and instead connect via video are allowed a greater sense of independence, and this may ultimately create an experience that is not only therapeutic but also empowering (Mallen, Vogel, Rochlen, et al., 2005).

A more recent study which identified similar themes to that of the Lewis et al. (2003) study, was conducted by Beattie et al. (2009). This was also a qualitative study in which semi-structured interviews were conducted previous to, and post the therapeutic intervention. Essentially all clients found the ability to engage in therapy from their homes as the major advantage of their participation in the study (Beattie et al.). The majority of participants also found their experience as positive, and the therapy as helpful. Participants further found developing a positive and quality working relationship with their therapist was possible, and not challenged by the technology (Beattie et al.). Therefore, what the study found was that as part of evaluating client’s experience of online therapy, there must also be a focus on the satisfaction a client perceives with treatment presented via this modality. In turn, the study of both effectiveness and satisfaction allows for a better understanding of the overall online therapy experience.

Satisfaction

Essentially two types of studies have taken the centre stage of telemental health research, these include program, and then also satisfaction evaluations, in particular client satisfaction studies (Morgan et al., 2008a). In the information technology industry, the satisfaction of customers is one of the most highly valued outcomes, and therefore prioritised (Li, Zhang, Fjermestad & Romano. 2006). In a broader sense, satisfaction can be defined as fulfilment or gratification, even contentment (Oliver, 2014). In particular to psychology and psychological intervention, client satisfaction reflects the addressing of client needs to satisfy their feelings of receiving the help they require for the issues they have presented with, according to their corresponding expectations (McCabe & Macnee, 2002). Essentially satisfaction is therefore reflected in the client's perception of a resolution (Jacobson & Truax, 1991). Studies have also found a strong positive correlation between high levels of client satisfaction and improved treatment outcomes (McCabe & Leas, 2008; Trotter, 2008). In an economic sense, if clients are satisfied with the service they receive they are not only likely to return, but also tell others about their positive experience, ultimately creating a potential for service provision to be widened. Satisfaction with the use of the videoconferencing medium therefore becomes a very important element to explore, as it could eventually contribute it to expansion, and greater use (Simpson & Reid, 2014a).

The study of satisfaction in online therapy is of great importance, as dissatisfaction can negatively impact on the development of a therapeutic alliance and ultimately outcomes (Day & Schneider, 2002). Satisfaction can have a strong influence on the ability to foster a strong and meaningful relationship between a therapist and client (Day & Schneider). From one of the earliest studies of client satisfaction with therapy conducted via videoconferencing by Dongier et al ., (1986), studies since have continued to evidence high satisfaction rates by clients (De Las Cueva et al., 2006; Hilty, Liu, Marks, & Callahan, 2003; Mair & Whitten, 2000; Rees & Stone, 2005a; Richardson et al., 2015). Whilst meta-analyses have evidenced these high levels of satisfaction with the medium, this form of research is not without its limitations, one of which being the file drawer effect (Mair & Whitten, 2000; Murphy et al.). In this way some negative results may be omitted from the final findings in an effort to give more weight to the favourable results, creating an ultimate bias. Another difficulty in such studies is that participants tend to evaluate

the treatment they are in, rather than having the ability to compare one experience to the other, so a face-to-face intervention to videoconferencing, or vice versa.

Furthermore, another challenge in such studies involves the treating therapist administering the pre-post measures. This can become an issue as the participant may be more inclined to give more favourable responses, based on the power differential (Stubbings et al., 2013). Whilst this remains a possibility, the consistent results of various studies have assisted in supporting the notion that clients find the use of the technological medium to connect with a therapist, favourable and satisfactory (Murphy et al., 2009).

As can be seen in the preceding volume of studies examined in the literature overview, the study of satisfaction of clients using videoconferencing is one of the most commonly used comparisons of evaluators (Richardson et al., 2015; Richardson et al., 2009; Simpson, 2009). This reflects the important nature of using videoconferencing and the realities of it at times not being acceptable or satisfactory for both clients and practitioners. In this way it is expected that to engage with the therapy or the medium through which therapy is presented, some level of satisfaction must be present (Simpson). Studies have attributed client satisfaction with the use of videoconferencing, with clients reporting feeling considerably less intimidated, and in more control when compared to face-to-face interactions (Lewis et al., 2004; Simpson). This ability to control and create a comfortable space may also however create an alternative result, being a lack of social presence, and therefore potentially impede the alliance or connection between the therapist and client (Lewis et al., 2004). Additionally some clients express concern about confidentiality and privacy issues (LeRouge et al., 2002). These concerns however tend to be noted closer to the commencement of the videoconferencing, and be accepted as the intervention progression (Day & Schneider, 2002). In this way participants tend to adapt to the modality in a relatively short period of time, giving priority and focus to the therapeutic process, rather than the features associated with the mode of delivery (Miller & Gibson, 2012).

There has been research that suggests that satisfaction is directly correlated with alliance, in that high satisfaction levels facilitate the development of a strong alliance between therapist and client, especially in telepsychology (Rees & Haythornthwaite, 2004). Arguably a more critical and pessimistic view of satisfaction studies to do with videoconferencing, is the notion that clients are

satisfied in the video condition simply because of initial negative expectations (Mair & Whitten, 2000). Therefore, because there were no significant technical issues or the video was higher quality than expected, participants are satisfied. Similarly, having the ability to engage in therapy via videoconferencing, as opposed to the alternative of no intervention, could inflate satisfaction scores as participants may essentially be desperate for any intervention. Further research could assist in making these findings more clear, and focus on some qualitative analysis to allow for a deeper understanding of what exactly makes the experience similar or different to face-to-face therapy, and how online interventions can be improved to enable even higher outcome scores.

A study by Simpson et al. (2005), explored client satisfaction in a CBT treatment for bulimia provided to clients via videoconferencing. Whilst clinical measures were used for the tracking of bulimia symptoms throughout the study, a qualitative questionnaire was established to assess client satisfaction. Questions centred on practical aspects such as sound and image quality, as well as perceived control over sessions, ability to focus, and the participants' overall experience (Simpson et al.). The results indicated significant satisfaction with the treatment and the technological aspect of the study. Participants further noted that the technology did not impede in any way on their positive experience. Concurrently, all participants indicated high perceived levels of therapeutic alliance which were sustained throughout the process of the intervention. Essentially studies evaluating online therapy and videoconferencing in particular, to date have demonstrated elevated levels of client satisfaction, positive experiences, and strong alliances (Mallen, Vogel, Rochlen, et al., 2005).

What research appears to portray is that the continuity of care of clients is the important element of a client's therapeutic experience (Campos, 2009). Essentially therefore higher satisfaction rates can be evidenced, and ultimately achieved by the clients ability to access, and continue an intervention they may be seeking, or in fact need (Liebert, Archer, & Munson, 2006). A study by Liebert et al., identified the key satisfactory characteristics of online therapies, as evidenced by over 80 participants who had experienced previous face-to-face therapy. These included primarily the convenience of connecting with a therapist, followed by privacy and anonymity. It was found that clients appreciated the psychological safety the technological medium provided them. Whilst most participants engaged with a therapist via email, some

also engaged via telephone and a limited number via videoconferencing. The findings however remained constant among the different categories. Again it is the idea of accessibility and a perceived sense of safety that is highlighted through this medium as creating satisfaction with its use (Liebert et al.).

A recent review by Backhaus et al. (2012) identified that over 50 percent of articles noted satisfaction ratings by clients and these generally reflected client satisfaction with the medium (Cowain, 2001; Simpson et al., 2001). Those studies that directly compared videoconferencing conditions to those where clients saw the therapist face-to-face found similar levels of satisfaction (King et al., 2009; Ruskin et al., 2004). It was noted that when clients exhibited worries or decreases in satisfaction regarding the medium, these most commonly reflected technical issues experienced, but overall did not tend to effect the levels of satisfaction recorded by clients (Cowain, 2001). Research has also expanded to show a correlation between participant characteristics and satisfactory rating of telepsychology (Simpson & Reid, 2014b). This includes research reporting greater satisfaction levels among females as opposed to males (Manning, Goetz, & Street, 2000) as well as younger clients preferring the intervention and providing higher satisfaction levels over older clients (Rohland, 2001).

Apart from the methodological shortcomings of invalid satisfaction measures, or subjective client experiences, it must be noted that satisfaction is not necessarily linked to clinical outcomes, and can actually adversely affect this. An example of this is socially anxious clients who may be satisfied with the videoconferencing or online medium as it does not spike their anxiety, but actually contributes to their avoidant behaviours (Simpson, 2009). Furthermore many studies that have examined satisfaction with online therapy have tended to overemphasise the correlation between high satisfaction rates and overall effectiveness, and thus have concluded that the intervention was successful or effective because of high satisfaction rates, rather than actually reporting on clinically significant treatment outcomes (Richardson et al.). Satisfaction must be seen for what it is, an outcome process variable that may to some degree impact on the client's adherence to treatment, and more importantly in their decision to continue to use online therapies, or alternatively seek face-to-face intervention. When examining the overall attitudes to online therapies, it has in more recent times been noted that clients perceive online, or the videoconferencing provision of psychological intervention as acceptable and

satisfactory (De Las Cueva et al., 2006; Murphy et al., 2009; Stahl & Dixon, 2010; Stublings et al., 2013). It was previously held that preferences for face-to-face interventions were greater than technologically mediated therapy (Rochlen et al., 2004), however this was found to reflect a familiarity with in-person interaction, and a gradual use of technologies within society, and organisations (Barak et al., 2008; Murphy et al., 2009).

Significance

Due to the geographical sparsity of the Australian population, over half a million Australians live in remote areas (ABS, 2010). As rural and regional areas experience significant shortages in specialist psychologists, the alternative of using videoconferencing to provide evidence based interventions has become a possible solution for many (Nelson et al., 2011; Rees & Stone, 2005a). Essentially one of the greatest advantages of online therapy has become its ability to overcome geographical barriers (Alleman, 2002; Manhal-Baugus, 2001). One specialist area that could potentially be endorsed by this medium is couples counselling. With divorce rates reaching nearly 50 percent in Australia, relationship distress is seen as an increasingly central factor for couples engaging in relationship therapy (Snyder et al., 2005). Moreover, the correlation between relationship distress and disruption to an individual's emotional as well as physical wellbeing further highlights the need for this intervention.

Furthermore, in Australia sectors such as the mining industry, where one in six people in the general population are employed, reflect a significant section of the population that may experience deficits in accessibility to specialist relationship counsellors (Australian Bureau of Statistics, 2013a; Vojnovic et al., 2014). Videoconferencing may allow the couples to not only initiate couples counselling, but also continue through the therapeutic process without disruptions (Cicila et al., 2014).

Empirical evidence now suggests that online therapy is a justifiable and effective means of conducting therapy, however further research is needed to enable conclusions about which mediums or interventions in particular are efficacious (Amichai-Hamburger et al., 2014; Kraus, 2011). This limitation will be address in the current study, which will be the first to explore couples therapy conducted via videoconferencing. Furthermore, it will also explore couples expectations prior to

engaging in the therapy, how these expectations change, as well as their experience, and satisfaction with the therapy process. This will investigate the working alliance, and whether it can be established via this unique medium, maintained, and perceived as strong by clients. Whilst similar studies of this calibre have been done before (Leibert & Archer Jr, 2006), they have not been conducted with this specific population involving couples and videoconferencing.

It is anticipated that the results of this study will contribute to the field of online therapy, and to fostering confidence in agencies, ultimately allowing expansion of services conducted via videoconferencing. Although this is a relatively small scale study it is hoped the quality of information elicited by participants will shed further light on the debate of whether couple's therapy has the possibility to be conducted by videoconferencing, and yield similar if not identical results and outcomes as that of tradition face-to-face therapies.

Chapter Two:
Rationale & Methodology

Theoretical Rationale

Australia in particular has large, sparsely populated areas that have experienced significant shortages in the provision of services such as specialist psychologists (Richardson et al., 2015). Therefore the use of videoconferencing to provide evidence based interventions to such populations, has become a potential alternative (Nelson et al., 2011; Rees & Stone, 2005a). As discussed earlier, this ability to overcome geographical barriers is one of the greatest advantages of online therapy (Alleman, 2002; Manhal-Baugus, 2001; Simpson & Reid, 2014a). One of these specialist services is couples counselling. Relationship distress has obvious effects on a couple, however the consequent negative effects on an individual's personal wellbeing, as well as any dependants, further highlights this need for the increased availability of couples intervention (Kraus, 2011; Robles, Slatcher, Trombello, & McGinn, 2014; South, Krueger, & Iacono, 2011). With divorce rates in Australia almost at 50 percent, and steadily rising (Australian Bureau of Statistics, 2013c), this is a service that could be significantly beneficial to a large proportion of the population.

Whilst empirical evidence now suggests that online therapy is a justifiable and effective means of conducting therapy (Simpson, 2009; Théberge-Lapointe et al., 2015), further research is needed to enable conclusions about which interventions in particular are efficacious when presented via this medium (Kraus, 2011). This limitation will be addressed in the current study, which will be the first to explore couples counselling using the Couple CARE program, conducted via videoconferencing. This study is therefore underpinned by the void in this research in online intervention, specifically regarding couples therapy and counselling, presented via videoconferencing. As described in the literature review, studies examining such interventions have focused on areas such as; client expectations, the experience of using technology in therapy, satisfaction with the medium, and any effects on working alliance. The current study aims to address all these areas, however uniquely factoring in any effects of using videoconferencing to convey therapeutic intervention to couples.

Research has identified behavioural couples therapy (BCT) as an efficacious treatment, in that couples who undergo this therapy report higher positive outcomes on their relationships than those in control conditions (Baucom et al., 1998; Baucom et al., 2003). Halford et al. (2004) have attempted to further enhance the effects of BCT by emphasising the importance of the self-regulatory component for each partner, by developing an educational manual for couples known as couple CARE. Self- regulation emphasises each partner's responsibility at working towards a satisfying relationship, it therefore aims to enhance BCT by teaching specific behaviours to self-directed change. Through the use of rehearsal, and homework review exercises the Couple CARE intervention places responsibility for change with both partners, and thus has been found to increase intervention adherence, and furthermore relationship satisfaction (Wilson et al., 2005). The current study uses Couple CARE due to it being largely manualised, to ensure all participants are exposed to the same intervention.

Specifically, satisfaction with online therapies, even videoconferencing, has again been the subject of a number of studies in the online telehealth domain (Beattie et al., 2009; Richards & Timulak, 2013). Satisfaction has been found to be high with the technological medium, and almost equal to that of face-to-face interventions (Day & Schneider, 2002; Dobscha, Corson, Solodky, & Gerrity, 2005). Again however there is a lack of studies specifically examining both couples therapy and videoconferencing, particularly in the Australian context. This study will be looking specifically at both participant responses regarding satisfaction, as well as the measurement of satisfaction through quantitative data.

Literature regarding the expectations and experience of clients about to engage with online therapies, has been a source of great information regarding the effectiveness of interventions administered this way (Lewis et al., 2004; Nicovich, Boller, & Cornwell, 2005). Currently, qualitative studies directly examining these two facets of online interventions are lacking (Beattie et al., 2009), and could provide a means of gaining more information about what clients expect regarding videoconferencing in particular. Furthermore, qualitative research could be invaluable at illustrating how these expectations could subsequently affect the decision to both engage and continue with online therapy. Further research is needed to explore these expectations, and whether they change throughout the therapeutic process, as well as the elements that could effect this change. By examining client

experiences with the medium, the ability to breach the demand gap through supply and engagement can potentially be increased.

Finally, research has shown that relationships online have the potential to be just as strong and emotionally vested as those formed face-to-face (Cook & Doyle, 2002; Gros et al., 2013). It has been demonstrated by numerous studies that high videoconferencing client alliance ratings, can mirror those of clients in face-to-face therapies (Day & Schneider, 2002; Simpson & Reid, 2014b; Stubbings et al., 2013). Whilst a general academic trend where further analysis of how alliance is developed and maintained in online therapies is developing, qualitative analysis is needed in combination with questionnaires to understand what may affect this alliance, and how strong clients perceive this to be. Specifically for couples therapy that is conducted via videoconferencing, a void exists with no research exploring this potential.

When examining the above deficits in literature, specifically in relation to couples therapy via videoconferencing in an Australia context, it can be concluded that further investigation, research, and analysis is needed in this area. Research elements such as; the client's experience in such a context, their expectations prior to commencing, the monitoring of any expectation change, as well as satisfaction ratings, and strength of alliance they perceive, are essential in such an enquiry. Furthermore, using an empirically evaluated and subsequently validated intervention, would add to the ability to accurately compare between a face-to face and video group. The results of this could potentially then be used to assist in breaching the demand gap, and consequently providing much needed services to those couples that may be geographically or financially disadvantaged.

Methodological Rationale

Quantitative Methodology

Within the literature investigating therapies provided online, most studies begin with a baseline measure of variables, a post intervention measure, and often; time permitting, a follow-up measure (Barak et al., 2008; Day & Schneider, 2002; Halford et al., 2015). This allows for the measurement of outcome variables at pre-intervention, to be statistically compared to those measurements taken once the intervention has been fully completed. This is essential, in attempting to find intervention effects of a unique modality such as videoconferencing. Further

measures taken at a pre-determined follow-up period allows the researcher to examine whether these effects are maintained over time, therefore evidencing the importance of a follow-up measure. Whilst comparing outcome measures at a variety of time points, a study of this design may still face lacking internal validity, due to its inability to compensate for the many potential effects of extraneous variables (Persons & Silberschatz, 1998).

Many argue the only way to establish the efficacy of an evidence based intervention is to compare two varying samples, and for those samples to be comprised of randomly allocated participants (Chambless & Hollon, 1998; Persons & Silberschatz, 1998). In this manner, researchers can limit potential systematic differences between samples and establish comparative efficacy of interventions or treatments. This is done through a design known as a randomised control trial (hereafter RCT) (Persons & Silberschatz). As a result RCTs are viewed as the strongest in design for scientific research, and a ‘gold standard’ in establishing evidence for treatment efficacy (Chambless & Hollon). However issues arise in regards to having a control, or waitlist group. Most psychological treatments or interventions are aimed at providing relief, or assistance to clients, however when samples are marked by characteristics that could deteriorate rapidly, or clients are experiencing significant distress, having participants essentially ‘wait’ for treatment or experience placebo conditions in which they do not receive the actual treatment or intervention, can be ethically and dangerously restrictive (Temple & Ellenberg, 2000). Because couples seeking couples therapy are often experiencing various levels of distress, and commonly tend to seek treatment when significant issues have arisen and have come to a breaking point (Fincham & Beach, 1999), it would not be appropriate to place couples in a traditional control condition and require them to wait to complete the intervention.

A potential solution to the use of a traditional control group is an active-control (Clarke, 1995). This allows for participants to receive an established, efficacious treatment or intervention, whilst the intervention group engages in the new trial (Persons & Silberschatz, 1998). In accordance with an RCT trial, participants are randomly assigned to either the intervention or active-control conditions. As a result, an active control group was used in the current study. This was a face-to-face condition that was tested for statistical differences to that of the videoconferencing sample, on a number of variables. Ensuring they did not differ in

a variety of demographic variables, enabled for more accurate comparison. This in addition to no significant differences on pre-intervention scores, allowed for more accurate comparison to the scores of those participants in the videoconferencing condition at post intervention, and follow-up.

Qualitative Methodology

Qualitative inquiry is a unique method that facilitates the examination of a phenomenon, allowing for it to be further understood within a certain context Baxter and Jack (2008). More importantly it allows researchers to examine the process rather than just the outcome (Hill, Thompson, & Williams, 1997). Correct use of qualitative inquiry allows for researchers to accurately evaluate programs and interventions on a number of levels (Baxter & Jack). In particular to online therapies, qualitative research has been able to identify client perceptions, reactions and experience of using the technological medium to engage with a therapist and psychological intervention (Barazzone, Cavanagh, & Richards, 2012; Lewis et al., 2004). Ensuring the qualitative methodology is replicable, and rigorous, meeting high standards for scientific inquiry is essential to establish credibility and validity.

However it can be difficult transferring quantitative concepts such as trustworthiness and soundness principles to qualitative research, as a result Lincoln and Guba (1985) identified qualitative alternatives to these principles. They identified dependability as the qualitative alternative to reliability, credibility as the alternative to internal validity, transferability as the alternative to external vitality, and finally conformability as the qualitative alternative to objectivity. Examining each of these will provide a description of how the trustworthiness of a qualitative study can be enhanced, and will be applied in the current study (Shenton, 2004). Dependability can be enhanced using overlapping methods, in this case methodological triangulation allows for qualitative and quantitative results from a particular study to be used to confirm similar findings (Shenton). For example, in regards to working alliance, if participants identify strong perceived alliance between themselves and the therapist, and this creates an overarching theme, a working alliance measure can be employed to statistically show significant increases in alliance rating from middle to post-intervention. Dependability can further be demonstrated by ensuring clear documentation exists of the research design, procedure, data collection, and the type of evaluation of data employed.

The qualitative equivalent of internal validity, known as credibility can be ensured when dependability is clearly demonstrated, as they tend to reflect each other (Shenton, 2004). Furthermore, ensuring multiple interviews are conducted allowing participants to add, and confirm data collected, also enhances credibility.

Additionally, attaining participant consent, and awareness that no negative consequences will arise as a result of participants providing information on their experience, is essential especially in a study such as this, and in enhancing credibility. This is to ensure participants do not fear their comments about the therapist and their relationship, will adversely affect their ability to engage with the program and gain benefits as a result of their participation. This in addition to having independent reviewers, to ensure data has been classified correctly and without bias is essential in ensuring honesty of information (Shenton). The use of well-established and commonly used research methods such as thematic analysis, can further ensure credibility. Thematic analysis involves emersion in the transcribed data to enable the identification of re-occurring themes (Braun & Clarke, 2006). This is done through the processes of coding, sorting, and organising data collected from the interviews. Using this form of analysis in the current study, allows for the identification of several prevailing themes from the responses provided by the participants (Liamputpong & Ezzy, 2005). Guidelines developed by Braun and Clarke (2006) will be used in an effort to maintain rigour and validity. These guidelines were developed as a means of providing clear steps for the appropriate use of thematic analysis whilst at all times maintaining rigour. Again, this will ensure a high standard of credibility in the study.

Transferability in qualitative research is the ability to apply the results to other contexts, ensuring data can be generalised (Lincoln & Guba, 1985). This can be difficult especially when studies are unique in their nature, such as the current topic of research on couples therapy and videoconferencing. However, similar studies have researched the elements under examination in the current context such as working alliance, expectations, and satisfaction, with individual clients and videoconferencing (Day & Schneider, 2002; Kimberly, 2005). This ability to replicate and link current results, with those of previous studies, assists in ensuring transferability is evident and subsequently strong. Finally, confirmability ensures that the results of the research have emerged from the data and are not tainted by bias or the researcher's own agenda (Lincoln & Guba, 1985). Again this can be achieved through the use of

independent raters, as well as carefully constructed audit trails documenting all processes, stages and findings of the research. This in addition to personal reflections, that note issues or concerns the primary researcher may experience, can then be used as a prompt during supervision session to engage in reflective, and critical discussion. These are important tools in eliminating bias and maintaining rigour.

In conclusion, it is clear that a number of methodological techniques need to be implemented when completing qualitative research. In the current study, this will specifically include triangulation, clear documentation of the entire research process, independent raters and interviewers, multiple data collection points and interviews, use of well-established analysis methods such as thematic analysis, audit trails and sufficient supervision.

Combined Methodology

As noted above, the use of triangulation will allow for adherence to the theoretical rationale, and a triangulation methodology will ensure the trustworthiness and rigour of the qualitative research. Therefore the current study will employ a mixed methods design comprised of a randomised control trial, utilising an active control group, to collect quantitative data, and semi-structured interviews to collect qualitative data from the entire sample. This will reflect an effort to examine the experience of couples undergoing couples therapy via videoconferencing, as compared to couples undertaking the therapeutic intervention face-to-face. Whilst previous research has allowed for some understanding of the unique dynamic between therapist and client via the technological medium (Day & Schneider, 2002; Dobscha et al., 2005; Himle et al., 2006), further exploration of this relationship is needed when introducing another element into the interaction; the partner. Exploring the dyad's experience in engaging with a therapist will allow for a more in-depth understanding of the couple's own interpretation of the interaction, and the therapeutic alliance.

Whilst the quantitative analysis will allow for the comparison of measures between the face-to-face and videoconferencing participants, it may not shed light on the actual experience of using the videoconferencing and furthermore the potential it has to connect the two parties, or a discussion of suggestions on how to improve the process. The qualitative enquiry will allow for these elements to be discussed and

described first hand by participants, as well as any other factors that may influence the development of an alliance, or the couples ability to engage in the intervention itself. This has the potential to illuminate the advantages of using videoconferencing and encourage broader use by clinicians. Mixed methods essentially combines these two methods in an effort to better answer the studies proposed research questions (Tashakkori & Teddlie, 2003). Both types of data are collected either at the same stage, or sequentially, and integrated at certain points in the research process (Tashakkori & Teddlie). In the current study quantitative data will be collected at pre, post, and during intervention, points, as well as follow up, whereas qualitative data in the form of interviews will only be collected at pre and post intervention.

Statistical Rationale

The following is a rationale for the use of specific statistical analyses within the current study. This is important in accurately and most effectively describing the results of the data collected. This includes the use of generalised linear mixed models, the use of reliable and clinically significant change, and a rationalisation of why non-inferiority trials were not used.

Generalised Linear Mixed Models

A generalized linear mixed model (GLMM) is a special class of regression model and an extension to the generalised linear model, in which the ‘mixed’ linear predictor contains random effects in addition to fixed effects (Breslow & Clayton, 1993). The ‘generalised’ element of the regression model allows it to handle several types of outcome variables, such as ordinal data with restricted ranges, binary variables, proportions, and count data. The current study employs a research design that has one nominal random effect, being the participant, one categorical fixed effect, being the condition (face-to-face, and videoconferencing), and finally one ordinal fixed effect of time (pore, post, follow-up). Because of this, GLMM is ideally suited for analysing this set of data. GLMM will be implemented through SPSS’s (Version 19+).

Furthermore, because in the current study the pre, post-intervention, and follow-up data come from both members of each couple, the analysis will need to account for intra-couple clustering in the data, which can also be done using the GLMM (Hartzel, Agresti, & Caffo, 2001). This therefore allows the analysis to take

into account the possibility that one individual may be affected by the other in the dyad as part of the intervention, and thus their scores may also be influenced by each other. Especially within couples therapy, where clients undergo the therapy or intervention together, this is a possibility of happening (Halford, 2004).

GLMM will further allow for results to reflect whether there is a significant effect of time, of condition, or of a time and condition interaction (Breslow & Clayton, 1993). Specific to the current study, significant intercept would indicate that both the condition as well as the intervention have an effect on the participants, therefore couple scores in both the face-to-face and videoconferencing condition changed from pre, to post, and flow-up, but changed differently. Alternatively, GLMM could also identify only an effect of time, therefore suggesting that the condition in which participants were placed did not have an effect, but the intervention did. GLMM can also account for differences between, and across participants on a more accurate level by not aggregating participant scores, allowing for the ability to identify an effect of condition if there is one (Breslow & Clayton, 1993). Being an established intervention , a significant change in scores after intervention is likely (Halford, 2004), however the potential effect of condition; being face-to-face or videoconferencing, is under investigation, GLMM is more likely to find this effect if it does exist in this unique data set. GLMM is also robust enough to allow for analysis to be conducted on samples that may be small, or unequal, again allowing for more accurate analysis (Breslow & Clayton).

Whilst GLMM is a sophisticated statistical procedure, it produces a similar result comparable to that of an ANOVA. However the current study's rationale for using GLMM as discussed above is strong, especially in comparison to the possibility of using an ANOVA. Analysing data using GLMM is marked by an estimation of the model parameters with maximum likelihood, as opposed to least squares in analysis use with an ANOVA. The use of the maximum likelihood ensures that the potential of factors to be either fixed or random is recognised from the outset. As opposed to this, the use of least squares in an ANOVA, assumes all factors are fixed, until the *F*-statistics is calculated and the error terms need to be determined.

Additionally, in longitudinal research there is often an issue of participant attrition and this can reduce statistical power. Therefore compared to more traditional methods of examining measures of behavioural change such as a repeated measures

ANCOVA, GLMM is better suited as it is less sensitive to such attrition, and it relies on data being collected from each participant at each data collection point.

Essentially the GLMM maximum likelihood procedure used, as discussed above, is a full information estimation procedure that uses all the data present at each assessment point, despite potential missing variables. This all-inclusive use of data therefore reduces sampling bias, and reduces the potential impact of participant attrition on statistical power.

Non-inferiority trials

Non-inferiority trials are used in analysis to demonstrate whether a new intervention is not statistically worse than an established intervention, by a satisfactory amount (Piaggio et al., 2012). Whilst non-inferiority trialling may have been relevant to the current data set, the technique requires the estimation of confidence intervals, but those confidence intervals cannot be computed reliably when there is clustering in the data. Due to the unique nature of this study and couple clustering in the outcome data, this technique was not used as opposed to analysis in which clustering was accounted for, such as through the use of GLMM . Moreover, non-inferiority trials require very large sample sizes beyond the scope of a PhD project, and this study in particular.

Reliable and Clinically Significant Change

As a means of further comparison between the two conditions, and the ability to ascertain whether participants in one condition appear to be benefitting from the intervention more than participants in the other, reliable and clinically significant change will be calculated. The reliable and clinical significance of change in client scores on certain outcomes can be assessed using the Jacobson and Traux methodology (1991). According to Jacobson and Traux there are two main steps in determining whether these changes in scores as clinically significant. Firstly, determining whether the change is statistically reliable, and secondly based on whether a client's post-intervention score falls within a functional range as determined by one of three cut off points.

The reliable change measure identifies whether a participant's score changed sufficiently, so that it is unlikely that this change could be attributed to some measure variability or unreliability, or even chance (Jacobson & Truax, 1991). This is done

by computing the Reliable Change Index (RCI). The RCI demonstrates to what extent, and in which direction a client's score has changed. For example, whether they appear to have improved or deteriorated, and whether this is statistically reliable and significant. The RCI is calculated by simply dividing the participant's score by the standard error of the difference for the instrument being used. If the RCI value is greater than 1.96 then the change in scores is deemed to be statistically significant, as it becomes unlikely that the change does not indicate real change (Jacobson & Truax).

The second criterion for satisfaction to indicate clinically significant change is the position of a client's score in a functional range as determined by three distinct cut-off points (Jacobson & Truax, 1991). Cut-off *a* is applicable when the post-intervention score falls outside the range of the disordered population, specifically two standard deviations away from that mean in the direction of the functional population. Cut-off *b* is whether the post-intervention score falls within two standard deviations of the mean of the functional population. Finally cut-off *c* is applicable when the post-intervention score of the client falls closer to mean of the normal population, as opposed to the mean of the dysfunctional population. It is recommended, if data is available in the literature for the measure under analysis for both functional and dysfunctional populations, cut-off *c* should be used (Jacobson & Truax). Alternatively, cut-off *a* should be used when normative data is not available for the functional populations, whilst cut-off *b* should be used when normative data is not available for the dysfunctional population.

When client scores on a particular measure are determined to be reliable and/or clinically significant they can be classified in one of the following categories (Jacobson & Truax, 1991). When client scores reflect reliable change they are classified as *improved*, and when they reflect both reliable and clinically significant change they are classified as *recovered*. There is also a possibility that client scores meet criteria for reliable change, but have moved in the dysfunctional direction, these are classified as *deteriorated*. If neither criteria for reliable or clinically significant change are met, the client is then classified as *unchanged*. It is important in the current study for this analysis to be conducted on the relationship distress measure (Dyadic Adjustments Scale), even though results may not accurately reflect dysfunction, results in a positive direction will reflect significant relationship adjustment. For the purpose of comparing the two groups within the study; the face-

to-face and videoconferencing, it is important to know whether the videoconferencing has a potential negative effect on the efficaciousness of the intervention. This is where comparison between conditions of clients that reflects reliable and clinically significant change is essential, as it will allow for differences between the conditions to emerge.

Objectives and Aims

As noted in Chapter 1, whilst studies have identified online therapies as efficacious in some contexts, a gap exists in the research on the perceptions and the practicalities with use of videoconferencing and dyads. In regards to the Australian context, studies specific to this area are non-existent. Therefore as a means of providing those couples that may be geographically or circumstantially disadvantaged a way to engage with a relationship expert, the current study will be an effort to add to the literature and thus directly bridge this demand gap. Through the use of qualitative methodology, the aim of the study is to investigate and understand direct participant experiences of undertaking couple's therapy via videoconferencing, as a means of assessing if this is a viable medium for delivering couple's therapy. Quantitative analysis will also be used to enhance the validity of qualitative findings and identify any discernible differences between couples in the face-to-face condition, and those connected to the therapist via videoconferencing, on a number of outcome measures. Objectives therefore remain to document the expectations and experience of couples in the videoconferencing condition to allow for a deeper understanding of their involvement, and thus ideally increase future intervention success through participant feedback. In turn, the study of both effectiveness as well as satisfaction will allow for a better understanding of the overall online therapy experience.

Therefore, in the current study I will further aim to explore both qualitatively and quantitatively the level of satisfaction by all couples with the intervention, and look more in-depth at the videoconferencing couples' sense of satisfaction specifically with the technological medium. This will also include both interviews and measures regarding satisfaction, as well as symptom severity from pre, to post and follow-up, to demonstrate any possible differences between conditions, and allow for conclusion regarding the sustainability of changes in symptoms over time, and effectiveness of intervention. Again this will be in an overall effort to

conceptualise the perceived appropriateness of using such a medium in couples therapy. Whilst couple distress as measured by the Dyadic Adjusted Scale will be of primary focus here, a general measure of functioning will also be used. The Depression, Anxiety and Stress scale-42, will be used initially to ensure participants in each condition do not significantly differ in their general wellbeing, to allow for more accurate comparisons. Additionally, the DASS-42 will be used to monitor effects of the intervention on levels of depression, anxiety, and stress for each participant, reflecting efficacy and also allowing further comparison between conditions post intervention.

One further important element that the study will aim to objectively investigate is each couple's perception of alliance between themselves and the therapist. Because of the dyad dynamic this is again unique to the current study. Whilst couples will be asked to fill out standardised working alliance measures, which will compare couples in the opposing conditions, the couples in the videoconferencing group will also be interviewed regarding their perceptions of an alliance, whether a collaborative relationship was established, and whether this evolved since the commencement of the intervention. All these objectives support the overall aim of the study which is to investigate whether couples intervention online is a viable and efficacious means of connecting with couples to provide psychological intervention.

Research Questions and Hypotheses

Based on the objectives of the current study, five major research questions have been identified.

- 1)** What are couple's expectations about engaging in couples therapy conducted via videoconferencing?
- 2)** Did these expectations change throughout the process of therapy?
- 3)** What was the experience of couple's who underwent couple's therapy conducted via videoconferencing?
- 4)** Did couples experience satisfaction with the process, the technological medium and the overall experience?
- 5)** Was the working alliance developed and maintained between both individuals in the dyad and their therapist throughout couple's counselling conducted via videoconferencing?

As noted earlier, to directly test a null-hypothesis an unfeasible sample size is needed (Tabachnick & Fidell, 2007), it was therefore necessary to formulate hypotheses in terms of both treatments having positive effects, but face-to-face producing significantly better outcomes. Hypotheses pertaining both to the quantitative and qualitative elements of analysis have been divided into two conceptually different groups which include those related to the effect of time on client outcome variables, and those related to the effects of the technology on client outcomes; the videoconferencing versus face-to-face conditions. Each hypothesis is therefore structured in two parts, whether there will be an effect of group (video versus face-to-face), and secondly, an effect of time (pre to post, post to follow-up, or pre to follow-up).

Hypothesis 1a: It is hypothesised that couple's satisfaction and adjustment levels, as measured by improvement on the Dyadic Adjustment Scale (DAS), in the face-to-face condition, will be significantly different to the improvement scores on the DAS for couples in the videoconferencing condition. It is further hypothesised that this difference will reflect higher scores for participants in the face-to-face condition.

Hypothesis 1b: It is also hypothesised that there will be a statistically significant increase in dyadic adjustment as measured by the DAS from pre to post treatment, and this will be maintained at three-month follow-up.

Hypothesis 2a: It is hypothesised that couple's scores in the face-to-face condition on the Areas of Change Questionnaire (AC), in regards to desired change, will be significantly different to the couple's scores on the AC in regards to desired change, for couples in the videoconferencing condition. It is hypothesised that this difference will reflect lower scores for couples in the face-to-face condition, reflecting less desired change from each respondent.

Hypothesis 2b: It is further hypothesised that there will be a statistically significant decrease in the amount of change client's desire from their partners as

measured by the AC from pre to post treatment, and this will be maintained at three-month follow-up.

Hypothesis 2c: It is similarly hypothesised that couple's scores in the face-to-face condition on the AC in regards to the amount of change each participant perceives their partner requires, will be significantly different to those perceptions of couples in the videoconferencing condition. It is hypothesised that this difference will reflect lower scores, and thus less perceived change by those couples in the face-to-face condition.

Hypothesis 2d: It is also hypothesised that there will be a statistically significant decrease in the amount of change client's perceive their partners want them to engage in, as measured by the AC from pre to post treatment, and this will be maintained at three-month follow-up.

Hypothesis 3a: It is hypothesised that there will be a statistically significant difference in the scores on the DASS-42, for couples in the face-to-face condition, compared to those in the videoconferencing condition. It is hypothesised that this difference will reflect lower scores for depression, anxiety and stress symptoms of participants in the face-to-face condition, compared to those participants in the videoconferencing condition.

Hypothesis 3b: It is also hypothesised that there will be a significant decrease in depression, anxiety or stress scores as measured by the DASS-42 for participants following the intervention, and at three-month follow up.

Hypothesis 4a: It is hypothesised that couples' perceived alliance as measured by scores on the Working Alliance Inventory (WAI), will be significantly higher for couples in the face-to-face condition as compared to couples in the videoconferencing condition.

Hypothesis 4b: It is further hypothesised that there will be a statistically significant increase from session 3, to post intervention in client ratings of the

working alliance as measured by the Working Alliance Inventory, and more specifically significant increases in the bond subscale.

Hypothesis 5a: It is hypothesised that marital happiness as measured by the Marital Happiness Scale will be significantly greater in the face-to-face condition, in comparison to the videoconferencing condition.

Hypothesis 5b: It is also hypothesised that couples' scores on MHS will increase each week, as couples progress through the intervention.

Hypothesis 6: It is hypothesised that there will be a significant difference in the satisfaction scores of couples as measured by the Customer Satisfaction Questionnaire, with couples in the face-to-face condition reflecting higher satisfaction rates than those in the videoconferencing condition.

Hypothesis 7: It is hypothesised that there will be significant difference in the amount of participants who meet criteria for reliable and clinically significant change for dyadic adjustment as measured by the DAS, in the face-to-face condition, compared to participants in the videoconferencing condition. More specifically, it is hypothesised that a greater number of participants will meet criteria for both reliable and clinically significant change in the face-to-face condition, compared to those in the videoconferencing condition.

Hypothesis 8a: It is hypothesised that there will be a significant difference in the amount of participants who meet criteria for reliable and clinically significant change for desired change as measured by the AC, in the face-to-face condition, compared to those in the videoconferencing condition. Furthermore, it is hypothesised that this will reflect a greater number of participants meeting reliable and clinically significant change criteria for desired change, in the face-to-face condition.

Hypothesis 8b: It is also hypothesised that there will be a significant difference in the amount of participants who meet criteria for reliable and clinically significant change for perceived change as measured by the AC, in the video

condition, as compared to participants in the face-to-face condition. It is further hypothesised that participant scores in the face-to-face condition, for the ACQ, specifically the perceived change subscale, will decrease significantly more, than those perceived change scores of participants in the videoconferencing condition.

Method

The following is a detailed method of how the current study was conducted to allow for full transparency.

Participants

Out of an initial 42 couples who expressed interest in participating in the study, completed all forms and returned these to the clinic, 33 were eligible to start. Exclusion and inclusion criteria were made explicit on the information letter provided to each interested couple. Exclusion criteria included any risk of suicidal ideation, participation in current couples therapy intervention, a DSM-IV diagnosis of psychosis or schizophrenia, severe alcohol/substance dependence, concurrent psychological treatment, or clinically significant relationship distress. These were assessed both in an initial phone interview, as well as through subsequent measures sent out as part of the initial screening, such as the Psychiatric Diagnostic Screening Questionnaire and the Dyadic Adjustment Scale. Relationship distress is commonly defined by a score of 98 or below on the DAS, corresponding to a standard deviation below the population mean in adjusted couples ($M = 115$, $SD = 17$) (Spanier, 1976). Scores between 80 and 97 reflect mild to moderate distress (Makinen & Johnson, 2006). A score below 80 therefore reflects severe distress, and participants with these scores were excluded. Couples who met criteria for these exclusions were not considered suited for the current intervention, as they may require a more intensive and individualised therapy. To ensure validity, the current study was bound by strict parameters, including a manualised intervention, making any significant deviation impossible. Ethically, all couples excluded on these criteria, were given the option for a more appropriate referral.

Conversely, participants were required to meet a number of inclusion criteria in order to be eligible to be considered for the present study. Participants were required to be over the age of 18 (due to the adult nature of the material discussed,

and consent issues), be in a defined de-facto or marital relationship, and be experiencing some mild relationship distress which has lead them to seek therapeutic intervention, as assessed through interview, and the DAS.

The 33 couples who proceeded with their involvement met all inclusion criteria, and were not excluded by any exclusion criteria. In regards to recruitment for the qualitative phase, according to Gehart et al. (2001) the aim of recruiting participants in a qualitative study is not to gain power by increasing sample size, but to reach saturation so that major themes are identified, and the data collected substantiates the analysis results. Qualitative studies on couples therapy differ greatly in sample sizes, the number of couples used to reach saturation varies between 4 and 14, with an average of 9 couples. Therefore the current study had aimed to recruit between 10 and 15 couples in the videoconferencing condition, and thus for further comparative analysis, 10 to 15 couples in the face-to-face condition. Initial statistical consultation identified 30 couples as sufficient to power the study, therefore increasing the amount initially proposed. As a result, once 30 couples, equalling 60 participants, completed the intervention, continued recruitment was ceased. The sample was comprised of a vast range of ages, with ages varying between 21 years, to the oldest client of 69 years old, with a mean of 42.31 years old. There was also a variety of relationship lengths of couples, with couples being in a de-facto relationship from anywhere between one year to 49 years, with an overall mean length of relationship of 9.98 years.

Recruitment

Participants were recruited via a number of means, using a variety of mediums. As noted by Rogge et al. (2006) couples recruited via newspaper or radio tend to show some levels of discord, and tend to agree to participate after self-selection, as opposed to more satisfied couples who see less of a pay-off. Advertisements (*Appendix D*) were distributed by mail with a cover letter to mental health providers and general practitioners in the metropolitan area. The letter outlined the purpose of the study, information about the intervention, and asked the professional to display the notice in their waiting room, or refer any clients they believed were appropriate. Furthermore, advertisements were placed on community boards, an popular online website advertising goods and services, in three community newspapers around the metropolitan area, and on the university campus,

to allow for a wide range of exposure for recruitment. Finally, the local university community radio station was approached, that recorded and aired advertisements for the study for two periods of recruitment. Feedback from interested participants reflected this to be the most successful method of recruitment. There were two primary waves of recruitment, one starting January 2012 and ending March 2012, and the second starting May 2012 to June 2012. The first wave of recruitment provided a large number of interested couples, however due to time restraints, one partner not being agreeable, and other personal reasons, many couples did not choose to participate. As a result a second round of advertising with the same resources was engaged a month later. Recruitment was then fluid throughout the data collection process, continuing whilst some couples were screened, and began the program. Overall a total of 33 couples, 66 participants, were recruited and found eligible to participate.

The Interviews

Two sets of semi-structured interviews were conducted as part of the qualitative phase of the current study. All interviews were conducted in the Curtin psychology clinic. The interview questions, based on previous studies (Krum-Heller Roe, 2002; Razzhavaikina, 2007) were used by the therapist, and provided to the external interviewers. They included prompts, and an initial summary to be read to all participants about confidentiality and purpose. All couples in both the videoconferencing and face-to-face conditions, partook in the same interviews to ensure equal time was spent with each, and thus the quantitative results were not biased by any possible varied time spent with couples in the two conditions. The questions were slightly altered for those couples in the face-to-face condition, however emphasis remained on the occasions they used the videoconferencing as part of behavioural rehearsal, much like couples in the videoconferencing condition. The first interview (*Appendix B*) was conducted by the therapist during the first session where participants were questioned on their initial impressions, and their expectations about the therapeutic process, and in particular the use of videoconferencing. The interview was conducted by the therapist and used as a means of establishing rapport with the couple in the early stages of therapy.

The second interview (*Appendix C*) was conducted by an independent researcher, and attempted to elicit participant responses regarding their satisfaction

with the therapy, whether their expectations changed throughout the process, and their overall experience. Further questioning was focused on the participant's perception of the development of a therapeutic alliance, and whether this was sustained throughout the process. To clearly separate the role of therapist and researcher for participants, Masters or PhD level students was asked to conduct the final feedback interviews with clients. The researcher received credit for time spent with clients as part of their current placement in the Curtin Psychology Clinic. This separation of researcher and therapist assisted in any potential blurring of boundaries, and allowed participants to provide feedback, completely autonomous of the therapy process, without potential fear of repercussion.

The Intervention

All couples, independent from the condition to which they were assigned, were exposed to the same intervention. Sessions 1 to 6 maintained the protocol of the Couple CARE manual (*Appendix E*), with additional time to address any further issues that may have arisen from week to week. In this way the intervention followed a very manualised protocol to ensure fidelity, however still allowing the intervention to be somewhat individualised for each couple. One common distinction between couples therapy and relationship education, is that within session, the therapist tends to interrupt interactions between couples, as the therapist then discusses their own interpretation of what they see happening (Markman & Rhoades, 2012). Couple CARE allows for therapists to do this by viewing interactions between couples, ensuring couples use the skills they have been educated about, and informing them about what they could do to improve communication, as well as enhance effective conflict management. Research has shown that the use of a research based manualised intervention, ensures proper protocol is followed and the highest level of care is maintained (Halford et al., 2004; Markman & Rhoades, 2012).

As discussed in the literature review, Couple CARE is used as an educational, skills-based tool for couples intervention by therapists, as a way of working with couples in alleviating distress, and strengthening a relationship (Halford et al., 2003). It is divided into six modules aimed at each partner, evaluating their current behaviour in a specific domain, identifying any goals for change, and then implementing plans to reach those goals (Halford et al.). A study by Halford et al. (2004) assessed the validity of the couple CARE program as a relationship

education program, and found not only high levels of participant satisfaction, but also general improvements in relationship contentment and durability. In this way, it was optimal for use in the current study as it is fittingly timed to only take six sessions, and can be administered identically to couples in both conditions, enabling data collection to accurately reflect potential changes in relationship enhancement, due to the same intervention.

Analytic Tools

As part of an initial screening and data collection package, a total of 4 questionnaires, and one demographics information collection measure was given to each individual. After session 3 one questionnaire was given, and at post intervention a total of 5 questionnaires were given to couples. The final, follow-up data collection point only required participants to fill out three questionnaires as illustrated in Figure 2. All these measures are detailed below.

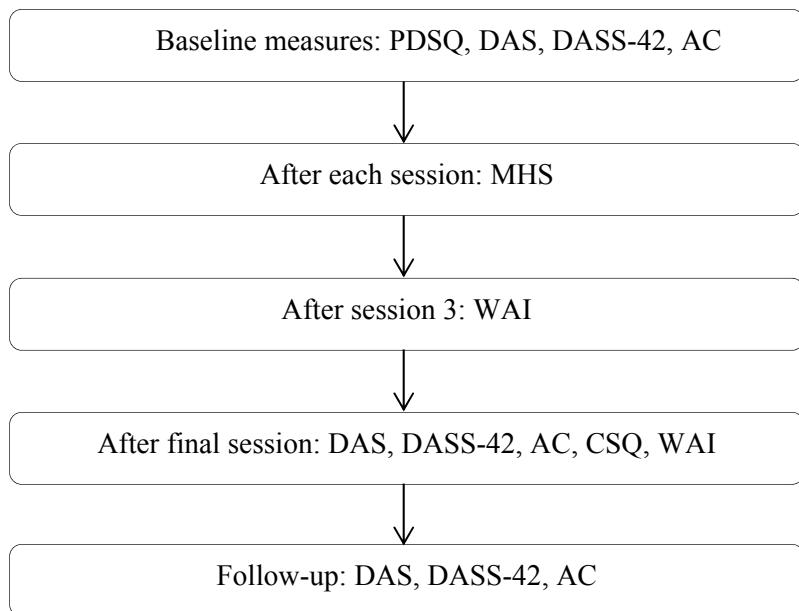


Figure 2: Flowchart of measures given to participants throughout the study
Note: PDSQ = Psychiatric Diagnostic Screening Questionnaire, DAS = Dyadic Adjustment Scale, DASS-42 = Depression, Anxiety and Stress Scale-42, Ac = Areas of Change Questionnaire, MHS = Marital Happiness Scale, WAI = Working Alliance Inventory

Psychiatric Diagnostic Screening Questionnaire (PDSQ)

The PDSQ is a self-report measure of the participant's psychopathology. Zimmerman and Mattia (2007) have concluded that the PDSQ is sensitive enough to detect clinically significant diagnoses. The PDSQ consists of 126 items that assess 13

DSM-IV diagnoses, as well as six additional items that screen for symptoms of psychosis. The questionnaire takes 15 to 20 minutes to complete and is commonly given prior to the client's first session. Therefore participants in the current study were given the PDSQ to complete prior to their first session, and asked to rate their experience of an item within a specified time period, using a yes or no format. Zimmerman and Mattia (1999) found this measure to have moderate to high internal consistency ($\alpha = .82$) and test-retest reliability (0.84). It was however found that the exclusion criteria of alcohol dependence/abuse on the PDSQ was too sensitive, and thus had been resulting in over diagnosis. This meant that many potential participants were found to have alcohol abuse issues as measured by the PDSQ, however when questioned further did not actually meet criteria. Therefore in order not to satisfy the drug or alcohol abuse exclusion criteria, if the participant identified this item on the PDSQ a further follow-up phone interview was conducted using the appropriate section of the Mini International Neuropsychiatric Interview. The MINI has also been shown to have high validity and test-retest reliability (Sheehan et al., 1997).

The Dyadic Adjustment Scale (DAS)

The DAS is a 32 item measure of relationship quality (Spanier, 1976). Its varied response format measures dyadic adjustment, with higher scores indicating higher dyadic adjustment. Questions reflect a general satisfaction, or distress, in a number of key relationship areas such as time spent together, communication, and future aims and goals. Furthermore four subscales can be isolated to gather more information about a certain relationship domain. These include dyadic consensus, dyadic satisfaction, dyadic cohesion and affectional expression or affection. More specifically, dyadic consensus reflects the degree to which the respondent agrees with their partner in a number of relationship and lifestyle domains, and dyadic satisfaction denotes the degree to which the respondent is generally satisfied with their partner. Dyadic cohesion reflects the degree to which the respondent feels that the couple participates in activities together, and finally affection refers to the degree to which the respondent feels the couple express affection towards each other. Spanier's initial study found strong consistency, with a test-retest coefficient of .96 (Spanier, 1976). Whilst this high coefficient was found for the entire scale, the four subscales ranged from .73 to 94. The DAS has also been identified to have high

reliability across studies (.915) (Graham, Liu, & Jeziorski), with a number of more recent studies also finding similar high reliability rates (Garbarini, Gerino, Marino, Rolle, & Brustia, 2014; Montesino, Gomez, Frenandez, & Rodriguez, 2013). In the current study the DAS was also found to have high internal consistency with a Chronbach's alpha of 0.80.

Areas of Change Questionnaire (AC)

Originally designed to identify targets for treatment and examine treatment effectiveness, the AC is a self-report inventory tool used to directly assess each partner's presenting complaints (Mead et al., 1990). Additionally, it also provides information on what type of changes the partner hopes to see in their spouse, and when compared to the other's AC; the extent each partner correctly defines the specific criteria the other wants changed (Margolin, Talovic, & Weinstein, 1983). These reflect important relationship domains such as intimacy, household duties, and time spent together or apart. Partners are asked to rate on a scale of 'much less' to 'much more' how much they would like the area changed, or perceive their partner would like them to change in that domain. Weiss et al. (1973) found that the AC had high internal consistency ($r = .89$), and has been reported to be sensitive to change pre and post therapy. In the current study the Areas of Change (Part I) was found to have a Chronbach's alpha of 0.87 and the Areas of Perceived change (Part II) was found to have a Chronbach's Alpha of 0.89.

Working Alliance Inventory (WAI)

The WAI assesses the quality of the therapeutic alliance between therapist and client. The WAI is a 36 item questionnaire that measures three parts of the working alliance. These are the emotional bond between the therapist and their client, the importance placed on the goals of therapy, and the quality of the involvement both the therapist and client have in tasks in therapy, and overall the amount of synchronicity between the therapist and client in each of these domains (Cnaan, Laird, & Slasor, 1997). Clients are asked to rate on a scale of 'never', to 'always', a variety of areas such as how much they perceive the therapist cares about them, how much they agree with the goals of the therapy, and how much they value the sessions. Horvath and Greenberg (1989) found this measure to have high internal consistency ($\alpha = .93$).

The Depression, Anxiety and Stress Scale – 42 (DASS-42)

The DASS-42 is a collection of three self-report scales used to measure depression, anxiety and negative stress states during the past week. The 42 item scale is the original and longer version of the shorter 21 item scale. The scale requires individuals to rate symptoms on a four point Likert scale ranging from *did not apply to me at all*, to *applies to me very much, or most of the time*. Higher scores therefore reflect higher symptomology. This measure can be used in couples therapy to measure the individual distress levels of each partner (Halford et al., 2010). Antony, Bieling, Cox, Enns and Swinson, (1998) found that the depression, anxiety and stress subscales had high internal consistencies (.94, .87, and .91 respectively) and moderately high concurrent validity.

The Client Satisfaction Questionnaire (CSQ)

The current study chose to use the CSQ-8, a shorter version of the original 31 item satisfaction measure (Attkisson & Zwick, 1982). Because the CSQ-8 was derived from the original version, and accounts for 75 percent of common variance of the original 31 items, it is seen as a viable and alternatively shorter measure to use. Tested in a number of studies, reliability as measured by coefficient alpha ranges from a .83 to a high .93, therefore identifying the CSQ-8 as a shorter instrument, but nevertheless displaying good psychometric properties (Attkisson & Greenfield, 2004). The questionnaire is most commonly given to participants at the conclusion of the intervention, and asks about their opinions and any conclusions they may have made about the service and their experience. Responses are placed on a four point scale with total scores ranging between 8, and a total highest score of 32.

The Marital Happiness Scale (MHS)

Frequent progress measures were collected, resulting in weekly scores being collected in the form of the MHS. This measure was given to couples after each session, and was collected as a means of tracking weekly changes in the relationship. However most couples did not complete the measure weekly, and thus changes were tracked where possible, and corroborated through further qualitative check-in's with couples on a weekly basis. The measure itself is aimed at estimating the amount of happiness or satisfaction each member of the couple feel in regards to their relationship. They are asked to mark on a scale of zero (completely unhappy) to 10

(completely happy) areas of a relationship such as household responsibilities, sex and personal independence (Azrin, Naster, & Jones, 1973). Whilst not used commonly, it was an appropriate measure to use on a weekly basis as identified by Azrin et al., and allowed a comparison point week-to-week, after the first baseline measure following the initial session. In addition to this, having a ‘general happiness’ question, allowed for consistent overall comparison if individuals had not completed the entire questionnaire either due to time restraints, or lack of appropriateness (couples who did not have children could not answer the children question). Using items from the ENRICH Martial Satisfaction Scale which has been validated with a reliability of .86, the shortened MHS allows for a valid weekly measure to be taken by couples, to mark potential progress throughout the intervention (Fowers & Olson, 1993).

Equipment

The current study implemented the use of two Apple Mac computers, one which was placed in the therapist’s office, and one which was kept stationary for all couples to use. Both of these were in the Curtin Psychology Clinic, but in different rooms. Only slight specification differences existed between the two computers. The therapist used an iMAC 21.5 inch, 2.5GHz Quad-Core intel Core i5 computer, with 4GB 1333MHz RAM. Whilst the couples also used a 21.5 inch iMac, but with a 3.06GHz intel Core 2 Duo, with 4GB and 1067MHZ RAM. Both computers utilised the Mac OS X 10.6.2 running system, and were connected via local ethernet using the Bonjour local network available on Mac computers. The only program that was utilised for sessions was the iChat program which allowed for the therapist and client to connect and both see and hear each other in real time, and for the therapist to record all sessions. The therapist would organise all connections prior to session, thus allowing the program to be available when couples entered the room. Whilst the therapist could see both the couple and themselves, the couples could only see the therapist, as not to distract or enable the participant to focus on the self-image (Simpson et al., 2005).

The Therapist and Fidelity

All therapy was conducted by the author (a PhD level clinical psychologist candidate) registered with the Australia Health Practitioners Registration Association as a Clinical Psychologist Registrar, with previous working experience with family

systems, couples and behavioural therapy. The therapist was provided and adhered strictly to the Couple CARE manual (*Appendix E*), which describes the tasks to be completed each week, the questions to ask couples, as well as the exercises to complete in session. Furthermore supervision was conducted by a Clinical Psychologist and couples therapist, with over 15 years experience in couple work, to ensure fidelity and adherence to protocol. After each intervention session, a progress note was completed by the treating therapist, to ensure all objectives as outlined by the manual had been accomplished, homework reviewed, and any in-session rehearsal exercises completed. A sample checklist is included in Appendix L. Progress notes were completed after every session, for all couples in both conditions, and reviewed and co-signed by the supervisor.

Adherence to protocol further involved weekly supervision, to watch a statistically generated, random selection of recordings of sessions, and grade the therapists' ability to fulfil the objectives of each session, how closely they followed the manual, and to what satisfactory level they were able to conduct the intervention. There was an equal selection of video and face-to-face couples. Evaluation forms were based the relevant week's objectives as specified by the Couple CARE manual, with each objective rated on a 5 point Likert scale that ranged from (1) *not completed* to (5) *completed*. There was also an overall satisfaction rating out of 10, representing how satisfied the rater was at how well each objective was completed. A sample checklist is included in Appendix K. Both reviewer and therapist graded these sessions and upon completion, and marks were compared.

Interrater reliability was assessed by calculating Krippendorff's alpha (α) for the mean completion scores, and satisfaction scores described above. When assessing interrater reliability between multiple raters, Krippendorff's alpha is considered to be a strongly rigorous measure (Krippendorff, 2011). The Krippendorff's alpha for the agreement between raters in the current study, for the mean completion scores .90 and satisfaction scores .86 showed strong reliability. This reflects high consistency across sessions, with the therapist maintaining the intervention by the manual, and doing this to a highly satisfactory level. A minimum of 10 precent of sessions were watched and reviewed by the reviewer to ensure fidelity.

The supervision of a second advisor was also employed in the study who is qualified in Couple CARE specifically. Elizabeth Moore, a Clinical Psychologist, and one of the original authors of the Couple CARE manual, was contacted and

agreed to conduct weekly supervision meetings via Skype with the therapist. This was to ensure the treating therapist was correctly administering the program, and adequately addressing the needs of the individual couples, within the appropriate context of the program.

The decision was made to use only one therapist, as a single therapist approach would ensure that the therapist adhered to the treatment protocol, and all couples received standardised and equal intervention. Furthermore, the practical cost of hiring an experienced therapist would exceed the budget of the project.

Procedure

A flowchart of the procedure has been attached (*Appendix A*) for a summary of the process. The following is a detailed description of the procedure enacted in the current study, divided by timeline of events. Prior to the commencement of any data collection or recruiting, ethics clearance was sought and provided by the Curtin research Ethics Committee.

Baseline assessment: Once participants contacted the clinic to register interest in taking part in the study, they received an initial telephone call providing them with some preliminary information about the study, and what to expect as part of their participation. If they remained interested, an information letter and consent forms were sent to the address they provided (*Appendix F and G*). A brief duty screen was also conducted to ensure participant suitability, and the appropriateness of the intervention for their situation. The information package explained that should the participant proceed with their involvement in the study, they need to read and sign all the forms and post them back in the reply paid envelope. Once the consent forms were received, an initial battery of tests and screening material was sent out, therefore two packages were send to them via mail, one for themselves and one for their partner. These included: a demographic information questionnaire (*Appendix H*), the DAS, the DASS-42, the Areas of Change Questionnaire, and the PDSQ.

Once all the complete clinical measures were received, scored, and found suitable for the study, participants were again contacted via telephone and given an appointment time, and informed about what to expect, such as what condition they will be placed in, and if appropriate, any further information. No couples withdrew participation after being informed of which condition they were placed in.

Participants found to satisfy suicidal or psychotic criteria on the PDSQ, or found to display significantly high distress rates on the DAS, were explained the program may not be appropriate to address their needs and thus the program could not ethically be recommended to them, referral numbers were provided and ability to meet with the project supervisors offered.

Randomisation to conditions: Prior to the first session, couples were allocated a condition using random allocation software (<http://graphpad.com/quickcals/randomize1.cfm>) to eliminate bias in treatment assignment. This was calculated on a sample of 30 couples, and two conditions. Participants were randomly placed in one of two conditions. In the first condition both partners were in the same room, and the therapist in another room (replicating couples in rural areas accessing a therapist's services in another location). To allow for comparison, in the second condition, the couples were in the same room as the therapist (replicating couples in tradition face-to-face therapy). All couples were sent maps with direction to the psychology clinic. Those couples in the face-to-face condition were shown to their rooms by the reception staff during office hours, and after-hours couples were greeted by the therapist in the reception room. Those couples engaging in the therapy via videoconferencing were explained over the phone prior to their first session that they would either be shown to the room by reception, and the therapist would appear on screen once they entered the room, or if after-hours appointments were scheduled, there would be signs posted on the building to show them the correct location of the clinic, upon entering which, they could go straight into the directed room. The therapist would then appear on screen and the session would begin.

The First Session: The first half of this session was used to explain the study to the participants, and ensure they had read and understood the consent forms. Couple's expectations as part of the Couple CARE program were discussed, and objectives set. Couple responsibilities and requirements of the program were also discussed. The last part of the session took the form of a semi-structured interview (*Appendix B*), as discussed previously. All couples underwent an identically framed first session including interview to allow for accurate treatment comparison in data analysis.

Sessions 2-5: Sessions 2 to 5 worked through the Couple CARE manual (*Appendix E*), with additional time provided to address any individual issues that may have arisen. Each session began by addressing and evaluating the self-change plans created and enacted by each member of the dyad during the week. The session then proceeded to move onto covering the content outlined in the manual, including some role-play and evaluation of each partner, by both themselves and the other, with some feedback from the therapist.

After session three, participants were then asked to fill out the WAI. Studies show that after three initial sessions, rapport begins to be established in traditional therapy (Cook & Doyle, 2002), and this can be a strong predictor of intervention outcomes. Thus the WAI was given to participants to complete and return in a sealed envelope, which would go straight into data collection prior to the commencement of session 4. Ensuring the envelopes were sealed and not reviewed until the intervention was finalised, allowed participants to be completely honest in their responses without any worry of reprisal from the therapist.

Final Session: During the final session, participants were asked to participate in a second interview. As discussed earlier, an external interviewer, also a postgraduate student, completed the post therapy semi-structured interview about the participant's overall experience. This was done in an effort to ensure the role of therapist did not become convoluted, and participants could speak freely about their personal experience of the therapist. The interviewers were provided with a list of questions (*Appendix C*) used to elicit information from the participants in a process suggested by Patton (2002). After the final session, the WAI was again given to couples to be completed, as well as the DAS, the DASS-42, and the AC. This allowed for the tracking of any changes in relationship distress, and furthermore for the purpose of statistical analysis, which was hoped to provide further evidence for the themes identified by the qualitative analysis. Additionally, participants were also asked to fill out a Client Satisfaction Questionnaire which contains eight questions assessing the quality of the service the participant received, and their satisfaction with the therapeutic process (*Appendix I*).

Post Intervention Assessment: Three months following the final session, all couples were contacted to participate in the completion of a final lot of questionnaires. Couples were sent individually, the DAS, the DASS-42, and the ACQ. The return of these completed each couple's participation, and feedback about any changes evidenced in the questionnaires was made available upon request.

Research Design and Data Analysis

Research Design

The current study used a mixed method design in order to strengthen the validity of themes identified by the qualitative analysis, and ultimately provide evidence for the aforementioned hypothesis. The design implemented reflected a randomised, active control group design to ensure all clients were undergoing the intervention, as their registration for the study would reflect some distress that could potentially worsen if a traditional control group was used (Persons & Silberschatz, 1998). This therefore involved randomising 15 couples to a videoconferencing condition, and 15 couples to the active control, being a face-to-face condition found to be appropriate as the intervention had previously been established as efficacious (Halford et al., 2003). Furthermore, the use of an active control allowed for a stronger test of the efficacy of videoconferencing, as comparison to a waitlist would allow for fewer conclusions to be made.

A single therapist was used to conduct all interventions, to minimise any therapist confounding variables. All couples participated in two interviews during the first and final sessions, with the therapist conducting the first interview, and an external researcher conducting the second. Triangulation was used as a technique by means of establishing reliability and validity in the current study. Specifically, the study strived to underpin the validity of the themes identified by the qualitative analysis with the analysis of a number of outcome measures, which were given to participants' pre, post and at 3 month follow-up. This quantitative analysis was used to corroborate and compliment the results of the qualitative analysis, and thus strengthen the overall findings in regards to the effectiveness of couples therapy presented via videoconferencing (Maxwell & Loomis, 2003).

The Qualitative Phase

It was an essential component of this study not only to see whether the technological element; videoconferencing, allowed for the intervention to be implemented effectively as compared to traditional face-to-face methods, but also to explore the lived experiences of the couples who use the technology. Therefore analysis was conducted on responses provided by participants from semi-structured interviews, in order to elicit themes about their expectations, the experience of undergoing couples therapy via videoconferencing, as well as perceived levels of therapeutic change and alliance. Through the use of an empirical form of phenomenology, this subjective experience of the couples can be explored on an in-depth basis in a unique and personal way (Finlay, 2009). Essentially this involves looking at participant responses, how they are uniquely expressed and experienced, and ensuring this individuality is accurately represented. This reflects the premise behind phenomenology, where the focus does not remain on the way to best report the participant's subjective experience, but rather to collect these experiences that reflect the meaning that exists within them (Finlay).

As part of the qualitative phase of the design, analysis in the form of thematic analysis was utilised (Braun & Clarke, 2006). This involves emersion in the transcribed data to enable the identification of re-occurring themes (Braun & Clarke, 2006). This is done through the processes of coding, sorting, and organising data collected from the interviews. Using this form of analysis allows for the identification of several prevailing themes from the responses provided by the participants (Liamputpong & Ezzy, 2005). Guidelines developed by Braun and Clarke (2006) were used in an effort to maintain rigour and validity throughout the analysis. The first phase involved becoming familiar with the data, which in the current study reflected the transcription of all interviews for couples in the videoconferencing condition, and becoming mindful to any early developing themes that may have started to emerge. Phase two then involved a more in-depth look at the data, and beginning to generate an initial list of codes from the data. This also involved importing all the transcribed interviews into the computer program NVivo 9 to allow for clearer grouping of themes. This essentially describes the process of coding, where data is read and coded, as a means of organising data into groups that reflect a certain meaning (Braun & Clarke).

Once data has been coded, the aim is to search for themes, also known as phase three. This involves grouping appropriate codes to form broader themes and creating a sort of ‘thematic map’. At this phase, there is a developing sense of importance of certain themes, which then leads to phase four where a review of themes allows for a more focused approach to hone significant and meaningful themes. This may also involve deleting themes that may not actually be themes, due to insufficient data, or the ability to combine themes and form overarching themes. The final two phases involve naming and defining the themes, refining the analysis, and again ensuring rigour by allowing for an external rater to confirm the identified themes. Whilst in larger studies a team of independent raters can confirm the validity of identified themes (Finlay, 2009), given the scale of the current study another psychologist with over three decades of experience in qualitative enquiry was employed to categorise a complete transcript into themes, and inter-rater reliability was then calculated. The final phase then involved the writing and reporting of the findings.

Qualitative researchers often describe analysis as beginning at the first interview and continuing throughout the research process (Baum, 1993). The current study reflected this notion in that following the first interview about client exceptions, the process of therapy very much became a collaborative one, during which themes identified by participants to improve the delivery of the therapy were incorporated into the study. For example, couples noted that certain colours were more difficult to see through the videoconferencing feed, consequently the therapist adjusted the colour of clothing worn to enable couples to see her better.

The Quantitative Phase

The current study utilised the Statistical Package for Social Sciences (SPSS v19) program to complete the quantitative phase analysis described in the earlier preceding section. Using GLMM, separate analyses were conducted on each of the five outcomes, the DAS, the DASS-42, the WAI, the ACQ and the CSQ. Data was compared on these outcomes from pre-intervention to post-intervention, pre to follow-up, as well as post-intervention to follow-up. Data collected at each time point was used, and analysed in order to collect as much information as possible about potential changes in client scores, and the effects this may have on the outlined hypotheses.

Furthermore *t*-tests and *chi-square* statistics were also calculated using SPSS to analyse descriptive statistics, and screen and compare participant data.

Reliable and Clinically Significant Change Analysis (Appendix J):

As discussed earlier, a reliable change (RC) score was also calculated (Jacobson & Truax, 1991) using pre, post, and follow-up outcome scores for each individual on the DAS, and the DASS. This allowed for the comparison of each individual and see whether their scores have changed significantly, and whether this change was likely to be significant or random, therefore indicating whether the intervention has had a significant impact on them.

Once reliable change was established, clinical significance was calculated to allow for conclusions on the effectiveness of the treatment for each individual, and thus assisted in determining whether each couple benefited from the intervention. As discussed above, classification of participants reflected a label of either recovered, improved, unchanged or deteriorated. Importantly this allowed for the comparison between each of these cases, and between the face-to-face conditions and the videoconferencing conditions. This was in an effort to demonstrate whether there are any differences, positive or negative, between the conditions.

This quantitative analysis was again used as a means of supporting the results of the qualitative analysis. In this way, triangulation was used as a technique by means of establishing reliability and validity in the current study. Specifically, the study strived to underpin the validity of the themes identified by the qualitative analysis with the analysis of the above outcome measures, which were given to participants pre, post and at 3 month follow-up.

In addition to this, frequent progress measures were collected, resulting in weekly scores being presented in the form of the MHS, to clearly track changes in the relationship. In this way, the study utilised some aspects of single case methodology which is clinically informative, in that it facilitates close inspection of changes over the course of therapy via the detailed measurement of treatment. This methodology has been described as possessing high clinical and face validity (Cromarty, Jonsson, Moorhead, & Freeston, 2011) given the emphasis on patterns of change within the couple.

Chapter Summary

This chapter has provided a rationale for the analysis, research design, theory and methodology of the current study. Whilst the premise to explore the use of videoconferencing and its effectiveness in implementing a psychological intervention is no longer novel, its use in couple counselling, and the unique dynamic of therapist and couple is. Through the use of a RCT with an active control group to enable stronger comparisons, 60 participants, forming 30 couples underwent couples counselling. Whilst 15 couples did this face-to-face with the therapist, 15 couples connected with the therapist and partook in the intervention via a videoconferencing screen. This latter group comprised the active control condition. This was done using an already established intervention; Couple CARE provided to each couple over a six session course.

Using measures at pre, post and 3 month follow-up allowed for quantitative analysis, and qualitative analysis gathered at start and finish, to triangulate and strengthen validity of results. GLMM was seen as the most appropriate statistical approach to employ due to the multiple layers and clustering of the data. This allowed for identification of significant changes in participant scores, with reliable and clinically significant change also calculated to track any progress. This included couple adjustment, areas of change, depression, anxiety and stress, as well as alliance ratings. Pre and post interviews were also conducted as a means of collecting and analysing data through thematic analysis, in an effort to identify important themes in relation to each couple's expectations, experience, and perceived alliance with the therapist. Ultimately, this combined methodology was implemented to monitor progress of couples throughout the intervention, and give depth to the study by investigating their experiences.

Chapter Three: Qualitative Phase

In this chapter the results of the thematic analysis conducted on interviews from session one and then session 6 are presented, with an exploration of the themes identified, followed by a summary of each theme in regards to the appropriate research questions.

Part I: ***Pre Therapy Interview Themes***

The pre-therapy interviews conducted during the first session, allowed for a number of themes to be extracted, regarding each couples' expectations of the use of videoconferencing as a medium to complete the Couple CARE program. This data was based on five open ended questions (*Appendix B*), asked by the therapist to each couple, prior to the completion of the first session. All couples in the study complied, and answered the questions. This yielded interviews lasting approximately 15 minutes, and once transcribed, data was analysed with the assistance of NVivo 10.

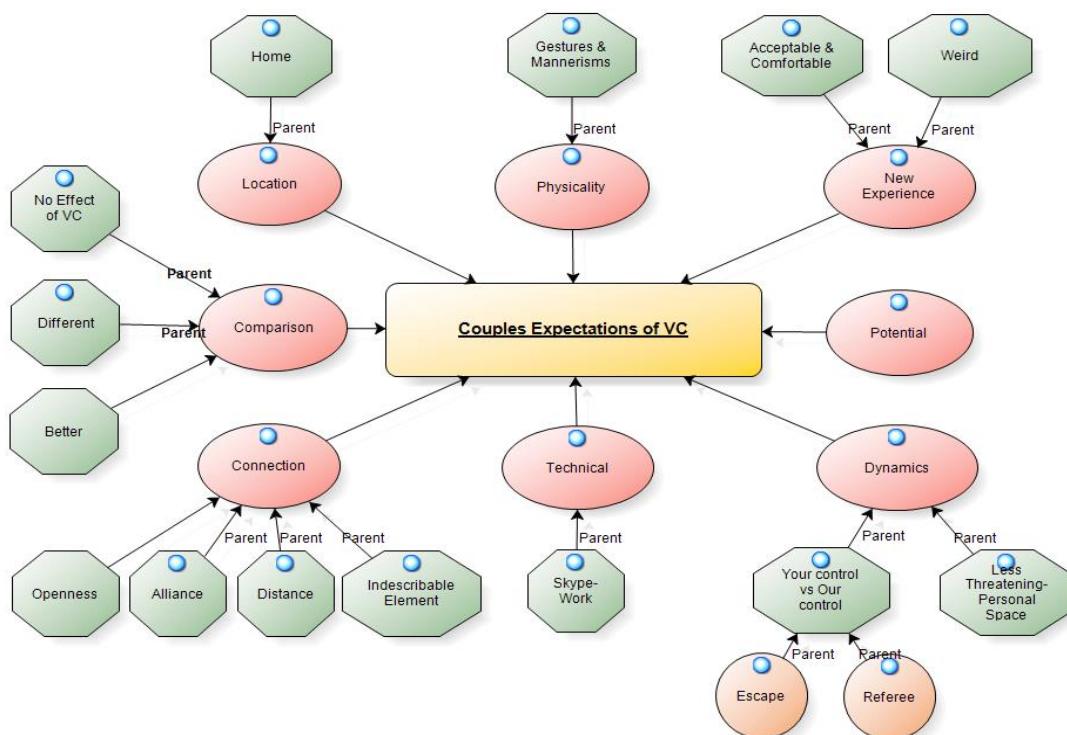


Figure 3: Summary image of the thematic analysis created through NVivo

This allowed the researcher to classify themes (or nodes) commonly reflected in the transcribed data. Figure 3 illustrates the seven core themes extracted from the data, and a further 13 identified subthemes. Only one subtheme was found to contain a further two subthemes. These will now be discussed in subsequent order, in greater depth.

Theme of ‘Comparisons’

This theme allowed couples to directly explore the comparisons between videoconferencing and face-to-face interactions. It was evident that couples who reflected on the videoconferencing as an alternative to face-to-face therapy specifically, had clear ideas as to whether video was better, whether it was different and thus not equally effective, or whether there was in fact no effect of the videoconferencing. As a result all comments within the theme of ‘comparison’ could be classified into one of three distinct subthemes; ‘better’, ‘different’, or ‘no effect of videoconferencing (VC)’, as illustrated by Figure 4 below.

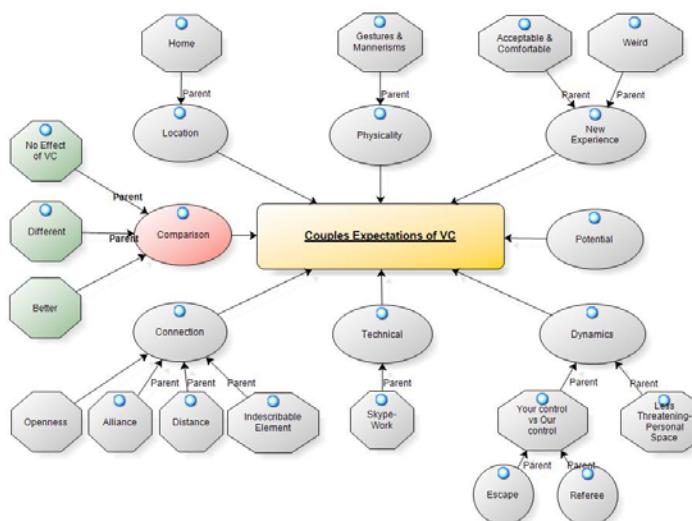


Figure 4: Figure of Comparison theme, with three direct subthemes also highlighted; better, different, no effect of VC

Subtheme of ‘Better’

The subtheme of ‘better’ was identified and interestingly described by couples. Within this theme, couples distinctly compared videoconferencing to face-to-face, and asserted their preference for videoconferencing. This became interesting however; as the reasons used to justify this preference, was something that some

experts would actually consider a hindrance to the therapeutic process, and here defined by the subtheme of “less emotional”. The idea of a therapy session being “less emotional” could be described by some as a lack of rapport and thus alliance, resulting in potentially stunted progress (Symonds & Horvath, 2004). However the couples who discussed this idea in particular, laboured the point that this ‘distance’ or lack of emotionality, results in better outcomes as a result of more focus on content:

“I think it’s a bit less, I don’t know the right word but emotive, um is that the right word for emotional? Like there’s less um, I don’t think there’s, like when we did counselling before I remember it being quite emotional, you can see and feel like the vibe in the room, it’s a bit less like this, ah which might keep more balance, controlled discussion if you like” (21).

Perhaps a testament to the nature of the program, and the therapeutic techniques needed to facilitate its delivery, couples reflected on the idea of feeling somewhat ‘removed’, or not ‘speaking to a real person’, allowing them to be more open in their disclosures, and engaged with the therapist, and to feel as if they were gaining more out of the therapy:

“yeh we know that you’re a real person and we can see you, it is much easier to talk to a screen and and you don’t kind of um, you don’t um hold back about anything really because it’s...you feel like you can open up more” (22).

One client who noted having a particularly shy personality, explained that the videoconferencing allowed her to minimise the possible effects of shyness as a hindrance, as she felt less confronted by the therapist as compared to a face-to-face interaction:

“I think it’s good, maybe it’s even better, cos I get shy around other people, so I don’t know, I think I like it even better, cos it feels like you’re still getting the same level of quality, but it’s not so confronting. I don’t know, maybe that’s just because I’m a shy person” (6).

Couples noted that this feeling of comfort with the videoconferencing allowed them to engage in the experience more wholly. Similar studies have also identified themes that reflect on the videoconferencing experience as eliciting a deeper emotional experience than the client had initially expected, allowing the client to feel deeply immersed in the counselling process (Lewis et al., 2004; Simpson et al., 2005; Stubbings et al., 2013). This ability to be open and engaged with the therapist via

videoconferencing was echoed in comparisons with face-to-face therapy, with couples noting that videoconferencing generally felt less intimidating, and confronting:

“yeh that’s my biggest thing, is, it’s like I don’t know you, but yeh, no it’s um. I think it’s a lot less nerve wrecking than face to face with somebody” (4).

This client’s partner added:

“because if you were sat there (in the room) you could be put under pressure, and start blushing” (3).

These comments reflect the idea of a face-to-face interaction feeling somewhat more intimidating, and alternatively, having the screen separating the client and therapist allows for that to be minimised, and a level of comfort to be established almost instantaneously. Couples therefore expected that the video would allow for this to be evidenced more than a face-to-face session would.

Subtheme of ‘Different’

Again in this subtheme couples took the initiative to directly compare their videoconferencing experience of therapy, with face-to-face counselling. In this case, couples reflected the experience was ‘different’ to the traditional approach. In direct contrast to the subtheme of ‘better’, couples saw videoconferencing as different to face-to-face therapy, and in some cases found it inferior:

“look I think it would, this is a good thing, I just think it would be better face to face. And don’t get me wrong , it’s like I deal with VC at least once or twice a week, so it’s not that I’m not used to VC, I just think I don’t know maybe being a people person...if I was to, just make a better connection I think” (1).

As is described in the above exert of one client’s comment on his expectations, some couples also viewed this idea of feeling somewhat removed or detached as discussed previously, as a negative element of their videoconferencing experience:

“in terms of having that connection with the person and not um and not um being completely open, you know, maybe there is a risk of not being completely open...because being removed, yep”(2).

A number of couples noted feeling disappointed by not being in the face-to-face condition, and wanting to have had the opportunity to meet the therapist in person:

“even obviously I knew it was this way I came in thinking oh I’m going to

meet someone, some disappointment that I didn't get to meet you face to face” (1)

Couples who made this negative distinction between face-to-face and videoconferencing however still discussed expectations regarding finding the experience valuable, and acceptable:

“yeh it just seems a bit foreign and detached, so . And don’t get me wrong I’m not saying it’s not valuable, it’s very valuable” (1),

This more accurately represented this subtheme, where couples reflected on a perceived difference between face-to-face interactions and videoconferencing more as a point of comparison, rather than a negative element of therapy conducted via videoconferencing.

Subtheme of ‘No Effect of Videoconferencing’

Again in direct comparison to the subtheme of ‘different’, this theme reflects commentary by couples where they expected videoconferencing not to have any effect on the therapy, delivery of content, or relation to the therapist:

“I don’t think it’s going to make it, I don’t think whether you’re here via the screen or sitting opposite us, it’s going to make any difference to how we relate to you and how seriously we take this, I don’t think that’s going to matter, I think it’s a fabulous medium if you’re trying to get to people who can’t access this” (14).

This echoed the nature of almost all responses in this subtheme. Couples reflected on the notion that they did not expect videoconferencing to hinder, or essentially affect the therapy in any way, whether that be negative or positive:

“yeh no I don’t think it’s going to be adversely effected, I think that it would be similar, probably similar outcomes at least from this point, with you in the room or not in the room” (28).

Furthermore, couples reflected on the notion that the technology used, actually allowed them to both hear and see the therapist and thus essentially mimicked real world interaction:

“I don’t think it makes any difference because you are basically sitting in the room. When I can hear you and see you and it’s in real time, you are basically in the room with us” (19).

This statement, strikingly similar to others in this subtheme, reflects the notion of ‘telepresence’ (Muhlbach & Ptussong, 1995). This essentially describes the extent the clients felt they were sharing the same space as the therapist, or even more specifically, to what extent it felt as if they were in a real face-to-face meeting with the therapist. Couples that identified this observation of the interaction feeling ‘real’, reflected this idea of having perceptual presence with the therapist (Lombard & Ditton, 1997), in that they noted being able to engage, and more specifically; see, hear, and interact with the therapist in ‘real time’:

“you’re um not a robot, you’re talking to us, and we can talk to you and see you, very personal and um yeh I don’t have a problem with it” (13).

This reflects the overall subtheme, and actually the overarching theme of ‘comparison’ in that couples did not feel disadvantaged by having been placed in the videoconferencing condition. Even in the ‘different’ subtheme, couples noted finding a perceived difference in interaction with the therapist, however they did not indicate this was going to affect the actual therapy, or its intended outcome in an adverse way.

Theme of ‘Location’

Several couples reflected on the location of where the therapy actually took place. This included both the room they were in, as well as the room they could see the therapist was in. Figure 5 illustrates this theme, and the subtheme identified of ‘home’.

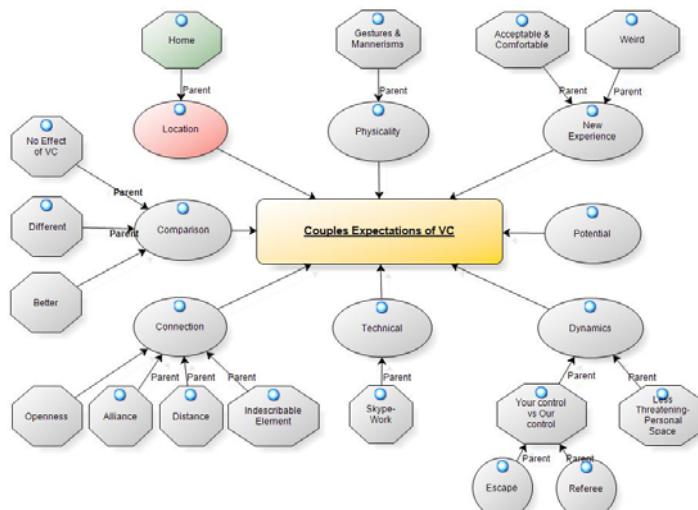


Figure 5: Figure of ‘Location’ theme, with one direct subtheme also highlighted; home.

This is where mention was made of the surroundings noticed by participant, such as the bright lights of the clinic, and the sterile nature of the rooms:

“but the fact that this room isn’t, and it has harshness, and it doesn’t, like even just a bean bag or something like that, flowers, or a vase of flowers, just something that made it a bit more natural if you like, it’s like a little cell, I mean it’s not a huge room” (3).

The rooms used were part of the Psychology Clinic at Curtin University, all rooms have a similar layout and are rarely personalised, due to the high frequency of trainee therapists using each room. As a result, couples that focused on the lack of ‘candles, cushions, and wall art’ were reflecting on the nature of the clinic as opposed to the videoconferencing element. Interestingly those couples that commented on this lack of personalisation said this is unlikely to change, and may not ultimately enhance or adversely affect any aspect of the videoconferencing:

“I don’t know if you need to improve it, but that’s what it is, I mean I’m aware that’s what it is, that may never change, but I guess it’s easier if you have those things around, as it makes it easier for those people on the other side of the screen to respond, without getting distracted or feeling uncomfortable” (3).

Another couple however, whilst they also identified the harshness of the room, noted that this would not affect the ultimate outcome of the therapy, or the value of the content:

“but the room is not conducive in terms of furniture...it’s sterile...it’s not going to affect us, it’s not going to affect us and the way we develop through this process” (28).

As mentioned above, this notion of feeling uncomfortable was not caused by the videoconferencing, but was enhanced by the lack of ‘warmth’ displayed in the surroundings. This idea was further explored and broadened by one couple who noted feeling uncomfortable due to the general premise of being in a foreign environment:

“I had to tell myself that you were a real person hah ha. And I think actually you would have been more real if it was in our own house, like if it was just with our computer and you would have come up on screen, then, or or it would have just been more real” (2).

They went on to identify that because they did not feel familiar or comfortable in the

environment they had been placed in, the experience did not feel ‘real’. Interestingly, the couple noted this idea of having the videoconferencing from home, would make it more ‘real’ and more comfortable. This was a clear subtheme identified in ‘Location’.

Subtheme of ‘Home’

The couples who noted the idea of engaging in the therapy via videoconferencing streamed directly out of their homes, reported mixed expectations. Some couples noted feeling that this could perhaps affect confidentiality, with the potential of others in the dwelling being able to hear what was being said. Alternatively, and more predominantly, couples noted the expectation of feeling more comfortable if they could engage in the process from their own homes:

“if it’s in your own home, again I think there’s huge benefit of you being in your comfort zone, and that could actually alleviate the other thing I talked about, the openness, cos I do feel like if you are in your own environment, then you’re more relaxed, more comfortable about being as open as possible” (2).

The theme of home was not explored in depth with couples, it was more of a comment that was made when reflecting on the location of the videoconferencing, and the expectations of whether this would add to any potential effects of the camera, as opposed to face-to-face interactions.

Theme of ‘Physicality’

In this theme couples made comment about the physicality of the therapist and the way this was portrayed through the screen. Figure 6 highlights the theme of physicality and the sole subtheme of ‘gestures and mannerisms’.

Couples commented on their physical perception of the therapist based on what they could see through the computer screen. The colour of clothing the therapist wore, her complexion, and how these were projected through the screen:

“the top you’re wearing...your top matches the wall, so you’re disappearing...your tan is nice but you’re disappearing, although the light is giving you some separation of your head and neck, but it also means you are disappearing to the wall” (4).

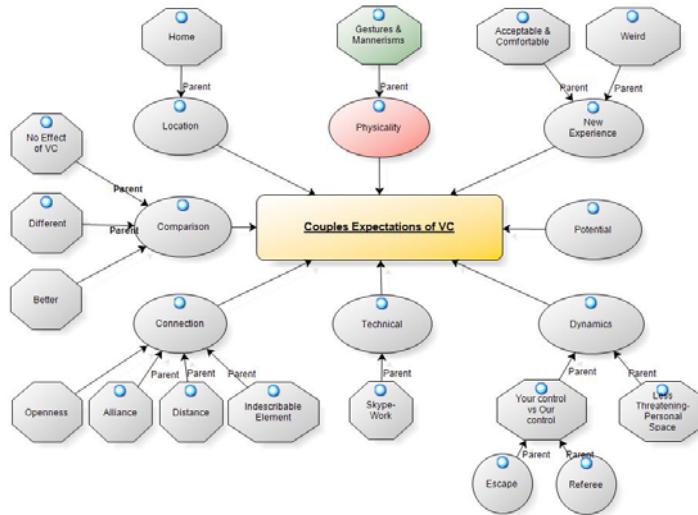


Figure 6: Figure of ‘Physicality’ theme, with one direct subtheme highlighted; gestures and mannerisms.

This early feedback was invaluable for the study as the therapist was able to alter clothing colour choices, and thus able to be more pronounced on the computer screen. Furthermore couples commented on the amount of the therapist they could see, and expressed interest regarding how much the therapist could see of them. Some clients noted feeling more relaxed about the expression of body language through the screen, hypothesising that perhaps the screen mediated the control over space, and made the therapist appear smaller and more contained, as a result allowing them to feel more relaxed:

“I know I feel a bit more relaxed in terms of body language, than if there was another person in the room”, to which her partner replied: “maybe it’s because she seems smaller” (8).

Other couples joked about not being able to shake hands, or hand pieces of paper to the therapist through the screen. However the main expectations remained that this lack of physicality would not hinder the presentation of content, but possibly somewhat prolong the time taken for a strong therapeutic alliance to develop:

“us communicating to you is a two way thing, and if the person on this side is not feeling comfortable with your communication because they’re not seeing it, then it’s going to be harder for you to get a result” (3).

As opposed to:

"that's fine, that you're um not a robot you're talking to us, and we can talk to you and see you, very personal and um yeh I don't have a problem with it"
(13).

These two quotes mediate the conflicting views that couple expressed regarding the physicality of videoconferencing. Whilst all couples could see and hear the therapist, some struggled with the inability to see the whole of the therapist and the extraneous factor that would remain whether the therapist was present face-to-face, or via the screen, such as the colour of their clothing, and the mannerisms and gestures the therapist used as part of her repertoire.

Subtheme of 'Gestures and Mannerisms'

This idea of a limited gesture range due to the perceived constraints of the videoconferencing was noted as having an effect on the affect range experienced through the screen:

"your gesture range is more limited, the body language the facial engagement...your affect facial range is much more limited, um hence so, like what you're doing now, when you're nodding, perhaps if that feels like a bigger gesture than you would normally do I don't know, but that's actually quite helpful... because then you fill the space a little bit more, so yeah, it's just your affect range on receiving is a bridge" (4).

As this quotation illustrates, whilst some mannerisms are lost through the screen, others enhance the experience such as nodding, and the use of hand gestures.

Interestingly, the use of hand gestures was commented on quite often by couples, as either helpful or a hindrance. As another couple commented:

"I'm sure your fingers aren't really that long...so in front of a screen that will be, can be distracting, you know, ah yeh I don't think it's terrible but I think it's, both things, often in the story things can be expressive, but on the screen they can be more distracting" (27).

This client went further to compare the use of hand gestures on the screen, to face-to-face interactions, and how they can enhance an interaction when in the same physical location, for example shaking hands or hugging. Whilst noting this is not detrimental to the process, overall couples did comment that the exaggeration of some gestures can be a distraction through the screen.

Theme of 'New Experience'

This theme was a reflection by couples on the fact that videoconferencing was a completely new experience to them, and thus difficult, if not impossible, to compare to any other experiences. This theme included two subthemes; couples that reported this being a new experience either noted feeling ‘weird’ initially, or found the exposure ‘acceptable and comfortable’. Figure 7 highlights this theme, and adjacent subthemes.

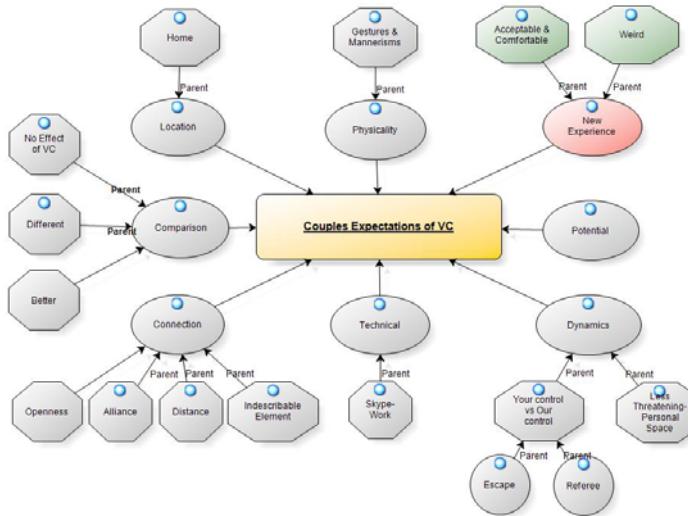


Figure 7: Figure of ‘New Experience’ theme, with two direct subthemes highlighted; weird, and acceptable and comfortable.

A number of couples commented on the expectations they entered the therapy with, and how this compared to their initial impressions:

“yeh no problem. I was sort of a bit sceptical at first cos personally I don’t even like talking on the phone, I’d rather have face to face conversations with people if I have to. But no it’s um, I haven’t found it off putting at all” (21).

Several clients noted either having no expectations when entering the therapy, or being sceptical like the above quote about the effectiveness, or application of the videoconferencing to deliver the therapeutic content. This resulted in the formation of the two subthemes; ‘weird’ and ‘acceptable’.

Subtheme of ‘Weird’

Several couples noted initially feeling ‘weird’ about the experience. This was more of a reflection on their first impressions rather than an expectation they had

about the videoconferencing. More specifically couples noted entering the room for the first time, seeing the screen, and the initial reaction of surrealism:

“well I thought it was very weird, because I’ve never done anything like this and I had to tell myself that you were a real person ha ha” (2).

Whilst only a few couples noted this feeling of weirdness, they then appeared to try and compartmentalise the experience by comparing it to something they were more familiar with, such as the use of the communication program on digital media; Skype:

“yeah no it’s good, it’s weird at first, like I said, it’s obviously someone that we don’t know, like if we were on Skype it would be like that if you were in the room with us anyway” (18).

Another couple conceded that it was the institutional environment that contributed to the ‘weird’ experience and took away from the experience feeling real or comfortable:

“It is really quite weird, I find it really quite weird because there’s the door opened, the, there’s something about the lack of human interaction with it, it’s fine when you’re on the screen...I feel myself wanting a bit more softness around...but it’s just a bit institutionally awkward” (4).

This comment again reflected a more aesthetic reflection of expectations and the experience, rather than the videoconferencing element itself of service delivery.

Subtheme of ‘Acceptable & Comfortable’

This subtheme reflected couples expectations and initial impressions of the videoconferencing being primarily positive and thus acceptable, and accordingly comfortable:

“I thought it was an easy way to um, I felt comfortable and easy to discuss things, um I suppose not confrontational, but also engaging as well, so yeah I thought it (videoconferencing) was a good, quite a good way to do it actually” (24).

Much as the preceding subtheme, couples noted that their initial expectations had been effected, to the point where some couples even expressed surprise at their rather rapid adjustment to the new experience:

“but I’m really surprised at how easy it’s been to be honest” (22).

Another couple added a reflection about the technology:

“I’m happy with it, it’s really clear, like I’m quite surprised at how clear it is to listen to you, and how the picture is as well, and how well it’s gone, I’m quite surprised you know” (20).

Again couples took this opportunity whilst discussing their comfort with using the medium, and lack of negative expectations, to compare the videoconferencing medium to that of a face-to-face interaction. Couples noted that the role of a therapist or facilitator does not appear to be altered by the medium with which they meet their clients:

“I don’t think it makes a difference having the person on the other side of the screen. Still have someone facilitating um the session, to ask the questions, and then the other person to sit and listen whilst the other person is talking” (26).

Essentially couples within this subtheme reported feeling accepting of the videoconferencing experience, and generally comfortable because they felt it closely mirrored that of a face-to-face interaction. Specifically, they could see and hear the therapist, but furthermore felt an additional element of control over the experience, and a heightened comfort with which they felt they could disclose personal information, and engage with the therapist:

“I sat down and I became quite comfortable because I’m here and you’re not, and I think that makes it work because I feel, that’s what it is, it’s a control thing, you know what I mean, I feel more in control of what I’m saying to do, and therefore I feel more willing to say more to you” (9).

This comment summarises the feelings of couples who found videoconferencing acceptable and overall a comfortable experience.

Theme of ‘Potential’

This was a theme briefly mentioned by a number of couples who noted expectations about the potential of the technology. Figure 8 illustrates this theme, however no further subthemes were identified.

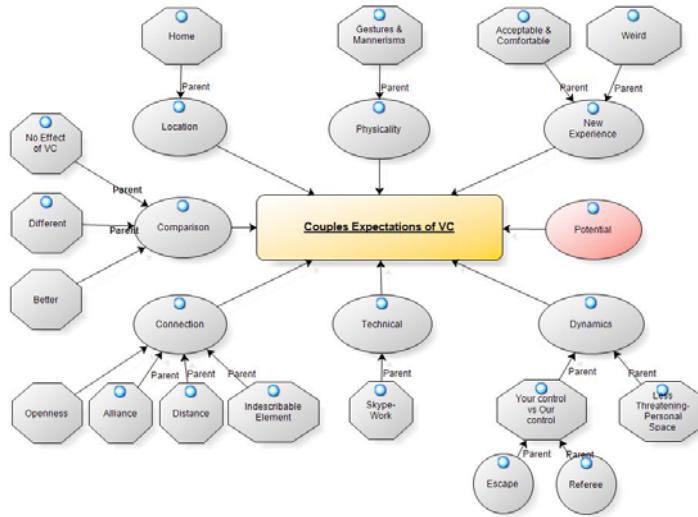


Figure 8: Figure of ‘Potential’ theme.

Couples commented on the potential of videoconferencing to provide wider accessibility for couples needing psychological intervention, that may not otherwise have the ability to access specialist intervention:

“yeh look I think the applications are widespread and there’s no limit...It gives people that don’t have access to psychologists access...But I think the applications are very very wide, it would be incredible” (19).

Comments within this theme centred on the potential of videoconferencing to reach a wide variety of populations including remote couples, prisoners, as well as connecting fly-in fly-out workers. Some concerns were raised however as to the availability of technology in these areas, and whether that would match the quality of the current videoconferencing technology being used by the couples. Through exploration of this potential, couples essentially identified their own satisfaction with using the medium, and overall ease of use:

“it hasn’t been difficult and I can certainly see for people country or interstate it’s a fantastic way to go, I mean it’s just like skyping isn’t it, talking to your mate on the screen” (26).

The ‘potential’ theme reflected the couple’s expectations about the wider uses of videoconferencing, and their confidence in its ability to be used as an effective medium to convey couples counselling.

Theme of 'Dynamics'

The theme of dynamics demonstrated the couples' exploration of how it felt to be part of a triad, where not every member was physically present in the room. Figure 9 illustrates this robust theme, with two subthemes of 'less threatening-personal space', and 'your control vs our control' which then has two further sub themes itself of 'escape', and 'referee'.

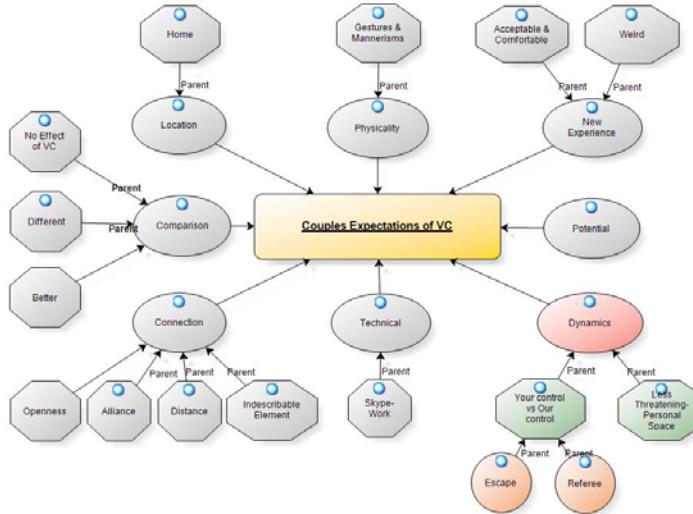


Figure 9: Theme of 'dynamics' with two subthemes highlighted of: 'less threatening personal space', and 'your control vs our control', with a further two sub themes of 'escape', and 'referee'.

Unique to this study, exploring couples counselling as opposed to individual therapy, couples could comment on the dyad dynamic versus two individuals in alternative locations. Couples felt a form of alliance together, and this appeared to allow them to feel relatively more comfortable:

"because the two of us together in a room, and you in another that makes us more comfortable about it, then with another person in the room, then with another person in another room, you know it's just us in this room as opposed to having another person in the room" (8).

One couple noted a sort of 'third dimension', where they preferred videoconferencing because they knew that whilst talking to a screen was the reality, they still felt it was personal, and not as intimidating:

"in fact I think it is probably easier for somebody like me, ok, who was hesitant to come... so I think for those sort of people I think it's probably a really good thing because um there's like a third dimension to it in a way, so,

but you still get the same contact, you don't feel like you're talking to a screen, you feel like there is a person there, but at the same time you're kind of like in your own space, so you're actually kind of well protected" (24).

This idea of the videoconferencing being less threatening, and couples feeling they had a sense of personal space was a clear subtheme discussed by many couples.

Subtheme of 'Less Threatening-Personal Space'

The reason this theme included reflections by couples of both videoconferencing feeling less threatening, as well as comments about it allowing for personal space, is because the two notions were used simultaneously:

"it's the fact that you're not in my personal space. Like I said I don't feel threatened by you, I would never feel threatened by you , but I could be sitting here with someone that might be a little threatening and I'm quite sure because they're removed from my personal space I would feel a lot less threatened. I think it's just the fact that you're on tv, you're not here with us, in person" (14).

Couples noted this detached removal of the therapist from the room allowed them to feel less threatened. They felt less intimidated, and less awkward in the experience due to the lack of physical presence by the therapist:

"like we were saying, you can feel more comfortable, because there's no one watching you like right here right now, but you still have your little, your little ball of comfort, little zone of comfort, you know what I mean. It's a positive thing for someone who's shy" (5).

A theme also identified by Lewis et al. (2004), this reflected on the notion that clients experienced less pressure than is commonly generated by being in the same physical presence as the therapist. One couple however noted that the perceived distance, could pose some potential drawbacks in that the comfort and lack of perceived pressure allowed the client to at times become withdrawn and disengaged:

"to be honest I don't listen very well to what others say, like I get it, I daydream too, but I don't listen very well, but if I had someone here I would be like watching. All scared, more like watching you 100 precent. But there's a little bit of distance, quite a bit of distance, but it still works" (5).

This illustrates the constant comparison by couples of the videoconferencing to face-to-face interactions, and whilst the client reported less focus, he essentially notes

again that the process is less intimidating, and that he expects that it will still yield the same, if not similar results. This was reflected by all couples within this theme, in that by engaging more freely in the process, feeling less inhibited and more open, couples could yield positive results from the therapy, and positive engagement with the therapist. Even the above quote does not suggest expectations that the videoconferencing would hinder the process, and this was a powerful reflection of this theme in particular.

Subtheme of ‘Your Control vs Our Control’

This theme focuses on couples who discussed expectation and issues with control. This subtheme clearly reflected two important notions; couples who reflected on themselves having the ability to control the process as a result of using the videoconferencing, and couples who noted the therapist had control and great responsibility to play the referee in the therapeutic process via videoconferencing:

“for a three way conversations for someone that might be in a hostile relationship, it would certainly be a benefit that each person could speak their mind, um without fear of retribution” (26).

This quote reflects upon the ability for couples to talk openly and honestly in a therapy session, in a safe and conducive environment to positive change. The idea of a therapist playing the referee, and the complexities videoconferencing may bring to this, were further explored by several couples.

Further Subtheme of ‘Referee’

This subtheme particularly related to couples seeing the role of the therapist as a sort of ‘referee’. Couples noted that the therapist had the ability to direct conversation and facilitate open and honest communication to enhance the experience. The technological medium was not seen to effect this communication in a negative way:

“I think actually being said to someone else, and hearing her problems and how she feels about things being said to somebody else, it’ll just have more clarity” (9).

However the notion of the therapist as referee was also viewed to potentially be hindered by the videoconferencing element. A number of couples commented that a

volatile situation could have the potential to become dangerous without the physical presence of the therapist:

“It could be challenging if there was a violent relationship I guess, you know two people in a locked room with a therapist out there not being able to um yeh intervene in that instance” (26).

This was followed by a discussion of whether the therapist could even identify the tension rising in the room whilst not being physically present, to know that the situation was escalating prior to any physical altercation:

“yeah I think the presence in the room and also, I don’t know from your end how easy it would be to pick up, for everyone to pick up vibes, um being in another room, or another building you know, that you’d be able to pick up the level of the tension rising before it actually got” (25).

The idea of feeling tension and vibes through the screen is explored further by couples in the ‘connection-alliance’ theme. Couples conceded that this may affect the appropriateness of couples who engage in couples counselling via videoconferencing, as well as the need to have strategies in place to deal with difficult and potentially volatile situations:

“I don’t know how it would go if we were really in hate hate mode, you might want to have separate chairs that might protect” (28).

Couples also then explored the amount of responsibility they themselves held for the therapeutic process, and the control they expected to, as well as actually had, over the session.

Further Subtheme of ‘Escape’

The subtheme of ‘escape’ was all about couples further exploring the amount of control they had in session. Couples reflected on the idea that they could terminate the session at their whim. Essentially couples echoed the notice ‘head thy warning’:

“because you’re not here, and I’m doing this, like the same as I would if you were here in the room, but you’re not here like I can just switch off the tv if I wanted to” (6).

Couples reflected on this idea of control over the computer monitor, and additionally noted they could simply leave if they desired:

“I don’t think either of us would just storm out in a huff type, but that would also be easier on VC, I hope, if we wanted to do that” (22).

As identified by both Lewis et al. (2004) and Simpson et al. (2005), clients felt empowered by the process, as they perceived to have more control over the sessions. This reflected a positive effect, with couples noting the ability to engage on a deeper level and express themselves more freely with potentially less fear of negative repercussions:

“it's a control thing... I feel more in control of what I'm saying to you... But if you were here, I would feel like even though you are facilitating the session, I would feel you are more in control from being here” (9).

The reflection on how much control and responsibility clients actually have over sessions when the therapist is connected via videoconferencing, proved to be positive for couples. Even though no couple enacted their ‘head thy warning’ notice, this was an important expectation for couples to express as it reflected the empowerment couples felt through the use of the videoconferencing.

Theme of ‘Technical’

This theme reflected the expectations of couples about the actual technical component of the videoconferencing. Figure 10 illustrates this theme, and the one subtheme of ‘skype-work’.

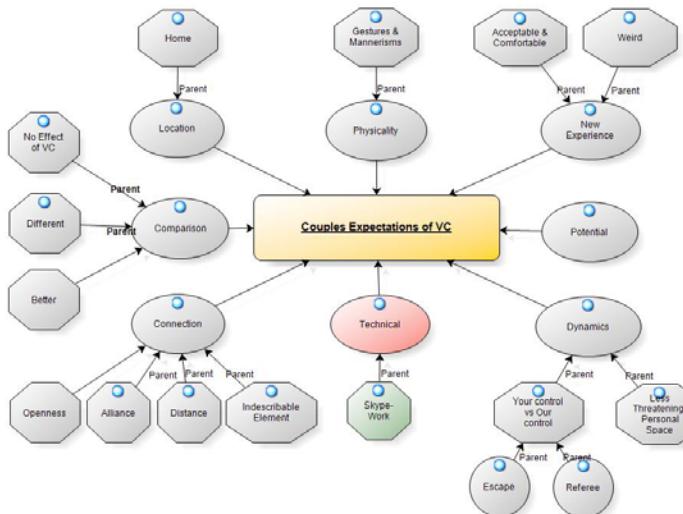


Figure 10: Theme of 'Technical', with a subtheme highlighted of 'Skype-work'

The technical theme reflected couples expectations about the actual technological element of videoconferencing. Couples reflected on the good connection, as well as

clarity of the screen, however expressed concerns about the potential for the technology to fail:

“as long as the audio is good, and the video is good, and it’s constant and there’s no hiccups. Like technology has a great tendency to let you down, the last thing I would want to be doing is pouring my heart out and then have that snap in the middle and have to stop and do it again, that would be terrible” (28).

Some participants also expressed worries about couples who may not be familiar with the technology and therefore may resist engaging in the therapy because of the medium:

“with people who may not have access to IT it might be a bit difficult, like if I gave this to your parents they just wouldn’t (use it)” (10).

Many couples further noted being surprised at the quality of the audio and visual aspects of the videoconferencing:

“I’m happy with it, it’s really clear, like I’m quite surprised at how clear it is to listen to you, and how the picture is as well, and how well it’s gone, I’m quite surprised you know” (20).

As illustrated by the above quote, the clarity of the picture and audio demonstrated the technology’s ability to create an image that accurately represented the presence of a therapist, who would otherwise be seated opposite the couple. There are a number of characteristics of a visual medium such as videoconferencing that can enhance the perceived presence of the therapist in the room (Lombard & Ditton, 1997). These include the combination of high image and sound quality, as well as image size and viewing distance:

“to be honest you could be in the room or VC, it still to me feels like a counselling session so um, I think also the right level, if you were down there it would be different, up there it would be different (pointing) cos of the space, it all kind of work really” (22).

Larger images have been found to increase presence, so the closer a person is to the image, the more they feel as a part of the image (Lombard & Ditton). Furthermore, the greater the proportion of the person’s visual field is encompassed by the angle of the image, the more presence is likely to be felt. As with the above quote, couples found that having the screen positioned at eye level and opposite them, allowed for a more accurate replication of a face-to-face interaction.

Subtheme of ‘Skype-Work’

Other couples reflected on their familiarity with the technology, by discussing the use of Skype, or even use of videoconferencing as part of their work:

“I agree, I mean we are quite familiar with Skype and it um, probably less daunting experience I mean to talk to a screen as opposed to a person” (15).

This reflected several comments made by couples regarding the experience being somewhat less confronting, as they had familiarity with using the videoconferencing medium to connect with others, usually family. Another couple added:

“I think it doesn’t make a difference...the medium is not as important, as long as there’s a good line, then it doesn’t really matter, at least to me. It may change for others, but I’m familiar with the technology, I do videoconferencing or conference calls all the time, so to me it’s really normal” (15).

Again, the couple’s ability to relate to the medium from past experiences, allowed them to feel more comfortable and easier engage in the process relatively early.

Theme of ‘Connection-Alliance’

The theme of ‘connection-alliance’ explores couples’ expectations regarding their ability to feel therapeutically connected to the therapist through the videoconferencing medium. As illustrated in figure 11, this theme incorporates four subthemes; alliance, distance, openness and the indescribable element.

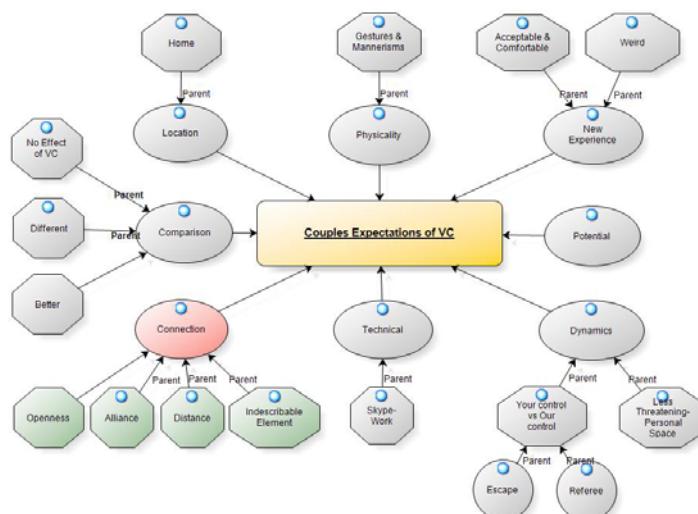


Figure 11: Figure of ‘Connection-alliance’ theme, with three subthemes also highlighted; alliance, different, and indescribable element.

This theme explores the couple's ability to connect with the therapist and the engagement they felt with the process. Couples fluctuated between two levels of perceived alliance. Firstly, couples noted expectations about empathy and connectedness being influenced by the videoconferencing element:

“as a client knowing whether or not there’s going to be real empathy on the other side of the screen, you know. That’s, and how that’s going to um flow, that’s just an interesting question on my mind at the moment. That’s about the only thing. I’ll be interested to see how I feel about that at the end of six weeks” (27).

Secondly, couples commented on their views of the videoconferencing and alliance at the time of the interview:

‘I quite like it, I think it’s been, it was quite quick to ah get comfortable...I think it would probably take longer if you were in the room, do you know what I mean’ (7).

Couples noted their ability, or perceived ability to connect with the therapist through the videoconferencing screen, and whether this was helped, or potentially hindered by the technological element of the therapeutic intervention.

Subtheme of ‘Alliance’

Previous research has found that the formation of therapeutic rapport would be possible through videoconferencing due to the availability of visual cues and gestures (Rees & Maclaine, 2015; Simpson, 2009; Stubbings et al., 2013). Couples in the current study replicated this expectation by noting their comfort, or acceptance of the medium due to similarity with face-to-face contact and the availability of these cues:

“we know that you’re a real person and we can see you, it is much easier to talk to a screen and and you don’t kind of um, you don’t um hold back about anything really” (22).

And:

“you’re um not a robot you’re talking to us, and we can talk to you and see you, very personal” (13).

This reflected a significant satisfaction with this mode of therapy and furthermore, much like participants in the Simpson et al. (2001) study, an actual preference for the videoconferencing, perceiving it as less confrontational:

“probably less daunting experience I mean to talk to a screen as opposed to a person. Not that I mind, just ah it’s um you feel close enough, but not too close” (15).

Some couples actually defended the notion that the building of rapport was not compromised by the medium with which the therapist connected with the couple:

“I found that we got acquainted very very quickly you know, ah we probably got more done than you would have, like from my experience of a first meeting of someone” (7).

The idea that rapport did not take long to establish reflects the notion that videoconferencing allowed clear objectives to be set, and enough comfort to be experienced by the couple to attain these objectives in a relatively short amount of time. This almost clinical and proactive nature of the videoconferencing interaction was further explored by couples feeling that the therapist could remain more impartial as a result of the videoconferencing, as they were not seen to align with a particular individual in the couple:

“whereas when you’re in the room with someone, um you can relax a little bit more, and in my experience sometimes the counsellor, can sort of align with one of the couple and not be as focused” (2).

As a standard prerequisite to establish alliance, especially in couples therapy, a therapist must remain impartial, as not to be seen as aligning with one individual of the dyad, and therefore endanger the therapeutic relationship from rupturing (Halford et al., 2014). One couple further described the videoconferencing as enhancing this element of impartiality:

“I think, the delivery through the medium does potentially give an impartiality emphasis, whereas when someone’s in the room um the you know, then as we are with humans trying to sway someone with our gesture, because of the screen it seems to give a, more of a sense of impartiality” (4).

This perception was another reflection on the possible effects the technology can have on the alliance between the therapist, and especially in couples therapy, the dyad engaging in the intervention.

Subtheme of ‘Distance’

It is argued videoconferencing is particularly valuable as it facilitates the production of a space in which two or more individuals can engage in prolonged

conversation, allowing them to create a meaningful relationship, and thus facilitate discussion of client concerns (LeRouge et al., 2002). This notion of a felt distance was mentioned in a number of varied contexts. Some couples noted that the videoconferencing made the process feel somewhat detached, creating a distance between therapist and client, noting a preference for face-to-face interactions:

“it just seems a bit foreign and detached, so . And don’t get me wrong I’m not saying it’s not valuable, it’s very valuable, it could be so much more in that person attraction” (1).

Alternatively couples discussed the idea of distance as allowing for more perspective, comfort, and general openness:

“in fact I think it is probably easier for somebody like me... because um there’s like a third dimension to it in a way, so, but you still get the same contact, you don’t feel like you’re talking to a screen, you feel like there is a person there, but at the same time you’re kind of like in your own space, so you’re actually kind of well protected” (24).

The idea of being connected but having a space to feel comfortable and safe in, was further explored by another couple, who noted feeling less threatened by the physical distance between the therapist and the couple:

“it’s the fact that you’re not in my personal space. Like I said I don’t feel threatened by you, I would never feel threatened by you , but I could be sitting here with someone that might be a little threatening and I’m quite sure because they’re removed from my personal space I would feel a lot less threatened. I think it’s just the fact that you’re on tv, you’re not here with us, in person” (14).

The ability for videoconferencing to connect two or more people via visual and verbal cues, but still allow for each individual to retain physical familiarity, appears to be a valuable element for these couples, who expected that compared to a face-to-face session, this third dimension is ideal:

“there’s a little bit of distance, quite a bit of distance, but it still works, you know what I mean” (5).

So expectations regarding distance proved to yield contrasting expectations regarding videoconferencing, however the rationalisation of distance allowed for couples to also explore the notion of this ‘indescribable element’.

Subtheme of ‘Indescribable Element’

Some couples struggled to articulate exactly how they felt about the videoconferencing element, and its impact on the therapeutic environment in session:

“I can’t understand why it’s different, but there is something different about it” (20).

Here they discussed the notion of the ‘indescribable element’ by which they referred to the idea of a connection, or rather lack thereof, that was influenced by the videoconferencing. Couples alluded to the potential of not being able to sense the mood or energy in the room:

“I don’t know if you would be able to pick that up not being in the room, whereas if you’re in the room you’d be able to pick up that...try and level it out...Whether you can do that over a video monitor I don’t know, but if you’re in the room you can yeh you can always feel the tension rising in the room” (25).

Abbott, Klein and Ciechomski (2008), also discussed this idea of potential crises in therapy, and the realistic shortcomings videoconferencing may have in these instances. As a result best practice guidelines have been suggested for online therapies, which include all therapists having sufficient client contact details should a crisis arise. On a less practical level, clients in the current study spoke about feelings and energies, that may not be transmitted adequately through the screen. Although the availability of both visual and auditory cues assist in providing a more detailed picture of clients and their presentation, couples noted this being markedly different to face-to-face interactions:

“sometimes when you walk through a door, ah you might shake hands with a person, and sometimes there’s a feeling of, of sameness, or likeness sometimes. It’s not critically important but sometime that sort of stuff, the aura of the body language can actually just help somebody to relax, and that courtesy that happens within the first few moments, I’m just curious about how that comes across the screen” (27).

This marked curiosity expressed by couples was a common theme amongst feedback. Couples explored their expectations regarding the potential effects of this lack of physical contact, and whether the energy and furthermore, the consequent connection between therapist and client, would be as strong as in face-to-face therapy. Overall couples expressed a curiosity about this potential effect, or lack thereof, and thus

reflected on their struggle to identify precisely what it was that may potentially be causing this; the ‘indescribable element’.

Subtheme of ‘Openness’

Clients also noted experiencing a greater sense of freedom to discuss issues they may have otherwise felt inhibited to disclose. Again couples chose to make direct comparisons to face-to-face interactions:

“I don’t see any problems, and I think you feel actually more open, rather than you in front of us in person” (16).

The feedback from couples appeared to draw clear parallels between feeling comfortable, to being open about feelings and thoughts, and the technological element of the videoconferencing; the screen. As with the Day and Schneider (2002) study, where participation scores, and more specifically disinhibition scores were higher when clients were not in the fact face-to-face condition, it was hypothesised that the technological element enabled openness to feel safer. One client reflected on the idea that the videoconferencing allowed for her to feel less intimidated, and thus again compared to face-to-face interactions, allowed her to open up:

“I think it’s a lot less nerve wrecking than face to face with somebody, I can’t just open up to somebody” (4).

Another client added:

“suppose you’re not so much under the microscope” (24).

This idea of the face-to-face interaction being more anxiety provoking was also explored by Callahan and Inckle (2012), where clients in the study noted a felt sense of pressure when in the room with the therapist, to act or speak in a certain way. However couples in the current study ultimately reflected on the notion that having a connection through videoconferencing appeared to shift the locus of control, and created a greater sense of perceived balance between client and therapist, allowing the client to be more open.

Summary of Part 1

The interviews conducted prior to the therapy commencing, yielded much information in regards to the participants’ initial impressions, and overall expectations in using the videoconferencing technology for couples therapy. Whilst a few predicted some potential difficulties in real-world uses of the technology, the

majority of participants noted positive first impressions, and minimal difficulties, or reservations regarding the use of the videoconferencing. Overall, thematic analysis of the interviews reflected that couples felt comfortable with the technology, and the therapeutic alliance it facilitated. Couples commonly noted the perceived differences between video and face-to-face interactions, however as a point of comparison, this did not reflect any overall negative evaluations or detrimental expectations. To follow is a closer examination and integration of the results from these initial interview themes. Only the first research question was based around the expectations of couples, and specifically probed as to what were couples' expectations about engaging in therapy conducted via videoconferencing.

In terms of the experience itself and the expectations couples entered the study with, these described their initial involvement as something completely new that they had never experienced before. This tended to be either relatively strange for couples, or something that was acceptable, despite being so novel. Couples that did not have any experience in the use of videoconferencing, naturally tended to compare their experience to previous face-to-face interactions. Therefore they said that either this was better than what they had experienced prior, in that it was different and unique, or just a completely new experience. Those that had said it was different, noted that they could still find value in the experience, and despite initially being somewhat biased, could still reflect positive expectations. This was providing that their engagement was enhanced throughout the therapy, and that the intervention itself was positive.

When examining the 'no effect of VC' and 'different' subthemes, these two reflected opposing views from couples. Whilst some expected this experience to be different, compared to face-to-face therapy, and therefore potentially have some adverse effects, the couples who noted there would be 'no effect of videoconferencing' did not see this as an issue. However the two subthemes did share some commonality, in that couples in neither subtheme ultimately believed that the videoconferencing element would negatively impact on their ability to acquire therapeutic gains from the intervention. This reflected an overall acceptance of the technology, despite varying initial expectations. However the extent of how it could potentially affect the therapy was the differing point, and the uncertainty of whether this effect would ultimately be evidenced in the therapeutic relationship.

A number of themes can be integrated to reflect couples' expectations about some of the practical aspects of the technology. Physicality, Location and Technical all described the practical aspect of the videoconferencing experience, and couple expectations in regards to this, as well as where and how it was used. The themes of Technical and Location in particular are reflective of each other. The location theme speaks a lot about where the therapy took place and how this could impact on the couple's expectations and subsequent experience of the intervention. Whilst many couples commented on the décor and the clinical nature of the room, some couples went further to suggest a way of allowing them to feel more comfortable and therefore more engaged in the therapy, which could ultimately impact on outcomes, could be allowing them to connect with the therapist from their home. This was related to the 'technical' theme in that many couples noted having previously used skype and this reflected their familiarity with using the technology. Integrating these two ideas together reflects the notion that given the increasing experience today's society has with technology, and the comfort felt from using this at home, to enable these two elements to come together would therefore, as suggested by couples, allow for a more enhanced therapeutic experience.

The theme of 'technical' was further integrated with 'physicality' as both contained subthemes in which couples discussed the visual elements of the videoconferencing experience. This was in terms of contrast, screen, and picture quality, which can be related to the 'gestures and mannerisms' that couples observed of the therapist. Because there is so much emphasis on visual data, the location as well as the therapists' physicality in terms of what the therapist wears, and their gesture range can all be impacted by the technology, and ultimately effect the experience. In this way the themes of 'location', 'physicality' and 'technical' come together to form a picture where couples noted that whilst this has the potential to impact initial impressions as well as expectations of how successful the intervention will be, overall couples expressed that their expectation of positive outcomes would not be impacted. This can then be further integrated with the theme of 'comparison', in that whilst some couples noted their preference for face-to-face intervention, again their expectations were not negatively tainted by the videoconferencing element, in terms of them feeling as if they could still benefit from the actual intervention. Further integration can then be made between couples who noted the 'potential' for

videoconferencing, and those that suggested increased comfort of use from within their homes, ultimately enhancing potential for it to be used on a greater scale.

Finally, there is a strong connection between the major themes of ‘dynamics’, and ‘alliance/connection’. Firstly, the themes essentially both reflect couples’ expectations in terms of the dynamic between the dyad and the therapist themselves. Therefore when the theme of dynamics reflects on the idea of control, and the therapist being the referee, couples noted some potential scepticism in terms of the therapist being able to pick up on certain feelings, that they could potentially identify better in face-to-face situations. As noted by couples in the alliance theme, the subtheme of ‘indescribable element’ is very much related to this. Therefore couples expected that perhaps their experience whilst still valuable, could be negated to some degree based on the therapist not being in the room and therefore able to pick up on more subtle emotional cues.

Most couples also made a comment in regards to distance and space, due to them being in an alternative location to the therapist. There were couples who noted that this space, or detachment, allowed for them to create a less threatening and more personal space. This related to comments about a perceived enhanced level of control over the experience, as reflected in the ‘dynamics’ theme. Alternatively there was the potential for this detachment to negatively impact their expectations. Under the subtheme of ‘alliance’, couples noted a scenario where the detached nature of the videoconferencing could feel like an inferior experience to face-to-face therapy. Again this reflected a comparison by couples to alternative scenarios. However, ultimately couples noted that despite this comparison they expected they would still gain the same results as a face-to-face intervention. Nevertheless, these all reflect similar couple expectations throughout these two major themes, in that due to the less threatening nature of videoconferencing, it would be easier to build an alliance, and therefore be more open and honest.

Essentially what these themes all reflects is a positive expectation in terms of the technology being used to, perhaps not enhance, but facilitate engaging in therapeutic intervention. Because the videoconferencing allows for both audio and visual stimuli to be transmitted between the two locations, couples expected to be able to build a strong alliance with the therapist. Overall the experience was expected to be positive and fully engaging for the couples, in spite of connecting with the therapist through a computer screen. What this summary has shown is that many of

the themes can be integrated, and encompass comments by couples that reflect their positive expectation about the technological element of this study. So therefore despite some expectations of the experience being different to a face-to-face clinical intervention, this did not appear to hinder couples' expectations of having a positive outcome from the intervention.

In summary, the initial interviews reflected overwhelming support for the technology, and the initial rapport couples were able to foster with the therapist, as well as the perceived ability to engage effectively in the intervention whilst feeling adequate comfort, and control over the process.

Part II:

Post Therapy Interview Themes

Following the completion of the intervention, external interviewers were employed in exchange for course credit, to question each couple about their experience of both the therapy, as well as their use of the videoconferencing. All interviewers were designated time during the final session to ask the list of 6 semi-structured questions, including prompts, with the consent of the couples. Once transcribed, analysis allowed for the identification of 11 major themes, with 23 subthemes and a further 6 subthemes from those, these are illustrated in Figure 12 below.

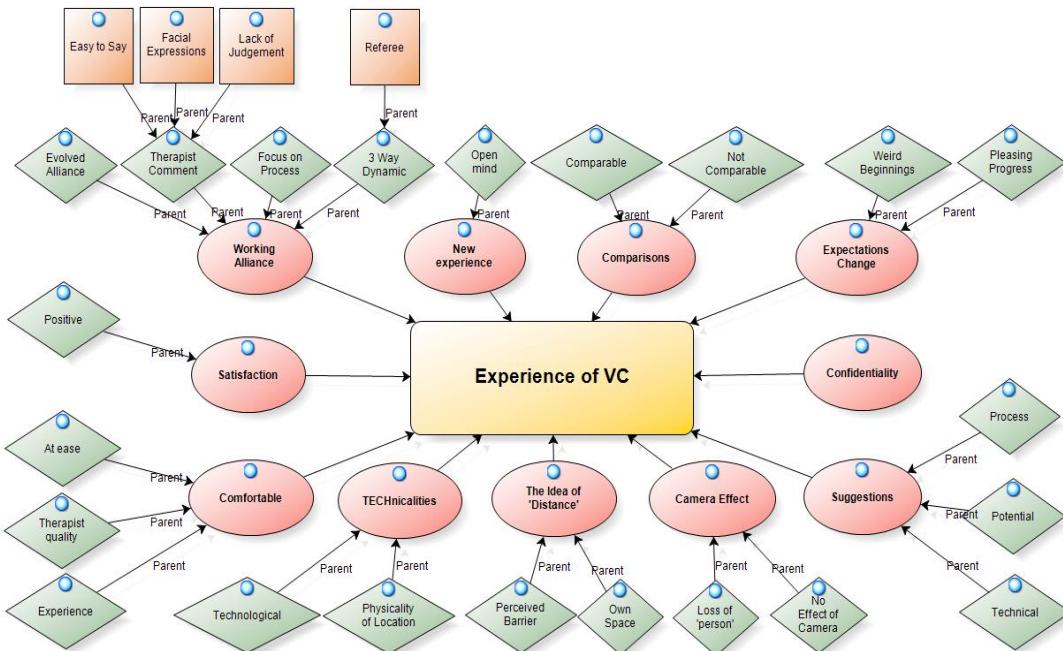


Figure 12: Summary image of the thematic analysis created through NVivo

Theme of Camera Effect

This theme identified a reflection by couples on the idea of the camera having, or lacking, an effect on the interaction between the couple and the therapist. It was rare to see couples indecisive in this area as there was more of a tendency for strong opinions to be shared with the interviewers. In very direct responses to one of the semi-structured questions asking couples if they believe the camera had an effect, couples supported one of two sub themes; no effect of camera, or loss of person. Figure 13 below illustrates this theme and the two subthemes in particular.

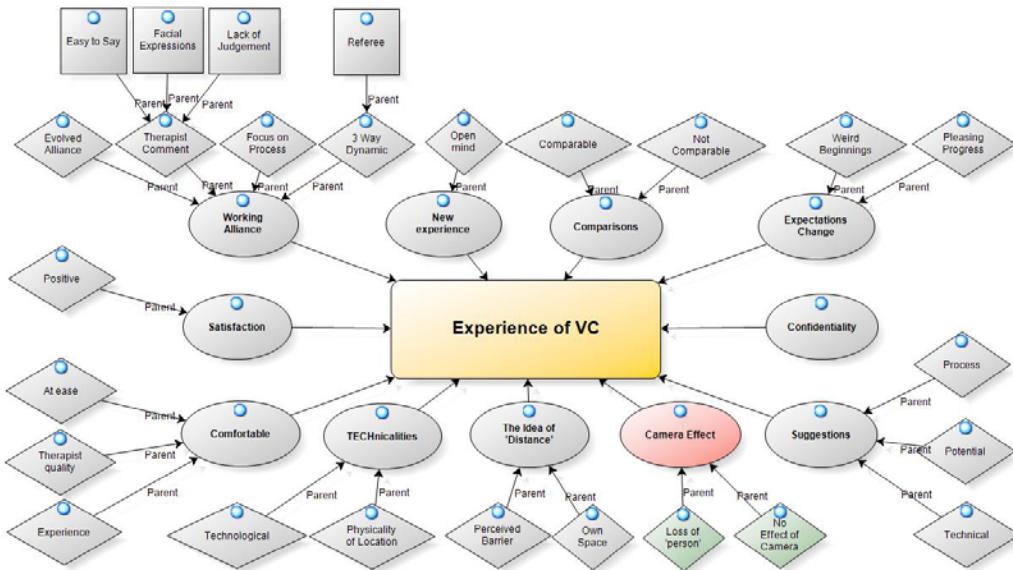


Figure 13: Figure of Camera Effect theme, with two direct subthemes also highlighted; no effect of camera, loss of 'person'

Subtheme of 'No effect of camera'

When asked if couples believed there was a potential effect of the camera, not specified as to whether this was positive or a hindrance, many couples noted there was no effect. As the comment below illustrates couples adjusted to the videoconferencing quickly and many subsequently stopped noticing that the therapist was not physically in the room:

"I think that you forget that you're actually...on camera, I think that I do"

(20)

Another couple added:

"from my perspective for the most part, it feels like you're kind of there, you don't recognise that you're really not in the room" (28).

This participant's quote reflects the idea of social presence, particularly the camera's ability to convey the physical presence of the therapist to the couple, and vice versa (Holmes & Foster, 2012; Rice, 1992). More specifically, Muhlbach et al. (1995) identified this idea of telepresence in videoconferencing, as the extent to which individuals at different locations, feel connected in one place. As indicated by the above comments, in the current study, clients felt they could share a space with the therapist despite not physically being in the same location. Some couples further noted that they did not perceive the camera to be a barrier in the therapeutic process, and that the essential part of communication was not inhibited due to the camera, as

it still allowed for both verbal and visual cues to be evident:

“I just pretended it wasn’t there, it was us talking, and it was ‘A’ on the other side, but you know we were talking, communicating” (11).

The client’s reality is reflected in this quote, in that the therapist and couples were connected via a videoconferencing screen, however this did not need to impact on the quality of the interaction as it still allowed for the objectives of the session to be completed, and communication to be open and spontaneous. This refers to the ability of the videoconferencing medium to overcome the communication constraints of other, similar mediums; such as time and location, as well as the ability to accurately transmit certain cues such as social and nonverbal communications.

Subtheme of ‘Loss of Person’

The premise of this subtheme was that a handful of couples found that there was an effect of the camera, more specifically a negative effect, creating either a barrier, a subpar interaction compared to face-to-face, or a loss of intimacy, or ‘person’:

“without trying to put down people that reckon it has no impact, I think it’s hard not to, you’re looking at a screen compared to you know, yes so you think that” (1).

This constant comparison was inevitable for many couples who found it necessary to reflect on their experience in terms of how it would potentially compare if it was face-to-face with the therapist. An observation that fluctuated throughout this subtheme was the idea of intimacy. Research suggests eye-contact, topic of conversation, facial and overall bodily expressions, all contribute to the amount of intimacy felt between two people (Simpson et al., 2005; Vertegaal et al., 2003). These same elements apply to individuals connected via a videoconferencing screen, however some couples consistently noted a distinct lack of intimacy conveyed through the screen:

“yeah I think I would prefer to be in the same room as the therapist...I think the emotional content may be a little lost sometimes, across the screen... I still think that if something became really intimate... where there might be tears and such...I just think that there is a little bit of distance with some of those issues that might come up” (27).

The idea of distance is particularly interesting as physical proximity, or touching are

also indicators of intimacy between individuals (Lombard & Ditton). However despite the screen being positioned in the room directly opposite the couple, where a therapist would in fact sit if physically present in the room, couples placed less importance on the process, due to the fact that they were speaking to a screen:

“if you have a person in front of you, you don't stare at the wall, you try to make eye contact and um it's, it's like the conversation is between three persons, but yet, although I tried to, it's difficult because it is a video, it's a screen” (16).

As this couple indicates, the idea of making effort to make eye contact did not possess the same amount of importance because of the screen. Eye contact can be used to control intimacy between people, and evoke arousal, in terms of empathy and interest (Vertegaal et al., 2003). The idea that couples placed less importance on this in the videoconferencing condition therefore does easily reflect the idea that they did not feel as if they were talking to a ‘real person’, as is the ultimate idea reflected in this subtheme.

Theme of Comfortable

This theme described a reflection by couples on how comfortable their experience of using videoconferencing had been. Couples noted three main reasons for this felt sense of comfort, creating the three subthemes of ‘at ease’, ‘experience’ and ‘a therapist quality’. This is illustrated in Figure 14 below.

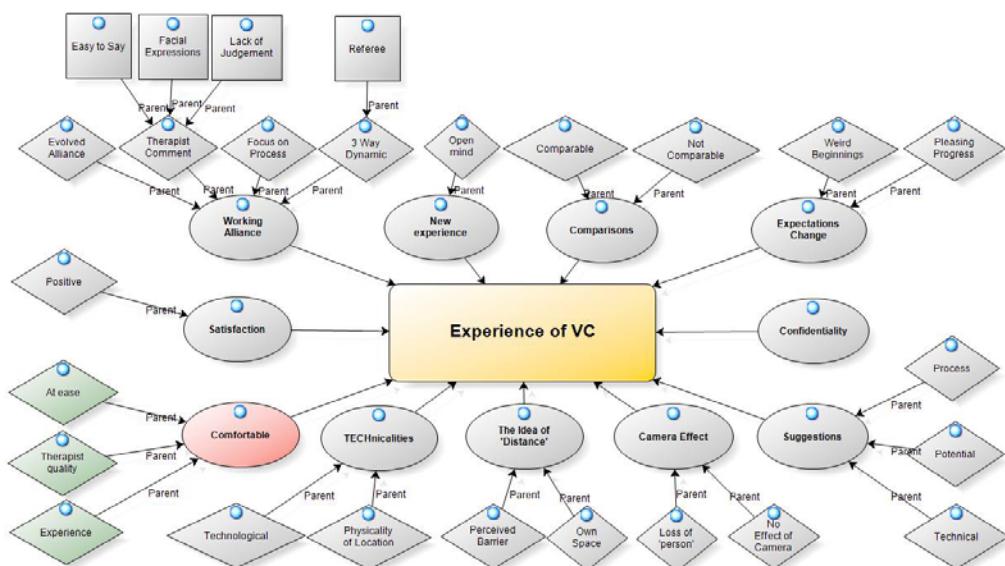


Figure 14: Figure of Comfortable theme, with three direct subthemes highlighted; at ease, experience, therapist quality

This theme reflected on both the couple's satisfaction with the actual videoconferencing medium in allowing them to feel comfortable, at ease, and to facilitate open discussion of a variety of topics:

"I think it's a lot easier...I think it's a lot more comfortable than what we expected, because it is quite intimidating to think you are going to come here and talk to somebody, somebody that you don't know, it is quite nerve racking" (4).

Lewis et al. (2004) similarly identified that clients found the experience more comfortable and less threatening due to the lack of the physicality of the therapist. The third subtheme also reflects on how the therapist's facilitation, in combination with the videoconferencing, allowed couples to feel more comfortable.

Subtheme of 'At ease'

A number of couples reflected on their experience of therapy via videoconferencing as facilitating discussion and communication that felt comfortable and relaxed:

"I did like it because I'm a shy person, I did find it a lot easier to discuss things than I would have if I was face-to-face with somebody" (6).

Comparing the experience to face-to-face encounters was popular amongst couples in this theme. As the above client noted, she felt at ease to communicate with the therapist. Couples speculated about why this was, and several hypotheses were discussed. This included the screen being a mediator or barrier between the therapist and the couple:

"I'm not sure, like I'm not a real good talker, but having, doing the videoconferencing I don't know whether I just felt there was that barrier so I could relax more" (25).

In this instance, the screen creating a barrier was seen as a positive element of the videoconferencing in that it created a safe space for the client, who felt it facilitated open and honest communication. This was further explored by another couple who noted the screen giving the experience a form of impartiality, that they felt resulted in fewer negative repercussions as compared to face-to-face interaction.

"I think like being here without somebody else like you (therapist), maybe if you feel a little bit like um free like to say what you want to say, without thinking what the person is going to think, or something like that" (5).

Suler (2002) discussed a notion he termed as ‘the online disinhibition effect’, referring to the greater degree individuals online disclose, as opposed to face-to-face. It describes how individuals feel less restrained, and overall express themselves more openly online. Despite Suler referring more to online chat, and not particularly videoconferencing, couples in the current study appeared to relate to this idea of a heightened ability provided by the technological medium, to express feelings and thoughts more freely. Most couples noted this was due to the therapist being removed, or not in the room, which afforded an added freedom from perceived judgement or consequences. This reflects the overall idea of this subtheme in that couples in the videoconferencing condition felt less inhibited, and thus more ‘at ease’ to engage in more authentic communication with the therapist.

Subtheme of ‘Experience’

On a broader level, a number of couples chose to reflect on the entire experience of using videoconferencing as comfortable. This subtheme in particular contained a lot of comments regarding feeling less intimidated, or alternatively more comfortable due to a perceived increase in control over the entire experience:

“because you’re not here I can say what I want, and I don’t get threatened because you’re not in the room so I feel like I’m at home, and I think it is just a control thing, like not that I would have switched off but I could switch it off and walk out. Whereas you can’t really do that if somebody else’s in the room, it’s more intrusive” (10).

The theme of empowerment is popular in the field of online counselling (Lewis et al., 2004). As reflected in the above quote, the client felt that the way by which they were connected to the therapist created a more neutral and comfortable space much like her own home. Therefore, a space the therapist was not necessarily in control of, empowering the client as they could choose to have the therapist exit at any time; by simply switching off the screen. As identified by Lewis et al., the technology allows for the session to take place in a space that is not controlled by the therapist and rather by the client. Although couples were asked to come into the Curtin psychology building they were still the party that was physically in the room, with an aid connecting them to the therapist.

“I think that's why I like it... you don't feel as exposed, you've got, there's like this barrier between you and the person so that kind of, I don't know, I felt like it was kind of cosy and more comfortable” (6).

As the above quote further demonstrates, couples felt as if they could make the space more of their own. As a result the client is afforded the ability to feel less intimidated and more in control (Callahan & Inckle, 2012). In this case the idea of the screen being a barrier is seen as a positive influence on the therapeutic process. Couples did however discuss the notion of the experience feeling slightly less personal than a face-to-face interaction:

“I'd say quite positive...I guess in a way making it slightly less kind of invasive and personalised might be a bit more comfortable” (8).

Couples reflected on the idea that due to the depersonalised nature of using the technology and thus not having the therapist sitting in the room, allowed for it to be less intimidating and as a result, overall a more comfortable experience.

Subtheme of ‘Therapist quality’

Finally couples attributed their comfort with the videoconferencing to qualities directly related to the therapist.

“I was just really anxious about the whole thing...I just didn't feel very comfortable, but then as soon as we came in here and she (therapist) made us feel very comfortable...and just totally changed the perception of it all together” (9).

As this comment reflects, couples felt the therapist facilitated in making the experience more relaxed and comfortable. Couples noted that in being approachable and non-judgemental, the therapist allowed them to settle into the unfamiliar experience at their own pace, and afforded them the ability to ask questions in an unrestricted manner. This sub theme will further be explored in the theme of ‘working alliance’, however it is important to note here that couples did find that the therapist’s ability to provide an open, and non-judgemental environment, facilitated couples to feel more comfortable and at ease.

Theme of ‘Confidentiality’

One of the most important ethical principles of therapy is confidentiality, this

is especially poignant in the online therapies literature, due to the unique challenges afforded to such approaches (Deane et al., 2015; Gamble et al., 2015; LeRouge et al., 2002). This describes the right afforded to clients to know that whatever they disclose in session is protected by strict guidelines, and is not being viewed by anyone but the therapist, or any agreed upon parties. Unsurprisingly therefore this was a theme identified by couples in the videoconferencing condition, as illustrated in Figure 15.

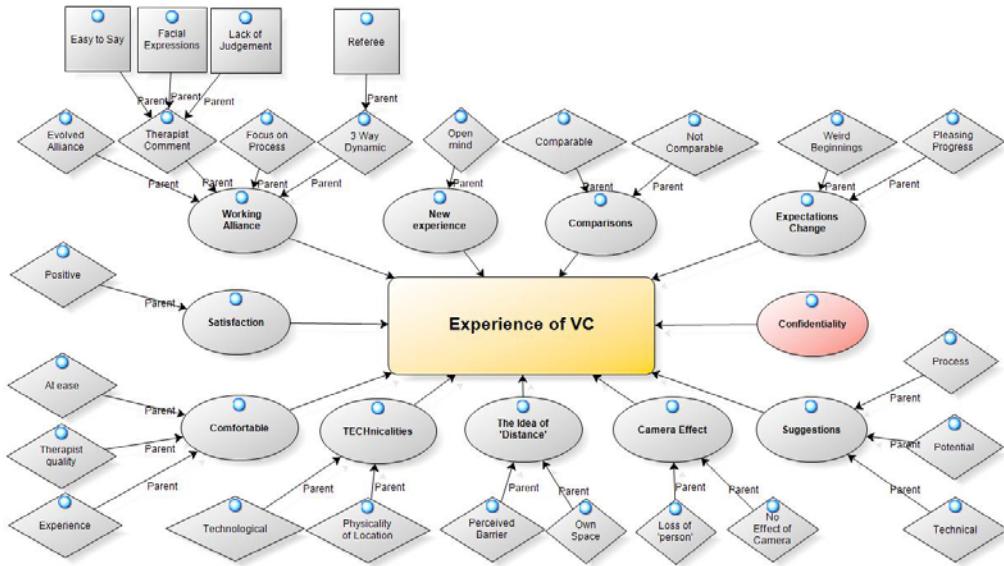


Figure 15: Figure of Confidentiality theme

Couples noted that in certain circumstances, they would feel uncomfortable engaging in videoconferencing due to the possibility of having their discussion seen or heard by others:

“what could be a real issue... not knowing whose hands it could end up in, because yeah that would be a concern to me if I was a very private person, where this might end up” (20).

Couples then speculated that perhaps in such circumstances the videoconferencing could ultimately hinder the therapeutic process, due to the individual feeling restricted in what they felt comfortable to discuss and disclose:

“maybe it could inhibit what I choose to talk about, and perhaps has, and perhaps haven’t gone into some areas that um that I might not want to talk about...on camera” (20).

Whilst couples reflecting on their own experience of videoconferencing in the

current study did not feel that this had been a significant issue, they were able to recognise that confidentiality via videoconferencing, or limits of, is an important element that needs to be discussed prior to engaging in therapy via this medium. As one couple noted, they too felt prior to continuing the therapy they needed to ensure what they were saying could not be heard out of the room:

“that after I left here, I'd hate to think that somebody's been out there listening because I'm very insecure about my, about our business” (14).

LeRouge et al. (2002) noted that a key attribute of quality telemedicine videoconferencing is in fact providing privacy and specifically quiet and soundproof locations for clients. Once couples were assured this was the case, they noted feeling more at ease to able to engage in discussion of personal topics.

Theme of ‘The Idea of Distance’

This theme was a reflection by couples on the notion that the technological element of videoconferencing created a form of ‘distance’ between the couple and the therapist. The theme explored how couples mediated this distance in their sessions, and whether they believed this to be a positive or negative influence on the therapeutic process. Two subthemes were identified, these included ‘perceived barrier’ and ‘own space’, as illustrated in Figure 16.

As described earlier, the theme of being comfortable for some couples was a direct result of feeling a distance, or separation between themselves and the therapist. Some couples concluded that this more relaxed atmosphere had a positive effect on the therapeutic relationship and allowed for rapport to be developed on a deeper level:

“I think the whole of the way that it worked just made it that much better, like with them (therapist) being separate, and being via video just made it much more comfortable, I think it built the relationship between us and her much better” (10).

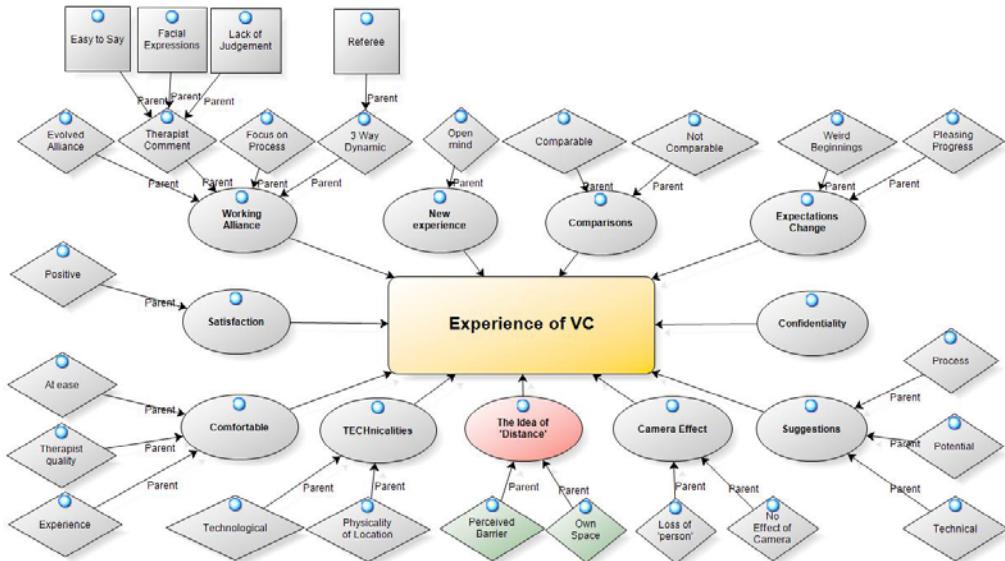


Figure 16: Figure of The Idea of Distance theme, with two direct subthemes highlighted; own space, barrier

Similar to findings in the Lewis et al. (2004) study, clients found that a more equal relationship was established between client and therapist, through the technological medium used to conduct therapy. Furthermore this allowed clients to feel more immersed in the overall therapeutic experience:

"I found easier to open up with that distance there, I didn't feel like the person was staring at me kind of thing like, leaning forward and looking at me" (6).

Couples who noted this comfort with the perceived distance went on to explain that this actually gave them not only more control but also responsibility for the sessions. This immersion in the counselling process was seen as a strong indicator of satisfaction by couples with the videoconferencing element. Furthermore, this responsibility couples saw for the therapeutic process of sessions, increased their focus and ensured they were both involved and exerting effort into making the sessions worthwhile for themselves:

"I think actually the video screen is good because you care, you care about what you're going to say and um you there's something, I'm not sure maybe something to do with being one step removed, you know, so maybe there is a high level of responsibility... I felt like I thought carefully about what I was doing" (2).

Alternatively, and as discussed earlier, couples also commented on the technological

element actually reminding them that there was a physical distance between the couple and therapist. However even these clients noted a preference for the technological medium as it allowed them to feel more comfortable due to the perception of having their ‘own space’.

Subtheme of ‘Own Space’

A handful of couples noted the physicality of the therapist being in one location and them in another, as creating a sort of ‘own space’ where the couple felt safer, and generally more independent:

“you’re feeling extra comfortable, you’re not feeling like they’re intimidating because they are not in the same room as you” (10).

Having that sense of owning to some degree the space the couple was in, allowed them to feel more enabled by the technology, and thus more comfortable. Feeling ownership of a space can empower a client to feel more in charge of the situation and can therefore allow the client to open up more as a result of feeling safe (Lewis et al., 2004). One couple reflected on this idea in particular of feeling safe in their own space:

“a little bit of a safety zone I suppose because they’re over there, and your over here so, it’s actually quite a safe environment to actually be honest, and you’re sitting in a room so I can kind of say what I want to say, and you don’t really have that person’s energy, like reacting, you only have them yeah sort of visually reacting there, so that’s probably a good thing” (24).

This illustrates the notion that the videoconferencing created a distance which allowed clients to take ownership of the space and feel safe to be exposed and honest about their thoughts and feelings, without fear of a physical reaction. Some couples went on to explore how this safe space was actually facilitated by the screen, and discussed their perception of it being a barrier.

Subtheme of ‘Perceived Barrier’

As noted above the use of videoconferencing allowed for couples to feel safe in an independent space. When reflecting further couples noted that this space is created by the screen acting as a barrier:

“there's still a distance, because if you were here I would be exposed... the camera like kind of brings, it keeps you like, a security barrier for exposure” (5).

This ability to expose oneself allowed for a deeper emotional experience to be had by clients (Lewis et al., 2004). Again, couples consistently noted that having this perceived barrier of the screen in place allowed them to feel more comfortable with the overall experience

“I think that's why I like it...you don't feel as exposed, you've got, there's like this barrier between you and the person so that kind of...I felt like it was kind of cosy and more comfortable” (6).

These responses reflect the idea of the screen being a barrier as a positive element of the couple's experience, creating a safe place for engaging in the therapy and exposing true, and perhaps more vulnerable thoughts and feelings. However couples who discussed their experience of videoconferencing as creating a barrier, ultimately had mixed response as to whether this had a positive or negative effect. Some couples actually thought that it added to the distance created by the videoconferencing

“the impersonality of the videoconferencing as method of delivery is at first quite a barrier... it affects the relationship because they're barriers, and in terms of the technology, um, quite hard edged, for a soft subject” (4).

This couple noted the importance of both the screen and the surroundings of the room, and reflected on this as influencing their overall experience, and use of the technology. One couple however reflected on how their expectations of the screen being a negative barrier actually changed throughout their experience

“I thought that the videoconferencing would make it...quite awkward and make it quite jilted, I didn't think that it would help the situation, I thought that it would be a barrier, but I found the complete opposite...you felt more comfortable” (9).

As found by Lewis et al. (2004) the lack of physical presence of the therapist allows for the client to feel more comfortable in the assigned location, despite this not necessarily being an environment they may be familiar with. This notion allowed for couples to compare their videoconferencing experience to face-to-face interactions and note the barrier creating a safe, and more open therapeutic atmosphere.

Theme of ‘Comparisons’

In this theme, couples took the time to directly compare the therapy via videoconferencing, to face-to-face interactions and express an opinion regarding whether they found the experience to be comparable, and thus positive, or not comparable and therefore inferior to face-to-face. Figure 17 below illustrates this theme with two distinct subthemes of ‘comparable’ and ‘not comparable’.

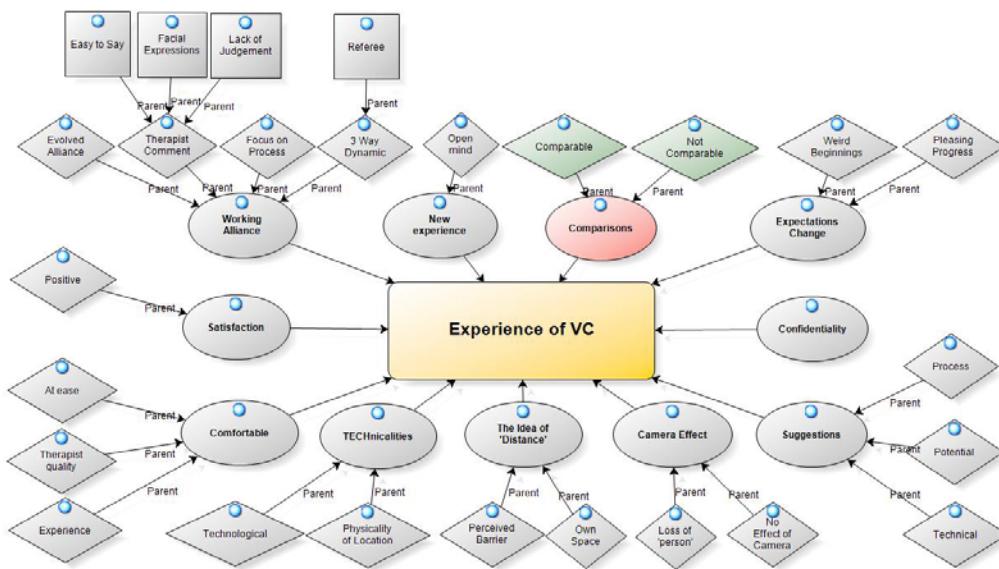


Figure 17: Figure of Comparisons theme, with two direct subthemes; comparable, not comparable

This theme reflects a number of direct comparisons that allowed couples to conceptualise their experience, and voice an opinion about their preferences for the facilitation of the therapeutic process.

Subtheme of ‘Comparable’

Under this subtheme couples compared the videoconferencing experience to that of a face-to-face interaction. The premise of this subtheme was that couples who made this comparison noted feeling that the interaction was the same if not better than face-to-face:

"it's real you know...because like you can see reactions and things, like it feels like they're listening...the video makes it good" (9).

Furthermore couples identified that the main objectives of attending the counselling had not been compromised by the use of the videoconferencing. Similar to the subtheme of ‘no effect of camera’ couples noted that they felt that they have received

adequate intervention, and skills due to the program and the abilities of the therapist, and this had not been compromised by the camera:

“whether it is by video or if ‘A’ was here in the room with us, it would still be the same because that’s what we wanted... we’re here to get something, we got it” (12).

On a broader level, couples noted that the success of their experience was not about the technological element of the video or the screen or even the camera, it was the ability to have a professional present, through either the screen or physically in the room to facilitate the therapeutic process:

“I think that having another person in the room either physically or through the camera affected the way we discussed some topics, most of the topics... I don’t think it was the camera itself, I think it was having the professional in the room visually or in person” (15).

As clients in similar studies have also identified (Lewis et al., 2004; Stubbings et al., 2013), videoconferencing did not hinder their ability to be immersed in the therapeutic process and the counselling itself, with the focus of sessions not on the technological element of the experience but the actual therapy. Some couples went a step further and noted that in addition to the videoconferencing experience being comparable to that of a face-to-face interaction, they found the medium to actually be preferable and superior:

“I think that the experience has been very positive and the fact that it has been delivered via videoconferencing it’s, it’s even better in some aspects... and I don’t feel the sessions have been impaired at all via the means of communication” (15).

This quote as well as the rest of the references under this subtheme do reflect a consistent satisfaction with this medium when compared to face-to-face therapy, in that couples did not feel the experience had been inferior or negatively affected by the medium through which they connected with the therapist. Some couples even appeared surprised at their ability to engage well with the medium. Some couples furthermore speculated about why they had this positive reaction to the screen and the technological element of the therapy, and many couples noted an affinity with using online videoconferencing, or more specifically programs such as Skype:

“in a lot of ways it’s like being on Skype” (17) his partner added: *“I like to think about, like it will be just like being on Skype”* (18).

These couples chose to compare the experience to face-to-face interaction, as well as those that negated the medium between something they were familiar with and face-to-face. A number of couples commented on having done videoconferencing before, either in a professional capacity, or using Skype to converse with friends and family.

Subtheme of 'Not Comparable'

Conversely to comparable, couples within this subtheme reflected on the idea that they either had no counselling experience to compare the therapy via videoconferencing to, or could not in fact compare it as an adequate or preferable alternative to face-to-face:

"I think I would prefer to be in the same room as the therapist... I think it's fine either way, I think the emotional content may be a little lost sometimes, across the screen" (27).

Most couples who described a preference for face-to-face counselling did not discount the use of videoconferencing; they simply noted that given the choice they would prefer the physical interaction with a therapist due to the perceived greater depth of emotionality. Most couples also noted how the experience could have been enhanced through a mixture of face-to-face and videoconferencing sessions within the current study:

"it would have been great if we have the first appointment in person" (1).

Again, these quotes illustrate that whilst couples deemed face-to-face interaction to be preferred, they did not discount the value of counselling via videoconferencing. Whilst some couples struggled to find an alternative to compare this medium to, others noted that ultimately they did not have similar experiences to adequately compare the medium in the therapeutic context:

"we have never been to a session or another psychologist before so I don't have nothing to compare it with, so maybe...it (videoconferencing) could be just a little bit impersonal" (16).

This theme reflected couples who sought to give some contextual meaning to their experience in reference to what they were accustomed to. Whilst some argued that it was more conditioning of what they were used to, face-to-face experiences, others simply conceded that they preferred the physical interaction, especially in a therapeutic context.

Theme of 'New Experience'

Alternatively to those couples who compared the videoconferencing to previous experiences with technology, or even face-to-face interactions, were those couples who saw the current experience as completely new. The theme of 'new experience' was reflected in these responses. As figure 18 illustrates, this theme only had one subtheme which details couples noting that they kept an 'open mind' at commencement, and throughout the experience.

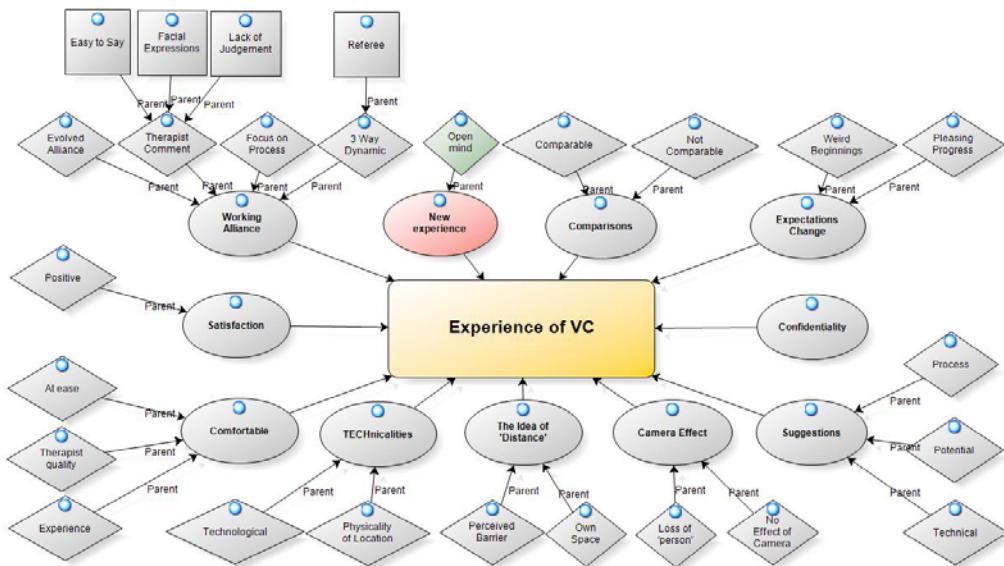


Figure 18: Figure of New Experience theme with one direct subtheme of open mind

The idea of the videoconferencing experience being completely new was something that was actually discussed by a number of couples:

"I've never done any of it before so it was a whole new experience for me" (25).

Other couples added that it was a worthwhile early intervention that had merits of its own:

"I found it novel, like an early adapter" (4).

The idea of the experience being novel was another form of representation of the experience being something many couples had never experienced before. Whether it was a lack of experience with videoconferencing directly, or on a broader level, an inexperience with therapy in general, couples noted not having done 'this before'.

Subtheme of ‘Open Mind’

Couples here noted that whilst it was an experience unlike any other they had had before, they decided to keep an open mind regarding use of the videoconferencing for the facilitation of the therapeutic process:

“you’re in here for reason, and the other person on the other side of the screen is putting some input, making an effort, so keep an open mind and just see where it takes you” (1).

This allowed for couples to immerse themselves in the process however not to have any expectations regarding the results of the program:

“I suppose you just take it, or keep an open mind, take it on board, and it ended up being better than what it was” (1).

Another client added:

“came in with a very open mind um and I found it to be quite a good thing” (23).

As reflected by these clients, many of the couples who noted that they had actually entered the program with an open mind found that they were satisfied with their consequent experience. Couples found that they benefited from the therapy and the idea of entering with an open mind proved to facilitate expectation change, and pleasing progress.

Theme of ‘Expectations Change’

Couples within this theme discussed how their expectations had changed since beginning the therapy. Particularly, couples discussed whether expectations regarding the use of the videoconferencing to connect with the therapist had changed since the first interview. Here couples identified predominantly that their expectations had changed, actually for the better, often noting their initial expectations had actually been exceeded:

“initially I wasn’t sure how effective it would be because of the screen thing, yeah so my expectations definitely changed for the better” (1).

As figure 19 illustrates this theme had two clear subthemes, including pleasing progress, and ‘weird beginnings’. These themes document a reflection for couples over the entire experience and their use of the videoconferencing to complete the therapy.

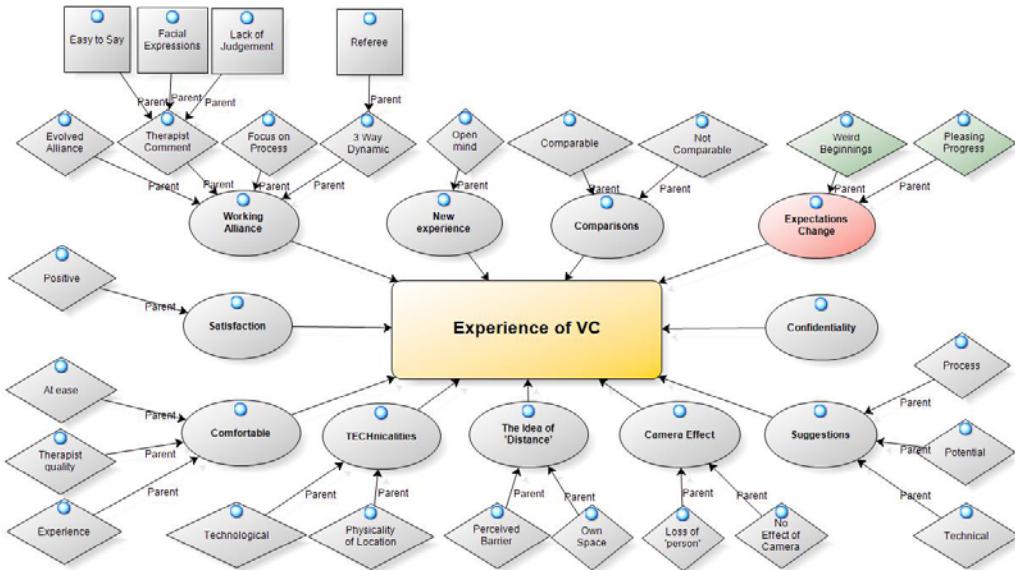


Figure 19: Figure of Expectations Change theme, with two direct subthemes highlighted; weird beginnings, pleasing progress

Essentially this theme reflects that the idea that many couples entered the therapy somewhat sceptical about the ability for the videoconferencing to facilitate therapy and be a viable alternative to a face-to-face session, and on an even broader level, that it would be effective. The following theme reflects couples being pleasantly surprised at the technological medium's ability to connect them to the therapist and engage them in the therapeutic process.

Subtheme of 'Pleasing Progress'

The theme of pleasing progress reflects a satisfaction by couples regarding a positive change of expectations since commencing the therapy. Similar to those clients in the Lewis et al. (2004) study, clients noted that once they had the opportunity to familiarise themselves with the technological medium of videoconferencing, they noted the experience being better than initially expected:

“I was just really anxious about the whole thing, what's this video thing about like this is not good, I just didn't feel very comfortable, but then as soon as we came in here and it is made us feel very comfortable, and it was all from there on, and just totally changed the perception of it all together” (10).

Another client adding succinctly:

“surprisingly really helpful, it exceeded my expectations” (1).

As these quotes clearly reflect, couples were pleased with progress despite the use of videoconferencing. Again, as with many previous themes, some couples compared the experience and their initial expectations to those of a face-to-face interaction, and as one client reflected, the ability to align with the therapist and immerse in the therapeutic process was not inhibited by the use of videoconferencing:

“I didn't know how it would work...I was really probably sceptical, how it would go... because you didn't have that contact, that sort of face-to-face...now I think it's probably, probably positive in terms of like I said I haven't tried to prove to get the person on side...that's way exceeded my expectations” (19).

The ability for couples to describe feeling aligned with their therapist, despite not being face-to-face was significant in their reflections regarding changes in expectations. To the point where some couples noted actually preferring the experience to that of face-to-face therapy:

“it is better than I thought it would be to the point where it was our, it was actually easier than having someone right there funny enough. So my expectations have been exceeded really” (22).

Nevertheless despite being pleased in their progress with the therapy via videoconferencing, some couples reflected on the ‘weird beginnings’ they initially felt when commencing the therapy through the screen.

Subtheme of ‘Weird beginnings’

Weird beginnings reflects discussion by couples of how ‘weird’ it was to walk into a room to engage in couples counselling, and be confronted by not a person greeting them, but rather a computer screen with the therapist on the other side:

“you felt like you were talking to a robot or something, I don't know, that was a bit awkward but then you just get used to it and it's like, and now I always have a little smile when I come in, and see her head on the screen” (6).

Again there is reference to the surreal nature of the situation, and the lack of physical contact with the therapist. As Cook and Doyle (2002) noted, the idea of not physically sharing a room with someone you are involved in a conversation with, has the potential to effect the working alliance. However whilst this theme reflects this

initial identifiable oddness, all comments are followed by the idea that couples were able to overcome this initial awkwardness and focus on the therapy.

“it was a bit weird at first, but yeah it was good...I think we were over it (the video) by the first session, first of when we came here we were like, “it’s a bit weird”, but yeah no it’s fine” (18).

As this client reflects, despite the initial strangeness of the situation, they were able to adapt quickly and shift the focus to the therapy.

Theme of ‘Satisfaction’

The theme of satisfaction as illustrated in Figure 20, reflected a satisfaction by couples with the videoconferencing element of their experience, and the subtheme of ‘positive’ adds to this as a satisfactory experience in general.

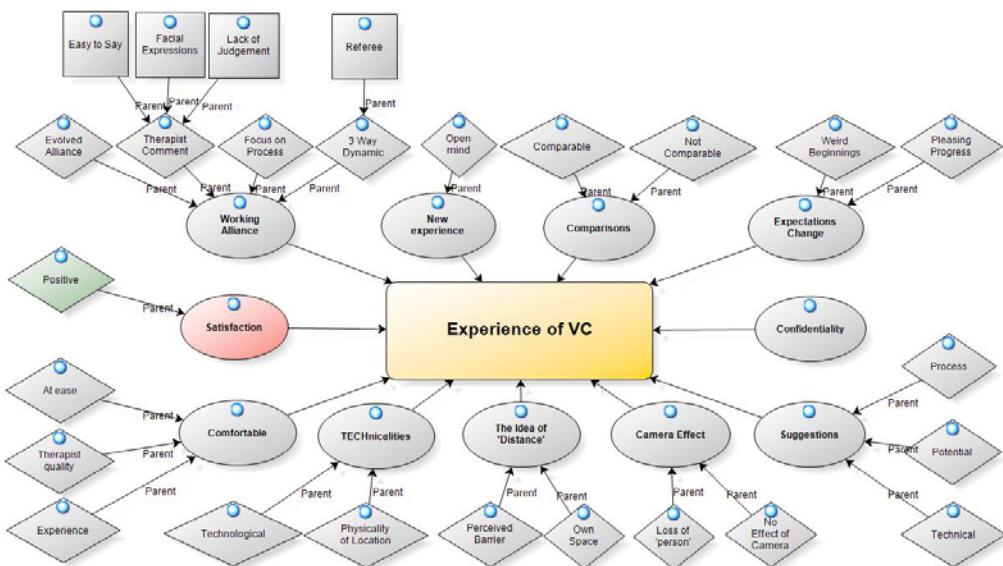


Figure 20: Figure of Satisfaction theme, with one direct subtheme also highlighted; positive

In this theme couples noted the experience as being pleasant, and as them gaining significant benefits and insight into themselves as individuals, as well as the couple as a dyad:

“it has been an enjoyable experience... as I say we've learnt a lot about ourselves and each other” (12).

This was reflected a number of times within this theme where couples noted that the experience just ‘worked’. It allowed for them to enter and engage with the

therapeutic process despite not having the therapist physically present in the room. This theme essentially therefore reflects the ability of videoconferencing to create a presence for the therapist in the room, and thus facilitate the process in an effective and mutually engaging way (Lombard & Ditton, 1997). Some couples went on to conclude that not only were they satisfied with their therapeutic experience via videoconferencing, but that they would furthermore recommend the experience to others:

“it's been really positive, and something that we both really (partner interjects) we would really recommend, I'd write a testimonial about it for sure” (19, 20).

As reflected in these quotes, comments categorised under this theme reflected a general satisfaction with the videoconferencing element as well as a reflection on a positive experience for the couples.

Subtheme of ‘Positive’

Whilst also reflecting a general satisfaction with both the technological aspect of the therapy as well as the intervention itself, some couples also made reference to specific positive elements of the experience, as well as positive possibilities:

“there's for you lot more positive coming out of videoconferencing counselling session then you would do if you were face-to-face with a counsellor... you're feeling extra comfortable, you're not feeling like they're intimidating because they are not in the same room as you, and they're...sort of looking in and going ‘well why don't you think of this, or think of this’ and then letting you two actually get to the problem” (10).

This couple was reflecting of the positives that resulted from the therapy via videoconferencing experience, this includes themes discussed previously such as being more comfortable, as well as feeling less intimidated or judged. Similarly to the findings of the Callahan and Inckle (2012) study, the idea of feeling more in control over the session is very important as it empowers clients, and more specifically to the current study, allowed couples to feel they are benefitting from session and feel confident enough to embrace the skills learnt independently. Other couples added that they felt ‘safer’, and that they were able to gain more from the objectiveness of the experience:

“I actually think it was a really good thing that it kind of made you stop and listen to what was going on here and there, and I think that was a real positive” (24).

This dynamic of having the therapist more objective, and able to facilitate the session to an equal level, was reflected by a number of clients who found this as a positive in their experience. Many noted feeling less judged, and more heard, and much like the Lewis et al. (2004) study, clients felt a deeper emotional entrenchment in the therapeutic process as they were able to engage better with the therapist, and thus ultimately gain more out of the experience.

Theme of ‘Suggestions’

Many couples took the liberty of providing suggestions on how the videoconferencing element of the therapeutic experience could be enhanced in the future, as well as suggestions regarding the overall process and potential of the therapy. As figure 21 suggests, the theme of ‘suggestions’ had three subthemes; potential, technical and process.

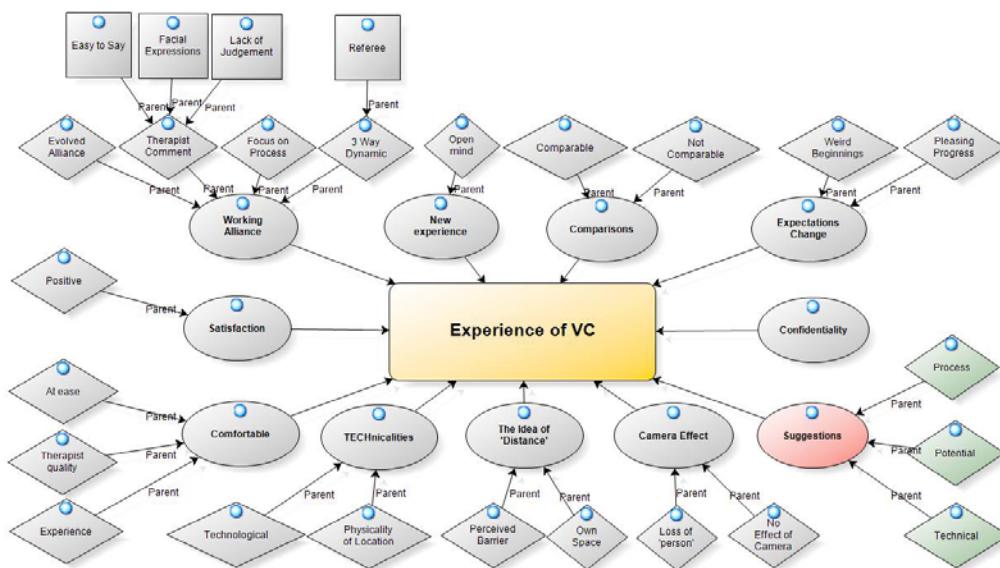


Figure 21: Figure of Suggestions theme, with three direct subthemes also highlighted; potential, technical, process

An important element of this theme, perhaps the most important, is that it reflects the couples' willingness to embrace the technological medium, and illustrates specific elements they would improve to provide a more efficacious service to future

couples:

“I think that anything that softens the hardness of the technology, ah is really something that you could bear in mind. So the relationship... overtakes the delivery method...some kind of equalising. It might be something that people turn you on... or there is a little animation, welcome to the room, press this button” (3).

As this quote illustrates, the couple noted suggestions for the future, to enhance the therapeutic element and balance of power between therapist and client from the very beginning, and decrease the obtrusive presence of the technology. This could include animations or a short video, welcoming the couple. As Lombard and Ditton (1997) mentioned, the ability for a technological source to create a presence or realism, and increase social richness, is invaluable in engaging clients in videoconferencing. Similar to the nature of this quote, a number of couples made suggestions regarding the process.

Subtheme of ‘Process’

Predominantly couples within this theme explored how the therapy began and suggestion about how more of a face-to-face approach could be integrated, as well as ways a slower and more in-depth introduction to the videoconferencing could be implemented:

“it would have been great if we have the first appointment in person...I can see that working quite well” (2).

Many couples suggested that having initial physical contact with a therapist would be a more appropriate way of starting the therapy, and consequently doing the session via videoconferencing would help build rapport quicker. Couples also suggested, regarding the process of therapy, that due to confidentiality reasons, it may be appropriate to offer occasional face-to-face session for all clients to be able to discuss sensitive matters without any possibility of those being recorded.

“if I did want to talk about something...So maybe if the service was offered once every six months to have met your therapist face-to-face...that could be an option” (20).

Again these quotes reflect not necessarily a preference for face-to-face therapy compared to videoconferencing, but a suggestion for amalgamating the two concepts to form a more ‘tailored’ approach to clients.

Subtheme of ‘Technical’

Lombard and Ditton (1997) wrote that presence is enhanced through visual stimuli in conjunction with audio. As some couples noted the specifics of the videoconferencing such as colours in the room, the background, and the therapist's clothes all impacted on their experience:

“the poster behind the screen is very distracting, as far as looking into the portal...the framing is quite distracting...really could use the visual colour so much better... so it’s just a way of making it lighter so engaging people on a sensorial level” (4).

This illustrated a reflection by couples on the technicalities of colour, background and setting, all important factors in creating both a realism and presence when using technological mediums to connect with clients (Lombard & Ditton). The screen can be seen as a sobering reality for clients that the therapist is not in the room and rather in a very separate. The ability for a medium to transport a client to a place where the client and the therapist are ‘together’ in a shared place is enhanced by the medium’s ability to have continuity (Lombard & Ditton). In this instance real time responses to the sensory, affective as well as cognitive processes of the client. Therefore as suggested in the literature the more senses a medium can stimulate the better the connection the client feels to the source, in this case the therapist, consequently enhancing the felt presence of the therapist in the location of the client. Some couples chose to suggest how the ability for the medium to be transformed into a more human, and potentially less obtrusive element, could be made:

“the screen has a glare screen, it would be better to have a non-glare, because then you’re not being reflected back in, um, and that sort of visual distraction. Just help to concentrate on the transaction that is happening with the therapist-participant relationship” (4).

As this client reflected, the ability to shift focus away from the technological medium and onto the therapeutic relationship is invaluable to creating presence, and facilitating development of rapport. The danger with using videoconferencing is that the screen has the potential to distance some clients from the therapists and thus essentially fracture or even stunt the development of a therapeutic alliance. The feedback received from couples in regards to the suggestions for future application is therefore instrumental.

Subtheme of ‘Potential’

This theme more reflected couples noting the potential they saw for the use of videoconferencing to conduct therapy. Couples briefly discussed the potential of videoconferencing to connect clients in remote areas to specialist therapists. Studies done in Australia (Griffiths et al., 2006; Stubbings et al., 2015) as well as overseas (De Las Cueva et al., 2006; Pelton et al., 2015) reflect this potential to connect two locations through technology and thus provide clinical intervention to at-risk populations. A number of couples suggested this potential at bridging the gap between locations:

“I can see huge positive for people that couldn’t get to access the services in remote areas” (26).

More specifically another client reflected;

“I would highlight it for FIFO situations, it’s probably a good methodology to be used. Because of the, up, down, and the sense of people getting lost in their relationships” (18).

This client specifically employed by the FIFO industry was able to identify this need and note this potential of videoconferencing to provide services on a more stable scale to couples involved in this unstable lifestyle. More references were also made for the potential to engage in counselling from your own home, couple noting this would allow for clients to both connect with a counsellor from remote locations, as well as allow for more comfort with the process due to the familiar home environment. Essentially couples agreed on the idea that the technological element allows for greater accessibility by clients to specialist services:

“that’s the beauty of the, is that it does lend itself to go into different spaces” (4).

These suggestions all reflected the ability for videoconferencing to be successfully used to conduct therapy, however improvements that could be enacted to allow for more efficient and more importantly, more effective delivery of service.

Theme of ‘Technicalities’

The theme of technicalities is based around the specific physical characteristics couples chose to reflect on as part of their videoconferencing experience. These did not include characteristics of the therapist or the alliance, but

instead the ‘physicality of the location’ and the ‘technological’ aspect of the experience. These are also the two subthemes illustrated in Figure 22.

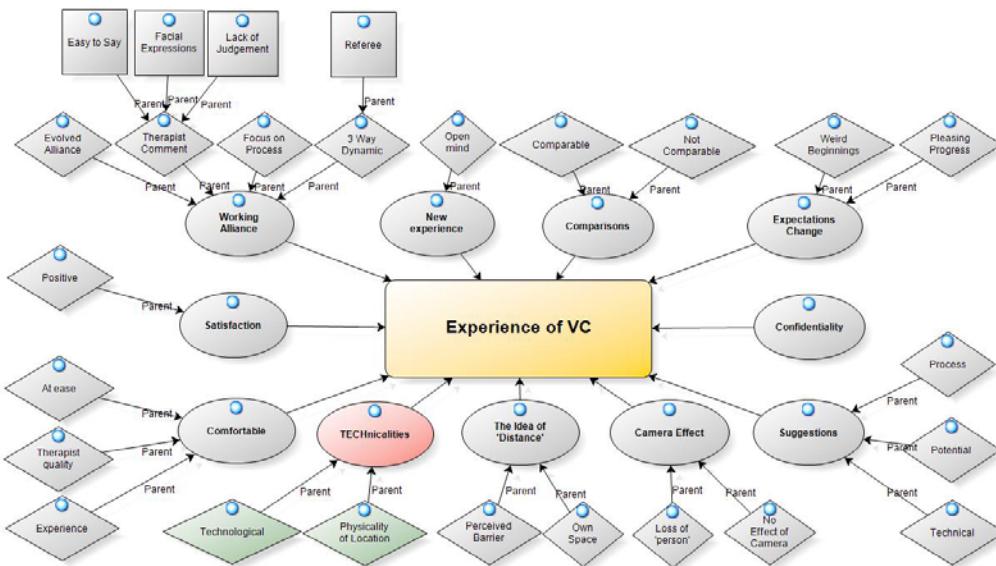


Figure 22: Figure of Technicalities theme, with two direct subthemes also highlighted; technological, physicality of location

As LeRouge et al. (2002) identified, the quality of a therapeutic videoconferencing experience can be measured by four types of attributes; technology, usability, physical environment, and the human element. The current theme reflected two of these, in the form of technology and the physical environment. The technical or physical elements that form the client's experience can significantly affect their perception of the process (LeRouge et al.). For example one client noted that the simple act of the therapist not having to write notes due to the recording of sessions effected their experience:

“I think that's a positive aspect...that people don't have to be taking notes you know from your side of the table, if you like, you know I think that's very positive” (27).

Specifically to this idea, another client added:

“I hated hearing the pen, that just really un nerved me, and you couldn’t hear that because it was through the camera, so it made me feel more comfortable” (9).

This is an example of how the technical aspects of the videoconferencing experience can enhance the experience, and add a richness of data for a therapist also, to be able to review session easily, or provide the couple with an opportunity to do so during

rehearsal exercises in session. Furthermore couples reflected again on the ‘technicalities’ of the therapist not being in the room with the couple:

“there was a time where we needed a piece of paper, and she forgot to put it in the room, so then she needed... for somebody else to pick up and put it in here, so I think that was just... a small thing really” (9).

Again, this illustrates some of the real world challenges of using videoconferencing that need to be considered in future endeavours.

Subtheme of ‘Technological’

References made to the technological element of the videoconferencing experience were primarily centred on two attributes of the medium. Firstly, couples commented on the quality of the audio, and secondly on elements of the screen itself. Having clear and synchronised audio and video is essential to the quality of client care (Bouchard et al., 2000; LeRouge et al., 2002; Simpson & Reid, 2014b). Being able to hear the therapist and what they say is just as important as the therapist hearing the couple. Some couples commented that at times the audio did cut out:

“I think that if um sometimes...when it cuts out the little bit, sometimes that can make, you suddenly like, makes you feel like...there is like that distance between you” (6).

The way comments are phrased, or questions asked, can be instrumental in providing a therapist or even a client, information about the other person, the danger therefore of missing words can reflect a potential fracture in the alliance as illustrated in the above quote, or even a subpar service delivery. As clients conceded however these instances were minimal:

“It’ll just be a word here or there” (8).

Alternatively it can also facilitate the process of turn taking, in that only one person may speak at a time, as speaking simultaneously interrupts the audio connection (Rees & Stone, 2005a). This encourages turn taking which has been found to be conducive to many family therapies (Rees & Stone). Conversely, if individuals do speak over each other, it may be important for a therapist to explore whether this happens outside of sessions, and how the other partner reacts to this (Kuulasmaa et al., 2004). As one couple reflected:

“feel you have to give that person there (points to screen) a chance to talk...you kind of feel like, we better shut up it’s their turn” (20).

This idea of having to take turns because of an outside entity competing for ‘air time’ is exemplified by the fact that simultaneous speaking disrupts the flow of information as no sound is transmitted. As the quote above reflects, couples needed to centre a lot of their attention on the screen. However as noted previously, if clients did not find a distraction with the setup of the room, some couples found distractions with the screen:

“the only thing I worry about tonight is there something that jumps across out of the screen down here somewhere on the screen, it’s a bit disconcerting” (23).

An older client in particular commented about having to use a mouse and their expertise with the medium, joking that her partner would not be able to complete the process without her:

“so if you had some real oldie sitting here that just weren’t computer savvy, you’d be in trouble” (14).

Nevertheless couples commented on the quality of the actual video as high, and noted being able to see the therapist very clearly. As Lombard and Ditton (1997) noted, the higher the quality of the image, the more real it is perceived, thus enhancing the presence felt by the client of the connecting entity, in this case the therapist. These examples all identify a reflection by couples on the technological side of the videoconferencing experience, with many commenting on their satisfaction with the process despite some temporarily compromised quality attributes. Quality audio therefore must not be underestimated as it has the power to transcend a technological medium into having presence, and connecting the two parties into a ‘shared location’ (Lombard).

Subtheme of ‘Physicality of Location’

LeRouge et al. (2002) noted an important attribute in providing clients with high quality care and in this case, therapeutic intervention, are physical environmental attributes. Similarly this subtheme was an exploration by couples of the physical environment surrounding the videoconferencing. A number of couples commented about the clinical nature of the rooms, often being described as ‘sterile’ or ‘bare’.

“I think, it feels sterile and it's not the warm environment or you know, when I say warm environment I don't mean temperature warm, I mean emotionally warm” (28).

Décor can be an important element in facilitating a therapeutic environment for clients (Greene et al., 2010; LeRouge et al., 2002). However couples consistently noted that any perceived deficits in appropriate décor, were not detrimental to the therapeutic process. Rather, some couples suggested notes on how to enhance the experience:

“I think the video is good, I would prefer to do the video counselling on the screen um in a nice and room, in a more relaxing environment because I found this quite difficult to be in, I am saying that because of the positive about the video screen” (2).

Couples also commented on the quality of the room in terms of its soundproofing attributes. As mentioned in the subtheme of ‘confidentiality’, one couples noted some anxiety regarding patients in the waiting room being able to hear their conversations. As LeRouge et al. (2002) and more recently, Gamble et al. (2015), discuss as part of a quality provision of service, videoconferencing must take place in a soundproof and quiet location, to ensure the client feels confident information disclosed will remain confidential. This was not a commonly discussed attribute, as the majority of couples did not express such concerns.

Obviously couples’ reflections about the counselling space were individual, and subjective, and despite the potential to have an impact on their receptiveness of the videoconferencing medium, did not appear to have negative effects. A further example of the subjectiveness of these views, was the poster in the room couples were situated in. Some couples identified this as a distraction to the therapeutic process, whilst others believed it created a more relaxed atmosphere, and allowed them to feel more comfortable. The other common attribute discussed in this subtheme was the size and location of the screen in proportion to the room, and the couple in particular:

“the size of the screen I think is important, that your, almost life-size...it doesn't feel like you're not really in here. But if we were looking at a really big screen, or a really small screen, you know I think that would be, it might impact on the interaction” (28).

An enhanced sense of presence may allow for a client to feel closer and more aligned with the therapist (Holmes & Foster, 2012; Lombard & Ditton, 1997), therefore ultimately enhancing the effectiveness of the therapy and the usefulness of the videoconferencing. It has been hypothesised that an image at a closer distance enhances the feeling of realness(Lombard). It was therefore important as outlined in the above client quote, for couples to be positioned directly in front of the screen, and for the size of the image to mimic real life human attributes. Studies have also found that larger images, create a deeper sense of realness and elicited more emotional responses from participants (Lombard, 1995). As the client in the above example mentioned, she too predicted that a smaller screen would perhaps effect the interaction between the therapist and the client negatively.

Theme of ‘Working Alliance’

This was a significant theme in the data as couples reflected on their relationship with the therapist to a large extent. As illustrated in Figure 23 this theme had four subthemes; therapist comment, more concentration, working alliance evolvement, and three way dynamic. A further three subthemes were identified from ‘therapist comment’.

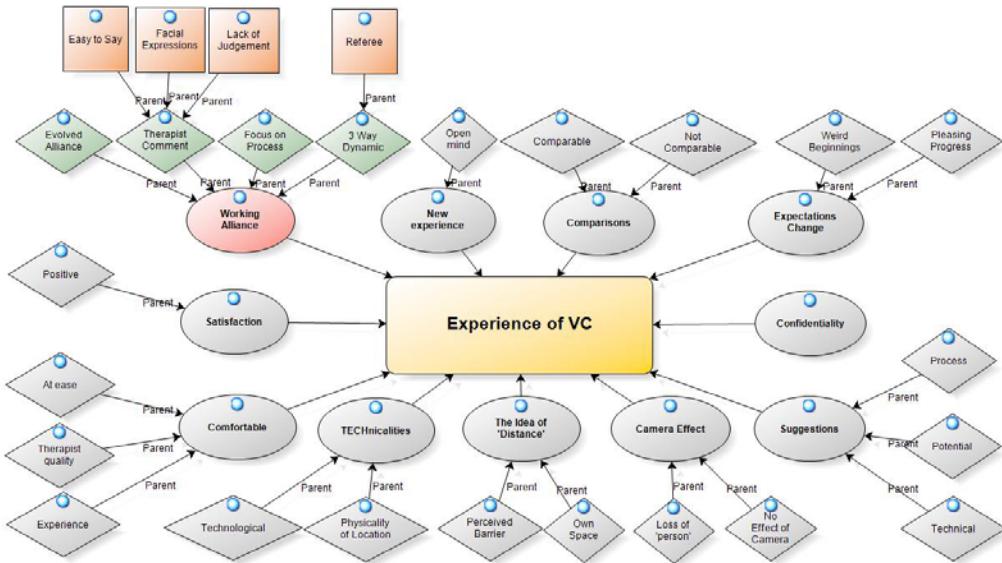


Figure 23: Figure of Working Alliance theme, with four subthemes highlighted; therapist comment, more concentration, evolved alliance, three way dynamic, with a further three sub themes of facial expressions, easy to say, lack of judgement

As illustrated, this is a fairly robust theme with several subthemes that are important to discuss in detail to allow the reader to understand the effect, or lack thereof, the videoconferencing had on the alliance couples felt with the therapist. This overarching theme reflected both positive and negative comments from couples, who either noted preferring the videoconferencing experience and the way through which they could connect with the therapist, or a preference for face-to-face therapy, as a means of establishing a deeper emotional connection with the therapist. Some couples speculated that they felt closer to the therapist, with a stronger alliance due to the impartiality of the medium, and the security they felt as a result of having their ‘own space’ through which they felt more empowered, and less judged:

“I think that yeah because it was videoconferencing, wasn’t sitting in the room, I related to the psychologist in a different way than I would if she was yeah we were personally together, so and I think that was a better thing for me anyway” (19).

Her partner added:

“I’m not sure if it’s because ‘A’ is so good at her job that she doesn’t seem to lean in one direction” (20).

Symonds and Horvath (2004) performed research into how an alliance is established, maintained and most importantly perceived by a couple dyad prior to, and during couples therapy. They found that when the couple perceives the alliance as strong, and both partners agree on this strength, the positive outcomes of therapy are significantly greater (Symonds & Horvath) . This idea is also reflected in the current study:

“I think the whole of the way that it worked just made it that much better, like with them (the therapist) being separate, and being via video just made it much more comfortable, I think it built the relationship between us and her much better” (10).

As these quotes illustrate, couples noted a strong therapeutic alliance with the therapist despite not being physically in the same location, and instead connecting through a video screen. However as noted above, not all couples felt they could overcome, or adjust to the technological element of the video:

“I still think that if something became really intimate... where there might be tears in such, and I know that it’s not the therapist’s role to cry along with you... empathise with the experience... I just think that there is a little bit of

distance with some of those issues that might come up...using this medium”
(27).

The quote illustrates the very essence of having a close working alliance, in that the client feels a connection with the therapists, and the therapist can show empathy and unconditional positive regard. The client conceded that through the videoconferencing this, whilst not impossible, may not have the same effect as it would face-to-face. As illustrated above, there were two contrasting experiences couples had with the videoconferencing medium. It is important to look at these in more detail through the subthemes.

Subtheme of ‘Three-way dynamic’

This subtheme explored the ways in which couples experienced the three-way interaction between themselves and the therapist through the screen. Due to the unique nature of this study this interaction between three people in two locations is essential to discuss, as couples noted having the therapist in a second location can potentially skew the power balance, and enhance the distance between the two:

“in the first few sessions...in a way I guess when we’re talking, we’re talking to each other, and I could see out of the corner of my eye... ‘A’ trying to stop maybe you from continuing, or trying to point something out and that not coming across... (but) I think as it went on we probably became a bit more aware of it, and she may have been a bit more vocal about it” (8).

As noted earlier, the ability for videoconferencing to facilitate turn taking is an important element of the medium (Rees & Haythornthwaite, 2004), creating potential for better interaction, and stronger communication between the couple and the therapist, and between partners generally. This couple went on to discuss the facilitation of the process by the therapist which allowed them to feel more in control, and confident in taking the positive communications skills home to practice independently, between the two of them. Other couples were more specific in speaking about the lack of physicality between the therapist and the couple, again noting that this afforded them their own space in which to work therapeutically, to having a stronger and more enhanced communicative relationship:

“it feels better on the video, I just don’t even know why but when you’re in that little room, and there’s the three of you in that tiny room it can actually

feel quite crowded, and more stressful... this was kind of a final measure really... (and) its worked” (20).

As this comment shows, essentially the ability for videoconferencing to afford some distance was a positive for this couple’s experience of therapy. Simpson, Deans and Breber (2001) similarly found that clients perceived videoconferencing as less confrontational and stressful, and also noted experiencing a greater sense of freedom to discuss issues they may have otherwise felt inhibited to disclose. Therefore whilst the three way dynamic between couples may be effected by the screen, this does not conclude that an alliance is necessarily adversely effected, or not as strong. In this way, a number of couples noted that the dynamic actually enhanced their interaction with the therapist, and especially the other partner:

“I never felt like she (the therapist) wasn't here...it impacted... just because it was another person in the room, so the way you talk to, the way I relate to A” (15).

What this client was explaining was that whilst the screen did not impact on his ability to relate to the therapist, it did have an impact on the way he interacted with his partner. This was actually commonly described by couples, in that many reflected on the experience of watching the interaction between one partner and the therapist more carefully, and thus being able to facilitate therapeutic progress more effectively:

“it's not like it separates it but in a way it does because you're actually watching and listening and looking at the same time, and that's all you're sort of looking at, and you know that ‘A’ is not reacting to me, or participating with me, she is participating with B, and then when she participates with me then B is there, and when she participates with both of us then obviously it's a three-way talk, so I felt that was a really really good thing” (24).

This allowed for there to be appropriate turn taking, and for both partners to feel heard and acknowledged. As Symonds and Horvath (2004) notes, this can allow for deeper emotional involvement and strengthening of the working alliance between each member of the dyad and the therapist.

Further Subtheme of ‘Referee’

Similarly to a theme identified in the pre-therapy interviews, and in accordance with the three-way dynamic couples felt through the therapeutic

experience, a number of couples commented on the therapist's ability to be a referee:

"she's controlled the dialogue very well, so there's no confusion as to who is going to talk, and so you say I could talk, and all at no, really good" (23).

Essentially couples noted that the videoconferencing element did not curb the therapist's ability to facilitate the session. Whether it was through the therapist directly and more assertively guiding the session as the client above experienced, or through the implied. One couple even referred to the therapist as a 'referee' explaining that this is enhanced by the videoconferencing medium as the couple feel a greater responsibility to engage the therapist due to them not being in a room.

Subtheme of 'Focus on Process'

When involved with videoconferencing, clients tend to embrace the therapeutic process more, as the novelty of the experience wains, with the clients becoming less aware of the technology and more absorbed in the counselling process itself (Lewis et al., 2004). Couples reflected that the video obligated them to be more responsible, and furthermore descriptive about their experience and feelings, and thus enabled them to become more immersed in the process:

"I think actually the video screen is good because you care, you care about what you're going to say... there is a high level of responsibility... so I'll be thinking carefully, I felt like I thought carefully about what I was doing" (2).

Another couple added that they felt they actually gained more from the therapy as they experienced an enhanced focus on the content. Again this translated into them feeling more confident to use the skills rehearsed in the space, out of session:

"because you know there's the two of us in this room...we're the ones doing it, you know 'A' is more kind of guiding us as opposed to if she was in the room we might feel a little bit more like...we couldn't do it on our own... it kind of makes it feel like it's more easy for us to translate this into home" (8).

This focus on content, and felt sense of control over the process is an important element in facilitating behavioural change for couples (Christensen, Russell, Miller, & Peterson, 1998).

Subtheme of 'Evolved alliance'

Within this subtheme couples reflected on their experience of the alliance between themselves and the therapist as evolving over the course of the therapy. Couples noted either one of two positions; some described a strong relationship from the beginning, whilst others noted a progression to a stronger, deeper emotional connection with the therapist:

"building that rapport changes, through time... I mean more at the beginning it is difficult to open up, but as time progresses it becomes easier, so we built a rapport, that trust" (15).

The working alliance literature asserts that as therapy continues, a stronger relationship can develop between a therapist and client which can ultimately facilitate behavioural change and essentially enhance the therapeutic intervention (Ardito & Rabellino, 2011; Asay & Lambert, 1999). Interestingly, there was a lack of couples that noted a deficiency in the development of this alliance, particularly due to the videoconferencing element of the intervention. As hypothesised by Simpson et al. (2005), perhaps the availability of both visual and audio cues allows for this relationship to develop similarly to that of face-to-face interactions:

"I felt that we got know each other better and better when the weeks went on, and I could see that she got to know us better...I think it's just a standard progression sort of thing" (6).

As noted in the quote above, the development of a therapeutic relationship is seen as part of the process, by the couples, and not hindered as a result of the technological medium.

Subtheme of 'Therapist comment'

This theme was study specific, in that clients reflected on how their experience was affected by the individual qualities of the therapist. It is important couples felt that their experience was enhanced by the qualities of the therapist, as this further serves as evidence to promote the effectiveness of the videoconferencing medium in being able to communicate therapist skills:

"I've never felt uncomfortable with 'A' at any stage anyway, so regardless of whether we were using this format or any other format I would have certainly felt the same way...because she was very easy to talk to, and very sweet and nice...and seems like she knows what she is talking about" (14).

Another couple added:

“professional and yeah no issues...she seems like someone that I would go and see face-to-face, I suppose that's the best compliment I could probably give her” (19).

As this reflection shows, couples often compared their experience with the therapist to the potential experience of seeing her face-to-face, and found that their relationship or alliance was not inhibited by the videoconferencing medium. This comparison is significant in demonstrating that couples were satisfied with this medium and felt therapist qualities or attributes were effectively channelled through this medium. Furthermore, as Lewis et al. (2004) identified, clients noted that therapists using this technological medium engage a number of skills to facilitate the therapeutic process. These skills include typical alliance building skill such as empathy, reflective listening, probing, and succinct summarisation:

“I thought her listening was amazing...she would come back with something that we said...she was obviously listening well...and she remembers things...her following up was amazing” (22).

As suggested by Lewis et al., these skills need to be used effectively to facilitate the formation of a strong alliance, due to the use of the technological medium and the need to engage clients quickly and effectively. Essentially couples seemed to comment on three particular attributes of the therapist that were conveyed through the medium and not hindered; the lack of judgement, the ease with which communication was engaged in, and the facial expressions that were conveyed through the screen. These also form the three subthemes of ‘therapist comment’.

Further Subtheme of ‘Easy to Say’

In this subtheme couples noted that the therapist allowed them to feel at ease to discuss a wide variety of topics, including topics that clients may otherwise struggle , or feel uncomfortable to discuss. Essentially clients reflected on their experience of feeling a strong enough alliance through the screen to the therapist to enable them to create an ease of communication:

“well the sexual intimacy all went smoothly, the way it was handled and you know, um, I said to ‘A’ not something I normally talk about, but yet she made it all very easy, and it didn’t feel uncomfortable at all so it was well done”
(26).

When elaborating on what therapist attributes facilitated this ease of communication, one client responded:

"I found her just very supportive, very attentive very encouraging um, and I suppose she didn't really um ever make us feel like we needed to rush or were on the wrong track...so you know that makes it easier to talk" (2).

Again clients made mention of the screen not impeding their ability to communicate openly with the therapist:

"I think I would say the same thing if she was sitting here in the same room so I don't have any issues" (12).

It is important to note, as this quote illustrates, that couples felt they could align with the therapist and engage in the therapeutic process, by being able to discuss personal and often difficult topics. Self-disclosure is an important element of creating a deeper emotional experience (Suler, 2004), and thus feeling this was possible through this medium is a strong indicator of the effectiveness for videoconferencing as a medium to convey therapeutic intervention.

Further Subtheme of 'Lack of Judgement'

The need for a therapist to remain impartial and non-judgemental is critical in facilitating the establishment of a strong therapeutic alliance with a client (Symonds & Horvath, 2004). Couples in the current study felt that this process was actually enhanced through the use of the technological element:

"'A' is so good at her job that she doesn't seem to lean in one direction or the other" (20).

Her partner elaborated on this:

"because yeah you know, that they could be 1500 km away from me, you probably really don't feel as judged sort of thing" (19).

Couples felt the bit of distance, or separation created by the therapist not being physically in the room enabled them to feel less inhibited and even less judged by the therapist. Couples felt that this allowed them to be more open and enhanced their therapeutic experience:

"I certainly felt she was quite you know impartial, or non-judgemental, so that was quite easy to sort of talk about anything...she would kind of guide you away from pointing out someone else's problems...and guide you back into talking about yourself...I thought that was quite good" (7).

As noted above, the lack of judgement is essential in facilitating the process especially in couples therapy (Symonds & Horvath). Couples must feel confident in the competence of the therapist, who must not be seen to align with one member of the dyad. As this subtheme illustrates, couples noted not only themselves not feeling judged, but also feeling as if the therapist remained impartial and not more aligned with the other partner. Additionally, impartiality adds to facilitate a conducive environment to positive interaction and individual behavioural change (Kuulasmaa et al., 2004).

Further Subtheme of 'Facial Expressions'

This subtheme actually reflected a less positive experience by couples, who noted that the ability for non-verbal behaviours to be conveyed through the screen, such as facial expression was inhibited somewhat by the medium:

"your facial expressions, you pick up on more when somebody is in the room with you, and you notice the way they are looking as well.. like if they are looking directly at you or them...but on the other hand like I still felt like the relationship with us and her was really good" (6).

As found in the Lewis et al. (2004) study, clients do not place as much emphasis on actual eye contact when engaging in videoconferencing, rather there is focus on what the therapists says, and the larger gestures they make. As this client reflected above, despite not being able to see clearly micro expressions or direct eye contact, the client described a notably strong relationship with the therapist. Few couples commented on the physical mannerisms or facial expressions in particular. However most described this not having a significant influence on their disclosures or engagement in the therapy, but did note the potential for this to effect reactions:

"we don't get through the video a physical perception of the other person, so I'll see a face in front of me but I don't see um how tall you are... sometimes this conception also effects the way you ah express yourself... I would probably act in the same way" (27).

Again, as this client reflected on their experience of the therapist, and the limited information he could gather about the therapist's physicality, he noted that whilst this had potential to effect the relationship, because the nature of the therapy is not particularly based around physicality or even physical proximity, he hypothesised

that his behaviour would have not been different if the sessions were in fact face-to-face.

Summary of Themes in Relation to Research Questions

The results of the second phase of the qualitative data collection can be used to discuss the current study's research questions two the five. The data gathered collates information from the couples who underwent the program via videoconferencing link and have subsequently provided an insight into their experience of the therapy, the technology, and the relationship with the therapist. The following is a summary and integration of the information collected in reference to each research question.

Research Question 2: Expectations Change

Research question two enquired as to if, and how, expectations the couples had at the start of therapy changed throughout their involvement. As identified in the theme of the same name, clients noted that despite finding the initial experience as strange, they adjusted relatively quickly, with some participants quoted as completely forgetting about the technological component. Whilst some couples noted starting the intervention with some nervous anticipation, most couples described an ability to familiarise themselves with the use of the technology relatively early. This was despite initially finding the experience somewhat strange and surreal. This theme of 'expectations change' can then be linked to opinions expressed under the theme of 'comparable', in that couples would compare the videoconferencing experience to face-to-face when describing their expectations change. This was either in the form of speaking about their initial impressions and comparison of the video to face-to-face sessions, and expectations that formed as a result of this. Alternatively, couples also spoke about a positive experience, and conceptualised this in terms it being able to compare this experience to face-to-face therapy, which some couples had also engaged in.

Finally, this positive change in expectations was also reflective of the 'working alliance' theme. These can be integrated as couples noted a perceived strengthening in alliance with the therapist throughout the intervention. Therefore, despite some initial reservations in terms of how rapport and alliance would develop through the technology, and expectations of how this may affect the intervention

overall, the increased alliance as well as comfort couples reported, assisted in changing these initial expectations. In the current study, this was a particularly important research question, as client expectations can have an impact on the overall success of an intervention (Tambling & Johnson, 2010). Therefore the summary that the expectation change experienced by couples was overall positive, despite some initial hesitations, is favourable for the use of technology for therapy.

Research Question 3: The Experience

This question was based around the overall experience of couples who underwent the intervention via videoconferencing. Many themes were identified by couples that essentially saw the technology in one of three ways; as a positive, a hindrance, or as neutral, with minimal impact.

Firstly, in terms of what couples described to be a hindrance, or more specifically elements of the technology couples reflected on as negative, was the ‘perceived barrier’ the screen represented for them. Couples noted that they felt the physical and sometimes emotional distance from the therapist through the use of the videoconferencing screen. Unfortunately some couples noted this negative was enhanced through the clinical nature of the rooms used for the therapy. As previous studies have found, the environment and décor in therapy rooms, especially those used for web-interventions is an important element in attempting to negate issues with the use of the technology (LeRouge et al., 2002). The importance of this was reflected in the current study where couples identified this as an issue. However, when further reflection on the screen itself was made, couples also discussed its size and location, which was noted as a positive feature, as it was seen to be positioned and sized adequately to mimic real world dimensions. Again, in terms of the technology itself, some of the interruptions in the live stream, especially when the weather was bad, also contributed as a sobering reminder to couples that they were not in the same room as the therapist. Interestingly however, no couple noted this as detrimental to the success of the intervention, or their ability to align with the therapist. Similarly, referring back to the notion of the screen being a barrier, couples also noted this actually provided them with their own space and therefore actually enhanced a sense of autonomy and empowerment, a finding also reflected by Simpson et al. (2005).

The second overall observation that integrates a number of the themes, was the neutral outlook reflected by couples. As can be seen above, whilst some couples noted some hindrances in the use of the technology for this particular intervention, they often concluded this with a comment about it not being detrimental to the overall outcome. This is important to mention as it reflects many instances of indifference. A clearer example of this is the notion discussed by couples of ‘distance’. Whilst couples noted a distance between themselves and the therapist, which was both physical and perceived, most couples went on to discuss this in terms of allowing them a sense of control over the process, and overall enhanced disclosure due to a lacking fear of judgement. This in itself integrates the themes of ‘comfortable’, ‘suggestions’, ‘the idea of distance’ as well as ‘working alliance’.

What can therefore be concluded from this data is that the experience of couples therapy via videoconferencing was seen as a positive experience by the majority of couples. As noted previously, the perceived freedom to self-disclose is a significant indicator of client engagement (Farber, 2003), therefore the ability for couples to use the distance effectively in this way, is actually more reflective of a positive experience. Nevertheless, this still reflects overall neutral feelings about the technological element of the videoconferencing.

Finally, couples who reflected on the experience and the use of the technology as positive appeared to be in the majority. This sentiment is evidently peppered throughout the entirety of the major themes. Two of the following research questions integrate these results, the research question specifically asking about satisfaction, as well as the question about working alliance. However each couple’s experience was unique and whilst the alliance is a major factor in intervention success, especially in online therapies (Cook & Doyle, 2002; Rees & Maclaine, 2015; Simpson & Reid, 2014b), this study explored the experience of participants in a more unique way. Couples noted that the ‘three way dynamic’ was enhanced through the use of the technology. They described feeling connected to the therapist as individuals, but also the emphasis on turn taking allowed them to feel as if they were able to engage with the therapist as a couple. Couples noted this as a strong positive. A feeling of connectedness with the therapist has been linked to greater engagement and as such further benefits from the intervention itself (Farber, 2003; Miller & Gibson, 2012). This was noted by several couples who overall described the

experience as positive, with a strong alliance and beneficial outcomes from the intervention.

On reflection of the entire involvement, some noted it was a completely ‘new experience’, which they entered with an open mind, whilst others noted a change in expectations throughout the experience in a positive way. These two themes were further linked to the theme of ‘comfortable’, in which couples reflected on the experience as being relaxed and as such, positive. Couples described this comfort grew throughout the intervention, and therefore effected their expectations in a positive way by enhancing their overall experience. Conversely, there was a notable lack of feedback reflecting on the technology as having an overall negative impact on couples’ experiences, or ability to engage with the intervention. The following is a closer integration of the themes clearly related to this positive experience, and specifically to the satisfaction and working alliance research questions.

Research Question 4: Couple Satisfaction

This question was aimed at exploring whether couples who underwent the intervention via videoconferencing found the experience overall, as well as the technological element, satisfactory. There was one specific theme that was directly related to this research question appropriately termed ‘satisfactions’. This essentially reflected the comments by couples that found the intervention, and overall experience as satisfying and generally positive. Comments throughout this theme linked to comments identified in the ‘working alliance’ theme. As couples reflected on why they were satisfied with the experience in particular, many spoke about the therapist and the ability to connect with them despite not being in the same location. When couples spoke about their comfort with the technology as well as the therapist, couples also reflected on their satisfaction with varying elements of that experience. This included the Couple CARE program itself, and the therapeutic skills used within this, as well as their ability to have an enhanced sense of control over the process. Furthermore this result can also be integrated with the ‘expectations change’ theme, in that couples noted overall pleasing progress throughout the intervention, where they felt both gains from the intervention itself, as well as an enhance alliance with the therapist. This essentially integrates all three themes of ‘working alliance’, ‘satisfaction’ and ‘expectations change’, overall illustrating a positive experience indicative of the majority of responses.

Research Question 5: Working Alliance

This question enquired as to whether a working alliance was formed between the therapist and the couple through the videoconferencing screen, and if so, how it was experienced by the couple. The theme of ‘working alliance’ is integrated throughout the entirety of these results in that couples commented on their experience with the therapist and the rapport they felt throughout most themes. Overall, all couples noted feeling a connection with the therapist despite not being in the same room with her. The difference however, was the strength of that connection, and whether they believed the camera affected this. Throughout the theme there appear to be subthemes aligning with either perspective, for example there were couples who commented directly that they believed there was no effect of the camera, whilst other believed it created a detached distance.

Alternatively there were also couples who believed the camera actually enhanced the experience. As opposed to the couples who stated that the camera resulted in a lack of intimacy, these couples believed that the use of the videoconferencing created a unique space where they felt a ‘lack of judgement’, felt more ‘at ease’ to engage intimately, and felt a strong alignment with the therapist. Couples noted that the technology facilitated the therapist attributes which put them at ease initially, to be successfully transmitted through the videoconferencing screen. These included empathy, warm regard, and impartiality. As Lewis et al. (2004) also noted, the ability of the technology to do this, is enhanced by the therapist’s own skills. This was the comment also made by a number of couples who noted it was the individual attributes of the therapist that enhanced their experience, and sense of connectedness to her. More unique to this study in particular was the three way dynamic. Some couples further noted that the camera enhanced this experience by insisting on turn taking due to the technology’s inability to pick up when two people talk simultaneously. A result also reflected by Rees et al. (2005b), the importance of which was already discussed earlier. Especially in couples therapy, and for the couples in this study, this was a valuable additional skill that needed to be utilised. This resulted in couples feeling heard and understood, and subsequently more connected to the therapeutic process.

Even some of those couples who noted the negative impact of the technology, also reported that this allowed a greater focus on the content, and therefore

contributed to the success of the intervention, ultimately combining the subthemes of ‘more concentration’ and ‘loss of person’. A further connection could then be made to the theme of ‘the idea of space’, which evidences this pro and con mentality of couples. Where couples noted they found the physical distance between the therapist and themselves as either a metaphorical barrier, or that it allowed them some personal space. Again even those couples who perceived the screen to be a barrier, still noted that this allowed them to feel more ‘at ease’. This can be viewed as an integration of the themes to form a more complete picture reflecting the ability of the technology to mimic real world settings, and connect therapist to client successfully and emotionally. In the current study, the thematic analysis shows the overall perception and subsequent experience that couples intervention through videoconferencing is a viable and effective alternative to face-to-face therapy, through which a strong therapeutic alliance can be built, and clinically significant therapeutic gains achieved.

Chapter Four: Quantitative Phase

This chapter describes the quantitative results attained from the statistical analysis of the data obtained from all couples at the three data collection points, as well as during the intervention. This begins with a brief synopsis of the analysis used, as described in greater detail in the previous chapter, followed by information regarding power, assumption testing, attrition and participant flow throughout the data collection phase, and demographics of the sample. Finally the results of the statistical analyses in the form of hypothesis testing will be explored, in an effort to address each of the earlier outlined hypotheses pertaining to the effects of the intervention on the outcome scores of each couple, and an examination of any potential effects of the condition in which clients were placed.

Generalised Linear Mixed Models (GLMMs)

GLMM represent a special class of regression model (Breslow & Clayton, 1993). When we talk about analysing our data with GLMM, we generally mean that we are estimating the model parameters with maximum likelihood rather than least squares (this explains the absence of the ‘sums of squares’ & ‘mean squares’ columns in the GLMM table of *F*-values). The GLMM is ‘mixed’ in the sense that it includes both random and fixed effects; and it is ‘generalised’ in the sense that it can handle several types of outcome variable including binary variables, count data, proportions, and ordinal data with restricted ranges. GLMMs therefore combine the properties of two widely used statistical frameworks: *Linear mixed models*, which incorporate random effects; and *generalized linear models*, which handle non-normal data.

Statistical Power

Within the context of the present 2 x 3 mixed design, conducting a non-inferiority trial to show that videoconferencing (the experimental treatment) was not inferior to face-to-face (the established treatment) would require many more participants than could be recruited with the current resources. It was therefore necessary to formulate hypotheses in terms of both treatments having positive effects (H1b, H2b, H2d, H3b, H4b, and H5b), but face-to-face producing significantly better

outcomes (H1a, H2a, H2c, H3a, H4a, H5a, H6, H7, H8a, and H8b). The study was therefore powered on the following logic.

- A significant difference between the two treatments on a primary outcome will manifest itself in a significant Group x Time interaction.
- It is only possible to recruit a sufficient number of couples for detecting a moderate to large ($f = .25 - .40$) Group x Time interaction.
- Twenty-eight couples, 14 in each condition, is sufficient for detecting moderate to large Group x Time interactions (Hemming, Girling, Sitch, Marsh, & Lilford, 2011)
- With only 28 couples, smaller interactions ($f < .25$) are unlikely to achieve statistical significance. All non-significant interactions will therefore be interpreted as providing *insufficient information for rejecting* the null hypothesis of ‘non-inferiority’; this is not the same thing as *accepting* the null hypothesis of ‘non-inferiority’.

Assumption Testing

The current research design involves the random allocation of dyads to two conditions (face-to-face and videoconferencing) and then assessing each dyad member at pre-test, post-test, and follow-up. When analysing data generated by this type of design, the traditional mixed ANOVA model requires the following assumptions to be satisfied: Normality, homogeneity of variance, sphericity, and independence of observations. The Generalised Linear Mixed Model (GLMM) however can readily override these restrictive assumptions.

The GLMM ‘robust statistics’ option will generally take care of violations of normality. The ‘robust statistics’ option should also take care of violations of homogeneity of variance. If the non-normal outcome is distributed according to a well-understood function, such as the binomial, gamma, inverse Gaussian, multinomial, or negative binomial Poisson function, then the relevant function can be specified in the GLMM syntax file. Violations of sphericity can be accommodated by changing the covariance matrix from the default of compound symmetry to autoregressive. Finally, the ability of GLMM to model random effects is essential when participants are nested within higher level units such as dyads because it provides a means of controlling the intra-dyad dependencies in the outcome data.

GLMM and Participant Attrition

When data are collected longitudinally, we have the issue of participant attrition (wave non-response). Wave non-response will normally reduce statistical power. Compared to the traditional statistical procedures for analysing behavioural change (e.g., repeated measures AN[C]OVA), GLMM is less sensitive to participant attrition because it does not rely on participants providing data at every assessment point; the GLMM maximum likelihood procedure is a full information estimation procedure that uses *all* the data present at each assessment point. GLMM is able to do this because time (pre, post, follow-up) is interpreted as a Level 1 variable that is nested within participants at Level 2. With GLMM, therefore, no participant is dropped from the analysis; this not only reduces sampling bias, but renders the traditional ‘completer versus non-completer’ analysis redundant. In fact, as a strategy for replacing missing data, the GLMM has been shown to perform on par with multiple imputation (Hemming et al.).

Participant Flow and Attrition

Whilst 42 couples expressed interest in engaging in the Couple CARE program, and returned all consent forms and questionnaires, only 33 were found to be eligible in regards to the inclusion criteria described in the methodology chapter. As illustrated in Figure 24 out of these 33 randomly allocated couples, two in the videoconferencing condition did not complete the full six sessions of the program, and one in the face-to-face condition. Reasons for not completing the program included one breakdown of a relationship, and two couples noted the program was not appropriately suited to their needs. These couples did not provide follow-up data. As a result, 15 couples in each condition provided post intervention data. At the three month data collection point, only 14 couples in each condition provided follow-up data.

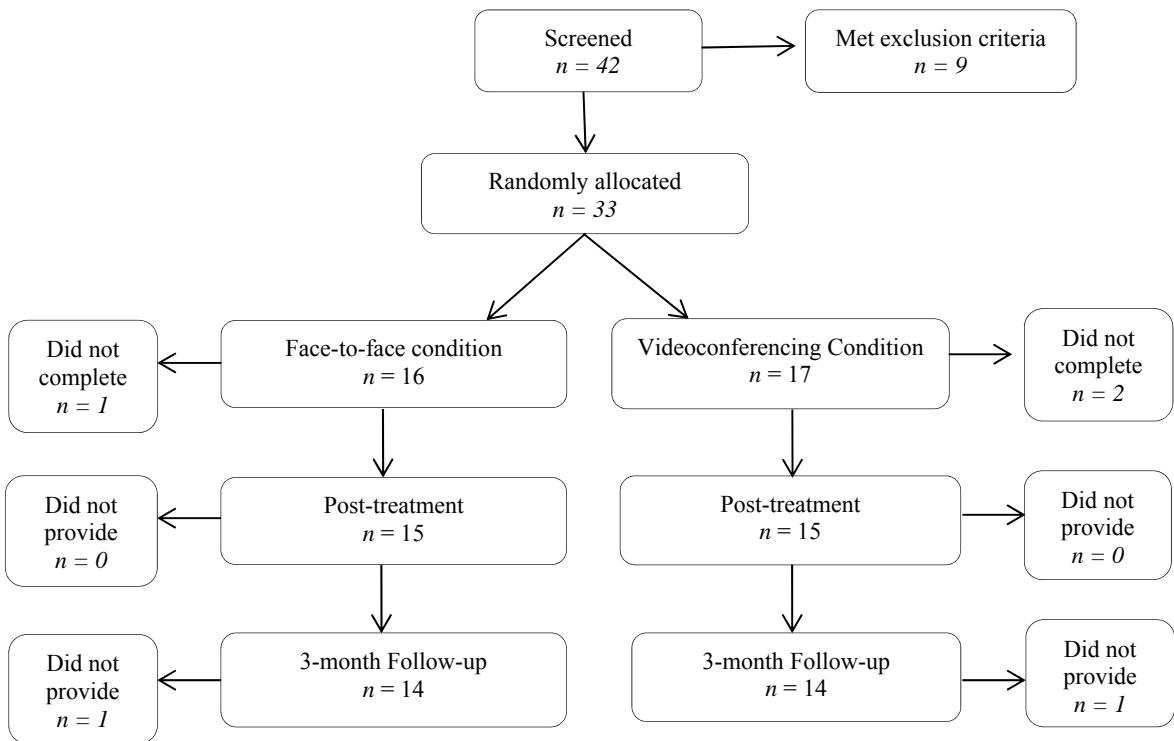


Figure 24: Participant Flowchart

Demographics

A range of demographic information was collected for couples prior to commencing the intervention, these were then compared between the two conditions (face-to-face and videoconferencing) to ensure they did not differ significantly. Information was gathered regarding age, sex, length of relationship, income, education, employment and ethnicity, and is displayed graphically in Table 1 and Table 2. A one-way ANOVA was used to evaluate whether the ages of participants in the videoconferencing condition ($M = 42, SD = 14.07$) were not significantly different to the ages of those clients in the face-to-face condition ($M = 41.63, SD = 14.75$). Results found there was no statistically significant difference between conditions for age ($F(1,58) = 0.040, p = .842$). Furthermore to ensure participants were distributed evenly between conditions in regards to the length of their relationship, participants in the videoconferencing conditions ($M = 9.98, SD = 10.90$) were compared to those in the face-to-face condition ($M = 12.50, SD = 13.39$). There was also no statistically significant differences between conditions in the length of relationship for couples ($F(1,58) = 3.323, p = .073$), indicating that the age of couples, and the length of their relationships, were evenly distributed between conditions.

Table 1

Age and Relationship Length of the Overall Sample and Each Treatment Group

	F2F		Video	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	41.63	14.75	42	14.07
Relationship Length - yrs	12.5	13.39	9.98	10.90

Table 2

Demographics Information of the Overall Sample and Both Conditions

		F2F	Video	Overall
Income	Earned up to \$75 000	15 (50%)	17 (56.7%)	32 (53.3%)
	Earned \$75 000 and over	15 (50%)	13 (43.3%)	28 (46.7%)
Education	Completed high school	27 (90%)	29 (96.7%)	56 (93.4%)
	Completed university	13 (43.3%)	15 (50%)	28 (46.7%)
Employment	Employed	29 (96.7%)	24 (80%)	53 (88.4%)
Ethnicity	Australian	22 (73.3%)	21 (70%)	43 (71.37%)
	Other	8 (26.7%)	9 (30%)	17 (28.3%)

A Person's chi-square test for contingencies was used to determine that sex, income, employment, ethnicity and education were all evenly distributed across the two conditions (with an alpha level of .05 adopted for this statistical test). When comparing education levels between the face-to-face and videoconferencing conditions, the chi-square test found no statistically significant difference $\chi^2(3, N = 60) = 1.31, p = .73$, demonstrating that the education levels of couples were evenly distributed amongst groups, with almost 80 percent of couples completing some form of higher education including tafe or university. The chi-square test for employment was also not statistically significant $\chi^2(3, N = 60) = 6.27, p = .10$, again demonstrating no significant unequal distribution between conditions, with just over 60 percent of couples in each condition currently engaging in full-time work. Similarly, the chi-square test for ethnicity also found no statistically significant difference between the face-to-face and videoconferencing clients $\chi^2(1, N = 60) = .08, p = .77$, identifying an equal distribution between condition of couple's ethnicity.

In regards to income, the chi-square test was again not significant $\chi^2(3, N = 60) = 3.28, p = .35$, reflecting no significant difference between couples in each

condition in terms of their income levels, with almost 50 percent of couples in both conditions earning between 25 000 to 75 000 thousand dollars per year. Finally, a chi-square test for sex was also conducted, as there was one couple that were in a same-sex relationship, however again the test was not statistically significant $\chi^2(1, N = 60) = .02, p = .88$, showing that this did not create a statistically significant difference in how couples were distributed between conditions. As evidenced by the above data, when comparing the videoconferencing and face-to-face conditions on demographic data, no statistically significant differences were found, and thus did not need to be accounted for as covariates in further analysis.

Finally, in terms of baseline measures it should also be noted that couples in the face-to-face condition did not differ significantly on the DAS, to those in the videoconferencing condition. This therefore negates any possible confounding variables in relation to baseline data, for accuracy of later statistical comparisons. Further and more specified analysis was conducted to explore any potential effects of condition on a variety of measures used within the study, with the mean for both conditions identical $F(1, 58) = 0.00, p = 1.00$.

Hypothesis Testing

The following subsection is organised by the hypotheses outlined in the methods section. This allows for the careful exploration of each hypothesis, and the description of all relevant results.

Hypothesis 1a

Hypothesis 1a stated that adjustment and satisfaction levels of couples in the face-to-face condition would be significantly higher than those of the couples in the videoconferencing condition as recorded by the DAS. GLMM analysis identified that the Group x Time interaction was non-significant ($F[2,170] = 0.20, p = .821$), and therefore each of the two main effects can be interpreted independently of one another. The main effect of group was non-significant ($F[1,170] = 0.01, p = .938$), indicating that the conditions did not differ significantly on the relevant outcomes at any of the three assessment points. Closer analysis of each subscale on the DAS also shows no significant differences between couple scores in either condition. As can be seen in Figure 25, means differed minutely between groups, and this was further confirmed by the analysis, which did not identify any significant differences between

groups in the subscales of cohesion ($F[1,170] = 0.017, p = .895$), consensus, ($F[1,170] = 0.194, p = .660$), satisfaction ($F[1,170] = 0.001, p = .973$) or affection ($F[1,170] = 2.499, p = .116$). Therefore this hypothesis was not supported by the findings of the current study. Alternatively, as illustrated in Figure 25, the main effect for time on the total DAS scores was significant ($F[2,170] = 5.47, p = .005$).

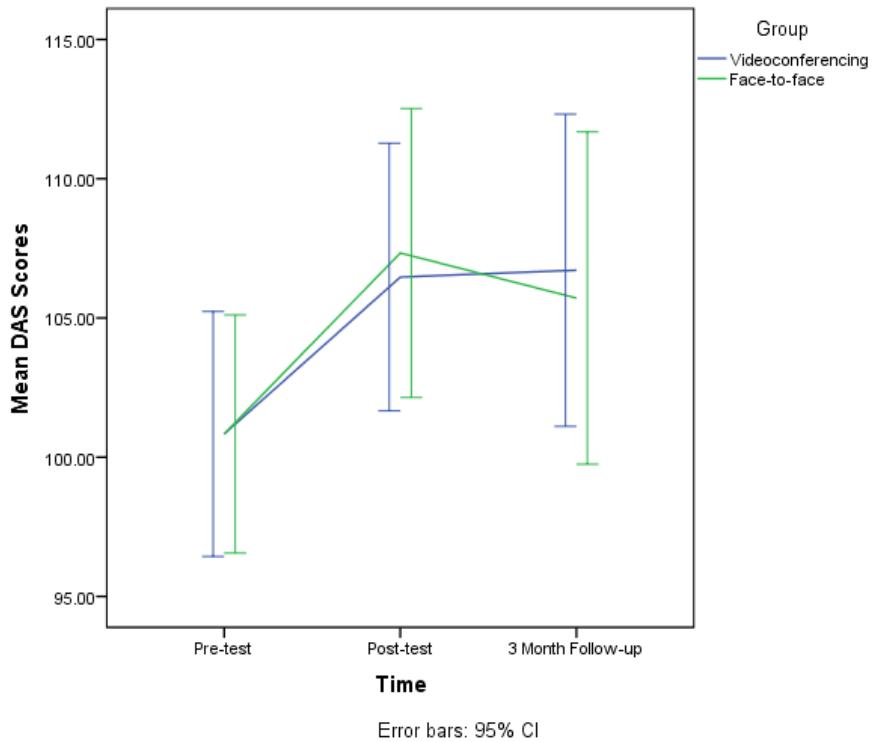


Figure 25: Means DAS scores for the face-to-face and videoconferencing conditions across pre, post and 3 month follow up assessment points

Hypothesis 1b

It was also hypothesised that adjustment scores reflected in the DAS for couples in both the face-to-face and videoconferencing conditions would significantly increase post intervention, and this would be maintained at a 3-month follow-up period. Post-hoc LSD (least significant difference) contrasts conducted on the main effect for time indicated that, for both groups, there was a significant pre-post increase on the DAS outcome measure ($p = .002$), with a moderate effect size ($\eta^2 = 0.06$). Neither group showed a significant post-FU change ($p = .769$) and both groups showed a significant pre-FU increase ($p = .017$) suggesting a maintenance of the intervention effects at follow-up, but a small effect size ($\eta^2 = 0.03$). This confirms that this hypothesis was supported. Furthermore, there was no significant

difference in client scores on the DAS between those couples in the face-to-face condition and those in the videoconferencing condition at any of the three time points, essentially therefore making no difference to DAS scores in how the intervention is presented. This was further illustrated by Table 3.

Table 3:

Post-hoc LSD contrasts of the Dyadic Adjustment Scale by Time

Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
						Lower	Upper
Pre-Post	-6.067	1.882	-3.223	170	0.002	-9.782	-2.351
Pre-FU	-5.483	2.273	-2.412	170	0.017	-9.969	-0.996
Post-FU	0.584	1.982	0.295	170	0.769	-3.328	4.496

Table 4 shows a more detailed outline of the means and standard deviations of the DAS for each condition at every time point, on all subscales. When examining scores and means on each of the individual subscales, only three subscales increased significantly as a result of time. More specifically, the consensus, ($F[2,170] = 5.033$, $p = .008$), the satisfaction ($F[2,170] = 4.354$, $p = .014$), and the affection subscales ($F[2,170] = 3.060$, $p = .049$) showed a significant difference between collection points. Therefore participant scores increased positively over time. As evidenced by the minute changes in mean scores on the cohesion subscale, this was the only subscale not to show a significant increase in scores ($F[2,170] = 2.512$, $p = .084$).

Table 4:

Means (Adjusted Means) and Standard Deviations for the Dyadic Adjustment Scale and subscales, and the Areas of Change Questionnaire subscales in the Videoconferencing and Control Conditions (N = 60)

Outcome	Videoconferencing group (N = 30)		Face-to-face group (N = 30)	
	Mean	SD	Mean	SD
Pretest DAS	100.83	11.77	100.83	11.46
Posttest DAS	106.47	12.87	107.33	13.90
3-mth DAS	106.71 (107.13)*	14.46	105.71 (105.51)	15.39
Pretest DAS_Con	44.73	7.33	45.00	6.88
Posttest DAS_Con	46.80	6.43	48.27	6.92
3-mth DAS_Con	47.96 (48.29)	7.54	47.61 (47.30)	7.66
Pretest DAS_Coh	14.60	3.14	14.73	3.08
Posttest DAS_Coh	15.30	2.77	15.60	2.77
3-mth DAS_Coh	14.43 (14.46)	3.58	14.86 (14.90)	2.61
Pretest DAS_Sat	34.10	4.81	34.90	4.28
Posttest DAS_Sat	36.40	5.59	36.33	5.74
3-mth DAS_Sat	36.82 (36.85)	5.84	36.25 (36.25)	5.70
Pretest DAS_Aff	7.47	1.98	6.10	1.97
Posttest DAS_Aff	8.03	2.11	7.13	2.27
3-mth DAS_Aff	7.50 (7.54)	3.10	7.00 (7.00)	2.58
Pretest AC_Desired	19.00	11.68	19.40	12.09
Posttest AC_Desired	14.77	10.41	17.47	11.93
3-mth AC_Desired	15.50 (15.57)	10.48	15.37 (15.51)	8.97
Pretest AC_Perceived	21.17	10.33	25.40	14.64
Posttest AC_Perceived	16.83	9.26	20.03	14.47
3-mth AC_Perceived	16.03 (15.79)	9.11	18.74 (18.39)	11.82

Note: DAS=Dyadic Adjustment Scale; DAS_Con= Dyadic Adjustment Scale; Consensus Subscale, DAS_Coh= Dyadic Adjustment Scale; Cohesion Subscale, DAS_Sat= Dyadic Adjustment Scale; Satisfaction Subscale, DAS_Aff= Dyadic Adjustment Scale; Affection Subscale, AC_Desired=Areas of Change Questionnaire; Desired Change Subscale, AC_Perceived; Areas of Change Questionnaire; Perceived Change Subscale.

*Missing values were recorded at follow-up, GLMM uses adjusted means when there are missing values and these are displayed in parentheses

Hypothesis 2a

This hypothesis stated that couples in the face-to-face condition would desire less change from their partner following the intervention than those in the video

condition. As illustrated in Table 5, GLMM analysis indicated that the Group x Time interaction was non-significant for the Areas of Change Desired scale ($F[2,169] = 0.58, p = .564$), and therefore each of the two main effects can be interpreted independently of one another. The main effect of group was also non-significant for the AC-desired scale ($F[1,169] = 0.19, p = .665$), indicating that the groups did not differ significantly on the outcomes at any of the three assessment points. This therefore did not support the hypothesis of there being a significantly higher increase in the face-to-face condition on the AC-Desired scale, compared to the videoconferencing condition. The main effect for time however, was significant for the AC Desired scale ($F[2,169] = 4.40, p = .014$).

Table 5:

GLMM analysis of the Areas of Change questionnaire; Desired and Perceived Scales

Subscale	Source	F	df1	df2	Sig.
AC_Desired	Corrected Model	1.934	5	169	0.091
	Group	0.188	1	169	0.665
	Time	4.400	2	169	0.014
	Group*Time	0.575	2	169	0.564
AC_Perceived	Corrected Model	5.192	5	169	0.000
	Group	1.444	1	169	0.231
	Time	5.674	2	169	0.004
	Group*Time	0.079	2	169	0.924

Hypothesis 2b

In relation to the effect of time, it was hypothesised that couples in both conditions would desire less change from their partners after the intervention, and this would be maintained at 3-month follow up. As shown in Table 6, LSD contrasts for the AC_Desired Scale conducted on the main effect for time indicated that, for both groups, there was a significant pre-post decrease on the outcome measure ($p = .041$), however only a small effect size ($\eta^2 = 0.02$). Neither group showed a significant post-FU change ($p = .659$) and both groups showed a significant pre-FU decrease ($p = .004$) suggesting a maintenance of the intervention effects at follow-up, but a small effect size ($\eta^2 = 0.05$). This therefore supports hypothesis 2b.

Table 6:

Post-hoc LSD contrasts for the Areas of Change questionnaire; Desired and Perceived Scales

Subscale	Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
							Lower	Upper
AC_Desrd	Pre-Post	3.083	1.498	2.059	169	0.041	0.127	6.040
	Pre-FU	3.657	1.249	2.927	169	0.004	1.190	6.123
	Post-FU	0.573	1.297	0.442	169	0.659	-1.987	3.133
AC_Percd	Pre-Post	4.850	1.477	3.284	169	0.001	1.934	7.766
	Pre-FU	6.194	2.109	2.936	169	0.004	2.029	10.358
	Post-FU	1.344	1.421	0.946	169	0.346	-1.461	4.149

Hypothesis 2c

This hypothesis also predicted a decrease in scores on the Areas of Perceived Change subscale for couples in the face-to-face condition, that would be significantly greater than the decrease in the videoconferencing couple's scores. Essentially this means that participants perceived their partners wanted them to change less in the face-to-face condition when compared to the perceptions of partners in the videoconferencing condition. The Group x Time interaction was non-significant for the AC_Perceived scale ($F[2,169] = 0.08, p = .924$), and therefore each of the two main effects can be interpreted independently of one another. The main effect of group was also non-significant for the AC Perceived scale ($F[2,169] = 1.44, p = .231$), indicating that the groups did not differ significantly on the outcomes at any of the three assessment points, therefore not supporting the current hypothesis. The main effect for time however, was significant for the AC Perceived scale ($F[2,169] = 0.567, p = .004$).

Hypothesis 2d

The purpose of this hypothesis was to predict that there would be a significant effect of time for couples in both conditions, and scores on the AC-Perceived scale would decrease for both. Further LSD contrasts for the AC-Perceived Scale conducted on the main effect for time indicated that, for both groups, there was a significant pre-post decrease on the outcome measure ($p = .001$), with a moderate effect size ($\eta^2 = 0.06$). Neither group showed a significant post-FU change ($p = .346$)

and both groups showed a significant pre-FU decrease ($p = .004$) suggesting a maintenance of the intervention effects at follow-up, but a small effect size ($\eta^2 = 0.05$). This therefore supports hypothesis 2d in that scores for couples in both conditions fell significant at pre-to-follow up.

Table 7:

*GLMM analysis of the Depression, Anxiety and Stress Scales – 42 Items
Hypothesis 3b*

Subscale	Source	F	df1	df2	Sig.
Depression	Corrected Model	10.303	5	170	0.000
	Group	0.838	1	170	0.361
	Time	12.396	2	170	0.000
	Group*Time	0.435	2	170	0.648
Anxiety	Corrected Model	2.978	5	170	0.013
	Group	0.001	1	170	0.973
	Time	5.045	2	170	0.007
	Group*Time	0.785	2	170	0.458
Stress	Corrected Model	5.460	5	170	0.000
	Group	0.136	1	170	0.713
	Time	11.178	2	170	0.000
	Group*Time	0.167	2	170	0.846

Hypothesis 3a

It was hypothesised that decreases on couple's scores on all three subscales of the DASS Depression, Anxiety and Stress Scale would be significantly greater for those couples in the face-to-face condition, when compared to those couples in the videoconferencing condition. As illustrated in Table 7 above, GLMM analysis on the outcome measures of the DASS-42 found that the Group x Time interaction was non-significant for the Depression subscale ($F[2,170] = 0.44, p = .648$), the Anxiety subscale ($F[2,170] = 0.79, p = .458$), as well as the Stress subscale ($F[2,170] = 0.17, p = .846$), and therefore each of the two main effects can be interpreted independently of one another. Furthermore, the main effect of group was non-significant for the Depression subscale ($F[1,170] = 0.84, p = .361$), the Anxiety subscale ($F[1,170] = 0.00, p = .973$), and the Stress subscale ($F[1,170] = 0.14, p = .713$), indicating that the groups did not differ significantly on the outcomes at any of the three assessment points. This therefore does not lend support for the hypothesis, and instead reflects that there were no significant differences on any of the three

subscales of the DASS between the two conditions. The main effect for time, however, was significant for the Depression subscale ($F[2,170] = 12.40, p = .000$, the Anxiety Subscale ($F[2,170] = 5.05, p = .007$), and the Stress Subscale ($F[2,170] = 11.18, p = .000$).

This hypothesis noted that client scores on all three subscales of the DASS-42 would significantly decrease over the time of the intervention for both conditions. As Table 8 demonstrates, the LSD contrasts for the Depression subscale conducted on the main effect for time indicated that, for both groups, there was a significant pre-post decrease on the outcome measure ($p = .000$), with a moderate effect size ($\eta^2 = 0.09$). Neither group showed a significant post-FU change ($p = .152$) or a significant pre-FU decrease ($p = .076$) not suggesting a maintenance of the intervention effects at follow-up.

Table 8:

Post-hoc LSD contrasts of the Depression, Anxiety and Stress Subscales by Time

Subscale	Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
							Lower	Upper
Depression	Pre-Post	2.500	0.617	4.053	170	0.000	1.282	3.718
	Pre-FU	1.701	0.953	1.784	170	0.076	-0.181	3.582
	Post-FU	-0.799	0.555	-1.439	170	0.152	-1.896	0.297
Anxiety	Pre-Post	1.100	0.364	3.020	170	0.003	0.381	1.819
	Pre-FU	1.168	0.458	2.549	170	0.012	0.264	2.073
	Post-FU	0.068	0.387	0.177	170	0.860	-1.819	-0.381
	Pre-Post	4.033	0.853	4.728	170	0.000	2.349	5.717
Stress	Pre-FU	3.249	0.839	3.873	170	0.000	1.593	4.905
	Post-FU	-0.785	0.505	-1.553	170	0.122	0.122	0.213

LSD contrasts for the Anxiety subscale conducted on the main effect for time (Table 8) indicated that, for both groups, there was a significant pre-post decrease on the outcome measure ($p = .003$), however only a small effect size ($\eta^2 = 0.05$). Neither group showed a significant post-FU change ($p = .860$) and both groups showed a significant pre-FU decrease ($p = .012$) suggesting a maintenance of the intervention effects at follow-up, but a small effect size ($\eta^2 = 0.04$).

Finally, LSD contrasts for the Stress subscale conducted on the main effect for time (Table 8) indicated that, for both groups, there was a significant pre-post decrease on the outcome measure ($p = .000$), with a moderate effect size ($\eta^2 = 0.12$). Neither group showed a significant post-FU change ($p = .122$) and both groups showed a significant pre-FU decrease ($p = .000$) suggesting a maintenance of the intervention effects at follow-up, with a moderate effect size ($\eta^2 = 0.08$). All these results are indicative of support for the current hypothesis in that client scores on the DASS did not significantly increase over collection points, but rather significantly decreased for both conditions, ultimately reflecting lower levels of depression, anxiety and stress over the course of the intervention. Overall these results support hypothesis 3b in that scores on the DASS-42 did significantly decrease over time.

Hypothesis 4a

It was proposed by this hypothesis that there would be a significant difference between the two conditions in regards to client Working Alliance Inventory scores, in that couples in the face-to-face condition would rate alliance significantly higher than those in the videoconferencing condition. GLMM analysis indicated the Group x Time interaction was non-significant for the WAI ($F[1,116] = 0.21, p = .650$), and therefore each of the two main effects can be interpreted independently of one another. The main effect of group was non-significant ($F[1,116] = 0.55, p = .458$), indicating that the groups did not differ significantly on the outcomes at any of the two assessment points, therefore not supporting hypothesis 4a. The main effect for time, however, was significant ($F[1,116] = 20.82, p = .000$).

Hypothesis 4b

The hypothesis proposed that there would be a significant increase in the Working Alliance scores of clients from Session 3 to Session 6 for both conditions. As demonstrated in Table 9, LSD contrasts conducted on the main effect for time indicated that, for both groups, there was a significant pre-post increase on the WAI outcome measure ($p = .000$), with a large effect size ($\eta^2 = 0.15$). It should be noted that no follow-up measures were collected for this outcome. This supports the hypothesis that there was a significant increase in the alliance ratings of couples in both the face-to-face and videoconferencing conditions over time.

Table 9:

Post-hoc LSD contrasts of the Working Alliance Inventory by Time

Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
						Lower	Upper
Pre-Post	-9.033	1.980	-4.563	116	0.000	-12.9	-5.112

As visually represented in Figure 26, it can be seen that perceived alliance scores for participants in both the face-to-face condition ($M = 202.17$, $SD = 8.11$) and the videoconferencing condition ($M = 194.63$, $SD = 7.81$) were high after session 3, and significantly increased after the final session. This was again for participants in both the face-to-face ($M = 212.10$, $SD = 8.49$) and videoconferencing condition ($M = 202.77$, $SD = 8.11$).

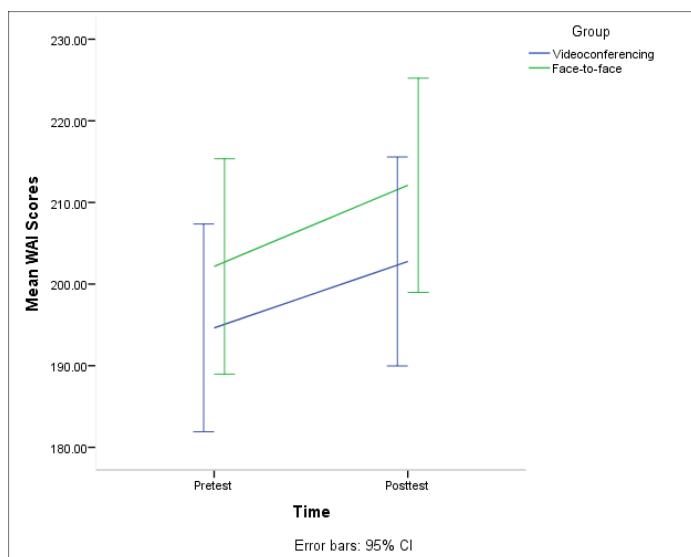


Figure 26: Means WAI scores for the face-to-face and videoconferencing conditions, at pre and post test

Particularly for the WAI bond subscale, there was also a non-significant Group x Time interaction ($F[1,116] = 0.00$, $p = .983$), and therefore each of the two main effects can be interpreted independently of one another (Table 10). The main effect of group was non-significant ($F[1,116] = 0.98$, $p = .324$), indicating that the groups did not differ significantly on this outcome at any of the two assessment points. The main effect for time, however, was significant ($F[1,116] = 11.37$, $p = .001$).

Table 10:

GLMM analysis of the Working Alliance; Bond Scales

Source	F	df1	df2	Sig.
Corrected Model	3.991	3	116	0.010
Group	0.982	1	116	0.324
Time	11.374	1	116	0.001
Group*Time	0.000	1	116	0.983

As demonstrated in Table 11, LSD contrasts conducted on the main effect for time indicated that, for both groups, there was a significant pre-post increase on the WAI; bond outcome measure ($p = .001$), with a moderate effect size ($\eta^2 = 0.09$). This therefore gives support to the hypothesis that WAI scores would increase throughout the intervention. These results illustrate support for the hypothesis in that there was a significant increase in client scores on the WAI from session 3 to session 6, and this was consistent for couples in both the face-to-face and videoconferencing conditions.

Table 11:

Post-hoc LSD contrasts of the WAI; Bond subscale by Time

Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
						Lower	Upper
Pre-Post	-2.683	0.796	-3.373	116	0.001	-4.259	-1.107

Hypothesis 5a

The premise of this hypothesis was to ascertain that there would be a significant difference between conditions in the scores of clients on the Marriage Happiness Scale. GLMM analysis identified that the Group x Time interaction was non-significant for the Marriage Happiness Scale administered weekly to each couple ($F[4,168] = 0.21, p = .053$), and therefore each of the two main effects can be interpreted independently of one another. The main effect of group was non-significant ($F[1,168] = 0.32, p = .572$), indicating that the groups did not differ significantly on this outcome at any of the two assessment points. This therefore does not support the hypothesis of having a significant difference in marriage scale scores between the two conditions. The main effect for time, however, was significant ($F[4,168] = 9.01, p = .000$).

Hypothesis 5b

This hypothesis noted that there would be a gradual and significant increase in scores from week to week (unspecified) on the Marital Happiness Scale for both conditions. As evidenced in Table 12, LSD contrasts for the Marriage Scale conducted on the main effect for time indicated that, for both groups, there was a significant increase on the outcome measure between session 2 and session 4 ($p = .006$), with only a small effect size however ($\eta^2 = 0.04$). Significant increases in scores were also evidenced between session 3 and session 6 ($p = .061$), with a moderate effect size ($\eta^2 = 0.06$), as well as a significant increase between session 4 and session 6 ($p = .024$), with a small effect size ($\eta^2 = 0.03$).

There were a small number of non-significant changes in scores between the middle sessions. There were no significant increases however between sessions 2 and 3 ($p = .126$), sessions 2 and 5 ($p = .050$), sessions 3 and 4 ($p = .216$), sessions 3 and 5 ($p = .170$), sessions 4 and 5 ($p = .530$), or sessions 5 and 6 ($p = .155$). Finally there was a significant increase on the outcome measure between session 2 and session 6 ($p = .006$), reflecting a moderate effect size ($\eta^2 = 0.10$), suggesting a maintenance of the intervention effect for both conditions. This therefore supports the hypothesis of a positive significant increase in scores on the Marital Happiness Scale over time for both conditions.

Table 12:

Post-hoc LSD contrasts of the Marital Happiness Scale

Contrast	Contrast Estimate	Std. Error	<i>t</i>	df	Adj. Sig.	<u>95% Confidence Interval</u>	
						Lower	Upper
S2-S3	-0.252	0.164	-1.538	168	0.126	-0.576	0.071
S2-S4	-0.458	0.165	-2.767	168	0.006	-0.784	-0.131
S2-S5	-0.582	0.295	-1.972	168	0.050	-1.165	0.001
S2-S6	-0.837	0.189	-4.432	168	0.000	-1.210	-0.464
S3-S4	-0.206	0.166	-1.241	168	0.216	-0.533	0.121
S3-S5	-0.330	0.240	-1.377	168	0.170	-0.803	0.143
S3-S6	-0.585	0.174	-3.362	168	0.001	-0.928	-0.241
S4-S5	-0.124	0.197	-0.630	168	0.530	-0.514	0.265
S4-S6	-0.379	0.166	-2.280	168	0.024	-0.708	-0.051
S5-S6	-0.255	0.179	-1.429	168	0.155	-0.607	0.097

Hypothesis 6

This hypothesis pertaining to the Customer Satisfaction Questionnaire proposed there would be a significant difference between the face-to-face and videoconferencing conditions in the amount of satisfaction clients noted with the intervention, with clients in the face-to-face condition in general indicating higher satisfaction levels. Clearly only having one time point at which data was collected for this measure, no effect of time analysis was needed. However the main effect of group was confirmed to be non-significant ($F[1,58] = 0.045, p = .833$), indicating that the groups did not differ significantly, and client satisfaction scores were similarly varied across conditions. When looking closer at the potential differences between groups on results of the CSQ, the differences between the face-to-face condition ($M = 28.47, SD = 3.42$), and the videoconferencing condition ($M = 28.70, SD = 3.41$) appear minuscule and clearly confirm the non-significant result, and therefore do not support the hypothesis.

Hypothesis 7

This hypothesis described there would be a significant difference between modalities; face-to-face and videoconferencing, in terms of reliable and/or statically significant change in participant's Dyadic Adjustment Scores. Furthermore it asserted that there would be more couples meeting criteria for both reliable and clinically significant change in the face-to-face condition, when compared to couples in the videoconferencing condition. The DAS was used to assess this reliable and/or clinically significant change, as it was initially chosen due to its ability to reflect distress in couples. Table 13 depicts the formula used, and Table 14 illustrates the actual values used to calculate reliable and significant change using cut-off a .

Table 13:

Formula used to calculate Reliable and Clinically Significant Change Cut-off a for the DAS

	Cut-off a	RCI	S_{DIFF}	S_E
Formula	$M_1 - 2S_1$	$\frac{X_2 - X_1}{S_{\text{diff}}}$	$\sqrt{2(S_E)^2}$	$S_1 \sqrt{(1-\text{rel})}$

Table 14:

Data used to calculate the Reliable Change Index and Clinical Cut-off a for the DAS

Symbol	Definition	Value
M_1	Pre-treatment mean of entire study sample	100.83
S_1	Standard deviation of entire pre-treatment study sample	11.52
X_1	Pre-treatment DAS score of individual	
X_2	Post-treatment DAS score of individual	
X_3	Follow-up DAS score of individual	
rel	Reliability of the DAS*	0.81

Although both normative and clinical data is available for the DAS, cut-off point a was chosen in accordance with Jacobson and Traux (1991) who argued that the normative data is based on a sample of married couples that may also be experiencing marital discord, which may not be accounted for, as a result this could reflect a sample in which there is likely to be some clinical distress. This would therefore move the normative sample on a closer path to dysfunction, ultimately creating a less stringent cut-off c (Christensen & Jacobson, 1994). As a result, those participants meeting criteria for cut-off a , more accurately reflect a significant move away from the maritally distressed sample.

Firstly Chi-square analyses were performed in order to determine whether the difference in conditions were in fact significantly different. Therefore a 2×2 chi-square test where the face-to-face and videoconferencing conditions were compared with reliable, to no reliable change was conducted. The analysis identified no significant difference between the amount of clients who displayed reliable or no reliable change in the face-to-face condition and the videoconferencing condition at pre to post $\chi^2 (1) = .007, p = .931$, or pre to follow-up $\chi^2 (1) = .206, p = .650$.

Table 15 below, illustrates the specific numbers as well as percentages of clients who fell in the *recovered*, *improved*, *unchanged* or *deteriorated* categories from pre intervention to post, and then from pre intervention to three month follow-up. When analysing this questionnaire in particular, individuals classified as *recovered* reflect a movement from scores that are indicative of a divorced clients and some distress, to those that reflected married client scores and adjustment.

Table 15:

Individual Clinically Significant Change Results for the Dyadic Adjustment Scale

Change Status	Pre to Post				Pre to Follow up			
	Face-to-Face		Video		Face-to-Face		Video	
Recovered	4	13%	5	17%	3	11%	3	11%
Improved	8	27%	8	27%	6	21%	8	29%
Unchanged	19	63%	20	67%	18	64%	18	65%
Deteriorated	3	10%	2	7%	4	14%	2	7%

Similarly a chi-square analysis was performed to identify if there was a significant difference in those clients that had produced a *recovered* status between the two conditions. However because at least one expected cell had a smaller than 5 frequency, a Fisher's Exact test was used (Joosse, 2011), with the 2 x 2 comparison of face-to-face and videoconferencing conditions, to significant change, and no significant change. The Fisher's Exact *p* for both pre to post, as well as pre to follow-up were not significant (*p* = 0.500 and *p* = 0.665 respectively) demonstrating no significant difference between conditions in the amount of clinically significant change clients across them. These results therefore do not support the hypothesis of there being a significant difference between conditions for reliable or clinically significant change scores for the DAS.

Hypothesis 8a

This hypothesis proposed that participant scores on the Areas of Change Questionnaire, specifically the Desired change subscale would decrease significantly, this would be greater for those in the face-to-face condition than those desired change scores of couples in the videoconferencing condition. However in this instance cut-off *c* was used as both normative and clinical sample means, as well as standard deviations were available (Christensen & Jacobson, 1994). Cut-off *c* therefore allowed for more precise analysis of which population participant scores fell in, more specifically whether participants moved away from scores indicating distress, to scores more accurately reflective of the non-distressed sample (Margolin et al., 1983). The formula for cut-off *c* therefore differed slightly for the AC questionnaire, with the inclusion of mean (M_o) and standard deviation (S_o) values of a

non-distressed population, and is visually represented in Table 16 (Margolin et al.).

Table 16:

Formula used to Calculate Reliable and Clinically Significant Change Cut-off c for the AC_Desired

	Cut-off <i>c</i>	RCI	S _{DIFF}	S _E
Formula	$c = \frac{S_0M_1 + S_1M_0}{S_0 + S_1}$	$\frac{X_1 - X_2}{S_{diff}}$	$\sqrt{2(S_E)^2}$	$S_1 \sqrt{(1-rel)}$

When examining the status changes in couples in the AC-Desired, and specifically how much individuals wanted their partners to change, the Table 17 below accurately portrays the variability between scores. However the hypothesis is pertaining to whether these differences between *recovered*, *improved*, *unchanged* or *deteriorated* were distributed evenly between groups. It is important to remember here that with this questionnaire in particular *recovered* reflects scores of those individuals that reflected non distressed as opposed to distressed couples scores, and thus *recovered* reflects a movement from scores that are indicative of a client that is distressed to those that reflect a lack of distress.

Table 17:

Individual Clinically Significant Change results for the Areas of Change-Desired subscale

Change Status	Pre to Post				Pre to Follow up			
	Face-to-Face		Video		Face-to-Face		Video	
Recovered	5	16.7%	6	20%	3	11%	4	14%
Improved	8	27%	10	33%	6	21%	6	21%
Unchanged	20	67%	18	60%	20	71%	21	75%
Deteriorated	2	7%	2	7%	2	7%	1	4%

Chi-square analyses were performed in order to determine whether the difference in categories reflected differences between the two conditions. Therefore a 2 x 2 chi-square test where the face-to-face and videoconferencing conditions were compared with reliable, to no reliable change was conducted. The analysis identified no significant difference between the amount of clients who displayed reliable or no

reliable change in the face-to-face condition and the videoconferencing condition at pre to post $\chi^2 (1) = .327, p = .567$, or pre to follow-up $\chi^2 (1) = .006, p = .941$.

When comparing potential differences between conditions for the clinically significant client scores, again, because as at least one expected cell had a smaller than 5 frequency, a Fisher's Exact test was used (Joosse, 2011), with a direct comparison of the two conditions. The Fisher's Exact p for both pre to post, as well as pre to follow-up were not significant ($p = 0.388$ and $p = 0.599$ respectively) demonstrating no significant difference between conditions in the amount of clinically significant clients across them. These results therefore again do not support the hypothesis of there being a significant differences between the face-to-face and videoconferencing conditions for reliable or clinically significant change for the AC-Desired subscale.

Hypothesis 8b

This hypothesis proposed that participants in the face-to-face condition would perceive their partners want them to change significantly less when compared to those participants in the videoconferencing condition. This was explored using the second part of the Areas of Change Questionnaire to determine areas of Perceived change, and client status changes in terms of *recovered*, or specifically a statically significant shift from distressed to non-distressed, *improved*, *unchanged* or *deteriorated*. Table 18 below visually represents the number of individuals in each status change category and the corresponding percentages within each condition.

Again, a chi-square analysis was conducted to ascertain whether there was any significant difference in the way client's change statuses were distributed between the face-to-face and videoconferencing conditions. A 2 x 2 chi-square test identified no significant difference between the amount of clients who displayed reliable or no reliable change in the face-to-face condition, and the videoconferencing condition at pre to post $\chi^2 (1) = .711, p = .399$, or pre to follow-up $\chi^2 (1) = .171, p = .679$.

Table 18:

Clinically Significant Change results for the Areas of Change Questionnaire, Perceived change Subscale

Change Status	Pre to Post				Pre to Follow up			
	Face-to-Face		Video		Face-to-Face		Video	
Recovered	4	13%	6	20%	7	26%	8	29%
Improved	8	27%	6	20%	5	19%	6	21%
Unchanged	19	63%	24	80%	21	78%	19	68%
Deteriorated	3	10%	0	0	1	4%	3	11%

When comparing potential differences between conditions for the clinically significant client scores, again, because as at least one expected cell had a smaller than 5 frequency, a Fisher's exact test was used (Joosse, 2011), with a direct comparison of the two conditions. The Fisher's Exact p for both pre to post, as well as pre to follow-up were not significant ($p = 0.365$ and $p = 0.533$ respectively) demonstrating no significant difference between conditions in the frequency of clinically significant change clients across them. These results therefore do not support the hypothesis of there being significant differences between the two conditions, for reliable or clinically significant change for the AC-Perceived scores.

Summary of Findings

The ability for this study to encompass a wide variety of couples based on demographic information, and measurement scales that were distributed equally amongst conditions, allowed for a more representative sample of the community. This sample therefore allowed for the focus of the investigation to remain on the potential effects of the modality through which therapy was presented, rather than between-group differences or confounds. Couples in the face-to-face condition did not differ significantly to those in the videoconferencing condition on age, income, education, employment status, sex, ethnicity, or length of relationship. It must also be noted that couples in the two conditions did not differ significantly on relationship adjustment scores, as measured by the DAS, with mean scores of 100.83 for couples in both the face-to-face and videoconferencing conditions. Therefore an equal amount of distress was evidenced in relationships in both conditions, prior to the intervention, allowing for no significant differences between groups on this measure,

and thus more accurate analysis post intervention.

Summary of Findings in Relation to Research Questions

The results detailed above allow for a thorough comparison between couple who engaged in counselling face-to-face with a therapist, or via a videoconferencing screen. What these results show in particular is that couples in the videoconferencing condition gained the same benefits as those face-to-face. In an effort to explore this in more detail, to follow is a summary of findings in reference to each applicable research question, as part of the quantitative analysis.

Research Question 4: Couple Satisfaction

Research question four asked whether couples experienced satisfaction with the process, the technological medium, and the overall experience. This question was answered by both the qualitative as well as quantitative results. Specifically, the quantitative analysis of the Customer Satisfaction Questionnaire indicated that couples in both the face-to-face and videoconferencing conditions were very satisfied with the counselling intervention. With no significant differences between the conditions, and average scores reflecting almost 90 percent satisfaction with the intervention, the majority of couple's scores reflected satisfaction with the counselling intervention. Similar to results of previous studies (Richards & Timulak, 2013; Savenstedt, Zingmark, Hyden, & Brulin, 2005; Young, 2005), chi-square comparisons revealed no significant differences in scores between the face-to-face and videoconferencing conditions.

When asked specifically if clients would come back to the program, again an equal number of participants responded in both conditions, that yes they would return for treatment, at a rate of 97 percent. Again a strikingly similar result to other online therapy studies (Looi & Raphael, 2007; Richards & Timulak, 2013), the ability to accept the null hypothesis reflects that connecting with a therapist via a videoconferencing screen, does not necessarily impact on a client's satisfaction with an intervention, and how helpful or efficacious they perceive it to be (Savolainen, Hanson, Magnusson, & Gustavsson, 2008). This is a significant result as it reflected that clients did not perceive to be gaining less from an intervention, or for the intervention to be less helpful, as a result of the modality through which it was conveyed. A clients ability to be engaged and become invested in therapy is a critical

component of the effectiveness of an intervention, and the overall therapeutic experience (Beattie et al., 2009; Trotter, 2008). Thus looking at the results of the current study illustrating high levels of satisfaction for clients in both conditions, shows promise that participants may find videoconferencing an acceptable medium for engaging on a deeper level in therapy.

Research Question 5: Working Alliance

This question asked whether working alliance was developed and maintained by each member of the couple and their therapist, in both conditions. The subsequent hypotheses stated that the working alliance will not only be maintained from session 3 to session 6, but actually increase after the final session, and that this will happen in both the face-to-face and videoconferencing conditions. The results of the current study support these hypotheses. Through examination of participant scores on the Working Alliance Inventory, participants in both conditions scored their perceived alliance with the therapist as higher after session 6. This was found to be significantly higher than scores after the third session, reflecting a notable increase in perceived alliance between participants and the therapist, in both conditions. In fact there were no significant difference between participants in the face-to-face conditions and those in the videoconferencing condition in how much alliance they felt with their therapist.

Both conditions reflected high alliance scores that increased significantly over time, with average scores in the face-to-face condition of 84 percent, and in the videoconferencing condition 80 percent. Again, this difference between conditions was not statistically significant. These results replicated those in similar studies of online therapy examining working alliance (Barak et al., 2008; Morgan, Patrick, & Magaletta, 2008b) in that the actual ability to connect with a therapist, despite the medium through which this is done, is the ultimate causal factor in establishing a strong alliance . The current study's results strengthen this notion, and evidence that client scores did not reflect a disadvantage to those in the videoconferencing condition in being able to align with their therapist.

The studies' ability to ensure that all clients completed the course of therapy with the same therapist, allowed for more accurate comparison of groups, without a further confounding variable. As is evidenced by the results of the statistical analysis, an identical and significant pattern of increase in participant alliance ratings exists

for both conditions. Identified as a common length of time for alliance to develop and be maintained (Symonds & Horvath, 2004), measurements taken after session 3, and subsequently post session 6, show consistent increases in perceived alliance by participants, without significant interference evident from the modality through which they connected with their therapist. It should however be noted that unlike some previous studies (Cook & Doyle, 2002) the current study did not show higher mean scores in the videoconferencing condition when directly compared to the face-to-face couples. Whilst again the difference was not significant, the ability for the results to reflect a superior videoconferencing result is not possible, on the other hand a significant increase in ratings for both conditions is.

Specifically looking at the Bond subscale in the WAI, and to what extent clients perceive the therapist cares about them, and more broadly their relationship with the therapist, participants in both conditions reflected this to be high. With face-to-face client scores reflecting an average of 88 percent, and videoconferencing clients 85 percent, this result illustrates to a significant degree that engaging with a therapist through an online and more specifically, a videoconferencing medium, does not put those couples at a disadvantage. In the current study couples in the videoconferencing condition still perceived their relationship or ‘bond’ to be very strong with the therapist, and this was comparable to those results identified in similar studies (Cook & Doyle, 2002; Leibert & Archer Jr, 2006). As Anker et al. (2010) found, high alliance ratings can be a strong predictor of positive treatment outcomes, giving emphasis to the importance of the client-therapist relationship in the therapeutic process. In the current study, the perception of a strong alliance through both the total scores of the WAI and the bond subscale in particular, were consistent between conditions. Furthermore client improvements in the other clinical outcome measures were also consistent between conditions as examined by the following research question.

Research Question 5: Effects on Couple Distress

This question asked whether the therapy proved to be efficacious in decreasing couple distress. This was examined in a number of ways including participant scores on the Dyadic Adjustment Scale, scores on the Areas of Change Questionnaire, as well as weekly measures of contentment on the Marital Happiness Scale. Furthermore, to ensure couples were not decreasing in general functioning, the

Depression, Anxiety and Stress Scale-42 was administered pre, post and at follow up. The DASS-42 results indicated no significant differences in couple's scores between the videoconferencing and face-to-face conditions, and thus significant improvement post intervention. These decreases in scores allowed for the conclusion that couples did not appear to be having adverse mental consequences from being involved in the therapy. Furthermore, and perhaps more poignantly there was no statistically significant differences in these improvements between couples in the videoconferencing as compared to the face-to-face condition. Therefore it appeared that all depression, anxiety and stress scores for couples in both conditions were positively affected throughout the process of therapy and couples left the program with lower levels of psychological distress than when they entered the program. The modality with which they engaged in therefore did not significantly effect this. Not used commonly in couples therapy as an assessment tool, the DASS scores nevertheless correlated closely to a positive general trend in decreased couple distress scores.

One of the most commonly used measures to assess distress in relationships is the Dyadic Adjustment Scale (Graham et al., 2006), therefore the answer to this research question was answered through analysis of couple scores on the DAS, which did in fact show significant increases pre intervention to post intervention, and pre intervention to follow-up. This reflected results of several other studies that have used the intervention of Couple CARE to provide behavioural based therapeutic intervention to couples experiencing some distress in their relationship (Halford et al., 2004; Wilson & Halford, 2008). Significantly increasing scores in the DAS reflects couples feeling more adjusted in their relationship, and overall experiencing lower levels of distress.

Further analysis examining whether participant scores on the DAS in the face-to-face condition scores differed from those participant scores in the videoconferencing conditions, found no significant difference. Using GLMM ensured that the confound of dyadic interaction was taken into account, and thus the likely potential for participant scores to be influenced by their partners was incorporated ultimately negated. Unique to this study, a direct comparison of couples between groups showed no significant difference in the two conditions, and thus identified that participant receiving intervention by both face-to-face and videoconferencing showed significant increases in their DAS scores. This ultimately

reflected an increase in satisfaction and decrease in distress felt in their relationships. Looking at the subscales of the DAS a similar result was found in that participant scores on the satisfaction, the consensus, and the Affection subscale all increased significantly after the intervention, and this increase was evident in both conditions. The Cohesion subscale was the only subscale not to show a significant increase over time, and this was evident for both conditions. Again the statistical analysis did not provide support for the notion that the modality through which the couples connected with their therapist influenced DAS scores, and thus the efficaciousness of the therapy.

Looking more closely at participants that showed furthermore reliable change, 27 percent of all participants, equally in both conditions were classed as statistically improved from pre to post intervention. Additionally, 13 and 17 percent of participants were termed as recovered in the face-to-face and videoconferencing conditions respectively. Perhaps not the most ideal way of interpreting the DAS as couples can still be functional with some distress (Hendrick, 1988), these results however do show that there was no significant difference between conditions in the percentage of participants that showed both reliable and statistically significant change. Therefore whilst most participant scores increased from pre to post intervention, and scores were maintained at 3-month follow-up, whether couples engaged with the therapist face-to-face or via the videoconferencing screen did not appear to affect the couples in participating in the program, or their DAS scores, instead ultimately decreasing distress in the majority of the couples' relationships.

The Areas of Change Questionnaire was also used in the current study to assess relationship cohesion; this was examined using both changes desired and changes perceived subscales. Firstly the AC desired scale, that indicates to what extent participants desire their partners to change, decreased over time, reflecting a desire for mates to change less after the intervention and at 3-month follow-up, compared to baseline scores. This decrease in scores was found to be statistically significant, and consistent with previous research on couples counselling intervention (Rabin, Margolin, Safir, Talovic, & Sadeh, 2007). This was evident across both conditions, reflecting no effect of group, therefore participants in both the face-to-face and videoconferencing conditions consistently desired their partners to change less after the completion of the program, ideally reflecting increased satisfaction and cohesion.

When looking at reliable and clinically significant change for the AC Desired, 60 percent of participants overall were classified as improved. Specifically, 27 percent of participants in the face-to-face condition, and 33 percent in the videoconferencing condition showed scores that reflected reliable improvement. Further analysis found 17 and 20 percent of participants in the face-to-face and videoconferencing conditions were classified as recovered. Further analysis showed no significant difference between conditions, therefore both recovered and improved participants did not differ on account of the condition in which they were placed. The 1 to 2 deteriorated clients in both conditions reflect an increase in perceived change, and a real world sample where some clients depending on other extraneous variables that may be affecting the relationship negatively, may seek further change from partners. Again this was consistent among conditions and thus did not suggest any effects of modality.

Looking alternatively at the second scale on the AC, the amount participants perceived their partners wanted them to change, similar results were also found. Analysis found that the amount of change participants perceived their partner's wanted them to engage in, decreased over time. This was a significant decrease from pre intervention to post intervention, and pre to three month follow up, suggesting these changes were sustained over time. Examining separately the differences between the face-to-face and the videoconferencing conditions, statistical analysis found no significant difference between participant scores on the AC-Desired scale. Therefore participants perceived change less, consistently across conditions. Decreases in both the amount individuals wanted each other to change, as well as perceived the other wanted them to change, reflected an overall positive results for couples in relationship functioning, which is consistent with prior research (Halford et al., 2004; Mead et al., 1990).

Further analysis was conducted to examine reliable and clinically significant change. This found that 27 and 20 percent of participants in the face-to-face and videoconferencing conditions respectively showed reliable change on the AC Perceived scale. Additionally, 13 percent of participants in the face-to-face and 20 percent in the videoconferencing condition were classified as recovered. These scores reflect a significant decrease in desired and perceived change by couples, and thus more cohesion and satisfaction (Mead et al., 1990). The 1 to 3 deteriorated clients again reflect a real world sample and not found to be significant in the overall

score. No differences between conditions were found in regards to these participants and thus negative effects of modality cannot be concluded, ultimately supporting the null hypothesis of no difference between groups.

Finally, examining changes in the weekly measure on the Marital Happiness Scale showed a positive increase over time in the amount of happiness participants perceived in their relationship over a number of areas. Overall, there was a significant effect of time for increases in the Marital Happiness Scale. More specifically, significant changes were noted between scales collected in session two and the fourth session, between session two and the final, sixth session, session three and six, as well as session four and six. This combined, reflected a gradual and significant increase in relationship happiness for couples over a total of five data collection points. This measure was particularly important as it could reliably illustrate the improvement of couples from week to week, and ensure couples reported varying levels of distress were benefiting from their participation in the therapy, rather than reflecting negative effects (Azrin et al., 1973). Further analysis also verified no significant differences between the face-to-face and videoconferencing conditions, in participant scores on this scale. Therefore participants in both conditions showed increases in happiness within their relationships, through progressing in the intervention. The condition in which participants were placed did not appear to influence this, thus supporting the hypothesis that relationship distress was reduced, or more specifically satisfaction increased through couples counselling via both videoconferencing as well as face-to-face consistently.

Conclusion

In this chapter the results of the quantitative analysis on a variety of measured gathered at pre, post, follow up and during intervention were reported. This analysis took the form of GLMM, as well as reliable and clinically significant change. This essentially involved a comparison between couples in the face-to-face, and videoconferencing conditions, and from pre to post intervention, and pre to three month follow-up. These results reflected a clear similarity between outcome scores of couples in the face-to-face condition, when compared to the videoconferencing condition, and a significant improvement in measures over time. Summaries were then provided in regards to the results related to the appropriate research questions in

regards to couple satisfaction, working alliance and relationship distress. Overall, these results consistently indicate therapeutic benefits to couples in both conditions, in terms of decreased couple distress and strong perceived alliance, with no significant negative impact of the technology. It is now important to integrate these results in relation to the qualitative findings identified in Chapter 2.

Chapter Five:

Discussion

Overview

This final chapter will synthesise the results and findings in regards to the overall aims of the study. This will include comments on the experience, participant expectations, as well as their satisfaction with the videoconferencing component of their therapeutic intervention. There will also be focus on the strengths and limitations of the current study as well as a comment on possible future directions of research.

The study allowed for several conclusions to be reached in relation to the use of videoconferencing to provide behavioural intervention to couples experiencing distress in their relationships. With diversity of couples in terms of varying ages, education status, and levels of distress, some further generalisation can be afforded to the study. Both qualitative and quantitative analysis found that when the couples intervention was presented via a videoconferencing medium, the results were no worse than when presented face-to-face. Related to previous research, and as guided by the research questions, the key findings of the current study are summarised to follow.

Key Findings

The ‘Big Bang’ Finding

Some said it could not be done (Schopp et al., 2000; Wray & Rees, 2003), however the current study has shown that videoconferencing for the transmission of therapy and therapeutic process variables such as alliance, empathy and satisfaction, can be done effectively, and comparatively to face-to-face therapy. More specifically, the current study was successful in demonstrating that videoconference is efficacious in connecting a couple and therapist, for the provision of couples intervention. Furthermore, when compared to the same intervention face-to-face, it was able to demonstrate comparative findings in terms of benefits. These included lower distress rates, higher satisfaction and adjustment scores, as well an overall decrease in depression, anxiety and stress scores. Consistent with previous research (Simpson & Reid, 2014b; Stubbings et al., 2013), the current study was further able

to demonstrate that despite never seeing the therapist face-to-face, couples identified the same levels of perceived alliance as those that only saw the therapist face-to-face.

As noted in the literature background, the use of this technology in connecting clients and therapists creates a unique opportunity for clients that would otherwise not have access to specialist mental health care (Capner, 2000; Liebert et al., 2006). As noted by several of the couples in the current study, they could envisage therapy as a possible function of the technology. Furthermore when analysing the results of the quantitative analysis, the strong alliance and satisfaction scores further represent the efficaciousness, and therefore the evidence and strong possibility for the use of the technology in therapeutic intervention.

As noted by Beattie et al. (2009), and more recently by Simpson and Reid (2014a), qualitative studies directly examining expectations and satisfaction with online therapeutic mediums are still lacking. The current study was able to integrate quantitative statistically significant results, with those elicited from qualitative data collection and analysis. As noted earlier, by thoroughly examining client experiences with the medium, the ability to enhance supply and subsequently breach the demand gap between service provision and service availability can be enhanced. These results are synthesised further in the sections below.

Experience

Effectiveness (Couple benefits)

The effectiveness of the intervention in the current study, and the medium through which it was presented, can be demonstrated through the analysis of measures given to couples at pre, post and follow-up. Couples reported clear increases in dyadic adjustment and satisfaction pre to post, with these improvements being maintained at 3-month follow-up. Based on both qualitative and quantitative data, it was observed that couples were able to engage in the counselling process, in the program, with the therapist, and generally immerse themselves in the experience despite only being connected through the computer screen.

Arguably one of the most interesting themes to emerge from participants when questioned about their experience of couples counselling via videoconferencing, was the idea that couples not only felt engaged, but those that had reported doubts about their ability to engage, altered those throughout the process. Because most couples reflecting on the experience were able to compare it to a face-

to-face encounter, this created some initial doubt in the technology's ability to replicate elements of such a physical interaction. However later comparison actually reflected positive experiences. This meant that whilst couples said it was different, it was not necessarily perceived to be worse, or more difficult.

Regarding their involvement, couples expressed satisfaction and an acceptance that reflected an overall positive experience. Couples were able to connect with their therapist, and engage in the process, often noting that they would forget the computer screen was between themselves and the therapist, and that they were only connected via the screen. Being able to create a shared environment is a unique element of the videoconferencing technology known as telepresence (Muhlbach & Ptussong, 1995). Participants noted that the ability to both see and hear the therapist contributed significantly to this. Furthermore the ability for the therapist to direct attention to either partner by using eye gaze direction, or gesture towards the individual to which a question is aimed at, emphasised what an important element the videoconferencing is, in creating a wholesome therapeutic experience. Therefore, the ability to engage in the therapy despite never meeting the therapist face-to-face, was a testament for couples who commented that this highlighted for them the strength of the technology. It can be concluded, based on the results of the current study, and in accordance with previous research for individualised online therapies (Day & Schneider, 2002; Germain et al., 2009; Lewis et al., 2004; Mallen, Vogel, Rochlen, et al., 2005; Stubbings et al., 2013), that participants found this to be a unique, and acceptable, even satisfying, experience.

Therapist Bias

Despite the documented resistance to the use of videoconferencing for therapeutic intervention as noted by such studies as Cowain (2001), and Rees and Stone (2005b), it is the researcher's contention in the current study that alliance can be formed through the screen, and that effective intervention can be conveyed and attained. It is the humble opinion of the researcher that when reflecting on their own experience of using the videoconferencing to engage couples, the experience did actually closely mimic that of the experience with face-to-face couples. Despite some doubt exhibited by couples, in the therapist's ability to pick up on a certain 'vibes' or affect without being physically present, as most therapists are aware, much of this can be detected by focusing on non-verbal cues. Being able to see couples facilitated

this focus, more so than the physical proximity. This in combination with the above satisfactory results attained from the analysis is hoped to assist in paving the way to the enhanced use of technologies, and in particular videoconferencing, in increasing accessibility to, and provision of therapy.

Alliance

As postulated by Simpson et al. (2005), should the client feel strongly aligned to the therapist, the mode through which they connect becomes redundant, and significantly less problematic. In the current study, couples were able to explore not only their relationship with the therapist, and its merits, but also create a comparison to those interactions they are more familiar with, those of a face-to-face nature. What was evident in the analysis of the questionnaires was that the initial working alliance scores for participants in the videoconferencing condition were not significantly different to those in the face-to-face condition. Furthermore when exploring this data as the study progressed, couples in the video condition continuously did not report significantly lower scores than those in the face-to-face condition, reflecting a strong and comparable alliance, despite physically being in an alternative location to that of the therapist. Further analysis also identified that the strength of this perceived alliance on all three subscales of bond, task and goal, increased over time in each condition. This therefore reflects that couples felt their alliance to be as strong and consistently strengthening in both groups. To shed further light on this notion, the study was able to explore these score through the use of the data gathered through interviews with each couple.

Couples noted that once they engaged in the therapeutic process they were able to immerse themselves in the experience and furthermore, forget about the screen, and focus on the therapist, the intervention and each other. Those couples in the videoconferencing condition noted that the video actually allowed for the alliance to be enhanced, as there was a greater perceived focus on the process of therapy. Furthermore couples noted specifically in reference to the therapist, that they felt less judged when directly compared to face-to-face interactions. Consequently couples felt unrestricted to disclose more vulnerable thoughts and feelings, and in general, found it easier to speak. As noted earlier, one common limitation in online therapy research is the absence of nonverbal cues (Cook & Doyle, 2002). This has the potential to strain the therapeutic process, as nonverbal communication is a means of

conveying undertones or messages we do not transmit verbally (Fussell, 1995). This therefore creates important emphasis on the videoconferencing element of the current study, with couples noting that being able to see the therapist, a unique advantage of videoconferencing technology, enabled them to use nonverbal communication, and ultimately feel more connected.

In relation to Bordin's model (Bordin, 1979), alliance requires a set of criteria to be met in order to be perceived as strong. In the current study, this included the agreement on tasks, a perceived bond, and an agreement and understanding of the goals set in therapy. As noted by Bordin these three facets must be experienced and satisfied, to enable the client to feel a strong working alliance. The current study reflects a satisfaction in all three facets of the alliance via the online medium, as evidenced by both qualitative and quantitative data. Furthermore, particularly on the bond subscale, couples felt a strong bond between themselves and the therapist, which significantly increased over time, but did not significantly differ to the face-to-face condition. All these results converge in the same place, the current study evidences support for previous findings that reflect that an alliance can be established when using technology to facilitate therapy (Day & Schneider, 2002; Mallen, Vogel, Rochlen, et al., 2005; Morgan et al., 2008a; Simpson & Reid, 2014b), and this is consistently true even in couples therapy.

The Three Person Dynamic

Consistent with previous findings (Muhlbach & Ptusson, 1995; Rees & Stone, 2005b; Vertegaal et al., 2003), the technological element of the videoconferencing enabled greater turn taking by the couples. Despite not being in the same room, couples felt as if the therapist was still clearly able to direct conversation and thus manage time between couples. As Rees et al. (2005b) identified, this can be an important element in facilitating rapport and alliance. The results of the current study further contribute to this finding, with statistically significant results, reflecting high alliance ratings by those participants in the videoconferencing condition.

One of the advantages noted in the literature background was a sense of control clients feel when using online technology (Mohr et al., 2008; Simpson et al., 2005). Unique to this study, this idea was also explored, but from a dyadic perspective. Couples noted on many occasions they felt an enhanced sense of control

over the therapeutic process by being essentially ‘in charge’ of their own space. This meant they could turn the screen on/off, or leave the room with more ease than they suspected would be afforded should they have engaged with the therapist face-to-face. As identified by Simpson and Reid (2014b) in their review, a sense of control can enhance engagement, and thus ultimately effect outcomes. Simpson et al. (2005), discussed the idea of online disclosures, which appear higher given the element of autonomy, and anonymity online. The positive results of the current study directly related to the ‘easy to say’ theme, which is based on a perceived lack of negative consequences, a sense of control was enhanced.

A fear of negative appraisal, has the potential to impede self-disclosures, and ultimately engagement (Teyber, 2006). As it has been noted, higher self-disclosures are commonly linked to client engagement (Farber, 2003). The ability to exert increased perceived control over sessions, in the current study allowed for greater involvement as reflected in the qualitative data, and lead to positive outcomes, as reflected in the quantitative data. Ultimately this replicated the results of previous studies in that the technological element of the intervention allowed clients to feel more comfortable (Nguyen et al., 2012; Simpson et al., 2005). Interestingly, and more unique to this study, the dyadic nature of the couples therapy did not appear to impact on this sense of control.

Environment

As noted by LeRouge et al. (2002) the environment therapy is conducted in, can be an important quality attribute affecting client’s experience of online therapy and therefore outcomes. Several participants commented on their experience of the environment in which the therapy was conducted. This included the cold and clinical nature of the therapy rooms. It is important however to note, that whilst this may have affected the participant’s initial impressions, it actually did not affect overall experience, as per comments made post intervention. Additionally, whilst this may reflect important aspects that need to be taken into account when conducting therapy via video, to enhance the experience and thus client engagement, it does not necessarily reflect issues with the technology itself. It is however an important consideration in treatment planning, to assist in negating any initial bias. In regards to the computer and the positioning within the room, the overall view was that the

computer was positioned well at eye level, and therefore closely mimicked real world interaction.

Presence-telepresence

When evaluating the use of technology in therapy, the degree a client feels they are sharing the same space as the therapist is known as telepresence (Germain et al., 2010). In the current study this was evaluated more in the qualitative data, in which many themes reflected a strong telepresence experienced by participants. This included feeling comfortable with the therapist, engaging well with the intervention, as well as finding the technology as facilitating a neutral focus. Given the positive results reflected in this data, it can be concluded that the sense of telepresence was satisfactory enough to be conducive to positive intervention results. As identified by Castelnuovo et al. (2003), participants noted that having high telepresence allowed them to become absorbed in the content, and at times ‘forget’ about the technological medium, exemplifying the importance of content and alliance, over the technology. As further asserted by Vertegaal et al. (2003), having the computer at eye level allowed for this to be facilitated, and allowed for better turn taking, therefore facilitating stronger telepresence.

Expectations

This study confirms that expectations prior to therapy can be altered, dependant on the experience. As postulated and subsequently explored by Suler (2001b), clients will enter therapy with clear expectations. These can be influenced by a number of factors, including prior experience, and willingness to engage (Kimberly, 2005; Rochlen et al., 2004). Expectations in the current study were also largely based around past experiences, in that couples compared their initial impressions against either previous therapy, or general face-to-face communication. Participants further noted use of skype and other programs that now allowed them to smooth the transition in communicating via the technology. However, as Germain et al. (2010) identified, even individuals without technological experience, can engage and benefit from the use of videoconferencing mediated therapy. As evidenced in the results, strong satisfaction ratings were reported despite many couples describing this as a completely new experience.

The collection of data from couples prior to engaging in the therapeutic process, allowed for the current study to gather initial expectations about the experience, from those couples that would never see the therapist face-to-face. What this identified was that most couples entered the program with an open mind. This was unlikely to be biased by the selection process, as couples agreed to engage in the program without knowing whether they would be in the face-to-face or videoconferencing condition. Whilst most couples noted they had limited videoconferencing experience, this did not appear to taint their willingness to engage. Couples were however quick to speculate how the experience would compare to that of face-to-face therapy. Again negative reflections seemed devoid of the speculation process as couples noted that it was likely to be different, some even said better, but few said that they expected it to be inferior, or even worse.

Results of the qualitative analysis reflect that expectations did change for a number of couples. In the majority, couples reflected a positive shift in expectations in that they began with some reservations about being able to engage in the therapeutic process and with the therapist as compared to face-to-face therapy, and post intervention found that they had in fact fully immersed in the process. Interestingly, those couples who commented about having this shift in expectations, noted being surprised by this movement. Couples reflected on feeling strange about not being in the same room as the therapist, which took some ‘getting used to’. No feedback was provided about expectations shifting in the opposite direction, such as couples expecting the experience to be positive, and then feeling as if this did not happen.

In relation to expectations about the ability to connect to a therapist, couples expressed some reservations when compared to a face-to-face interaction. This included participants speculating that the lack of physical proximity between themselves and the therapist would perhaps create an experience lacking some depth. Couples speculated that the therapist may not be able to fully comprehend their experience because they are not in the same room and thus may miss some cues. This however did not prove to be significant enough to hinder their involvement. As Germain et al. (2009) found, initial impressions of the videoconferencing do not necessarily negatively impact on clinical outcomes. Alternatively, some participants noted they were likely to find the experience favourable as the distance afforded by

not being in the same room as the therapist would allow them to feel less intimidated, and potentially feel more in control of the process.

An expectations directly related to what the couples in the videoconferencing condition anticipated from the therapist, was that the therapist may have a diminished ability to exert the same amount of influence when compared to a more traditional face-to-face session. Obviously the therapist in the latter scenario could physically intervene in any interaction, however considering that this is rarely required in therapy, perhaps it is the physical presence of the therapist that couples expected would make the difference. However as couples noted, and to what appeared to be the surprise of the couples, the therapist retained a level of control over sessions that they had not initially expected. This included her ability to use gestures, eye contact to direct conversations, and to verbally interject if discourse was inappropriate. All these strategies put in place reflected a controlled, mutually engaging environment that allowed couples to immerse themselves in the therapeutic process in a safe and supportive, and most of all, empathetic environment.

Satisfaction

Again both qualitative and quantitative data reflected a general sense of satisfaction with both the therapeutic intervention as well as the use of videoconferencing to engage in the counselling. Furthermore, the quantitative responses reflected an overall satisfaction by couples with the program itself. Looking specifically at those couples in the videoconferencing condition, satisfaction scores matched, and not significantly different to that of the face-to-face participants. Couples noted feeling they could recommend the program to others, and would engage again in videoconferencing if the future need and availability arose.

Qualitative interviews identified that couples in the videoconferencing condition expressed a general sense of satisfaction with the entire experience. Furthermore participants expressed satisfaction with the therapist and their ability to engage with her, the perceived sense of care exhibited by the therapist, as well as their use of the technology. However the predominant theme was that couples found the experience acceptable, as meeting their needs and furthermore their expectations, and finally as being acceptable to engage and invest in. Most couples were able to compare the experience to that of a face-to-face encounter and allowed this to be a

positive comparison. Participants expressed that whilst the experience was different and unique, even a little strange at times, it was deemed satisfactory.

In regards to the technology, couples noted satisfaction with the ease of the use the computer. Since the technology was already turned on, and connected when the couple entered the room, this was one potential inconvenience that was minimised, and appreciated by participants. Couples noted that this allowed them to engage in a way similar to face-to-face interactions in that they entered the room, saw the therapist, and started talking much like a more traditional encounter. This allowed for the relationship to develop in a more organic manner. As consistently demonstrated by research, clients are satisfied in using technology to facilitate a connection to a therapist (De Las Cueva et al., 2006; Murphy et al., 2009; Stahl & Dixon, 2010).

In relation to the process, or more specifically the therapeutic process, couples noted that a relationship or alliance did develop with the therapist via the technological medium, despite never actually meeting the therapist face-to-face. Couples noted satisfaction with this alliance. They felt more comfortable and less judged connecting with the therapist via the computer. Looking at the therapeutic process in a more general light, couples felt as if the technological element allowed them to focus more on the content and remain objective in session. Through this they felt as if they potentially gained more from the therapy program, than they would have should they have participated face-to-face. Whilst difficult to compare without a mixed sample, the comparison of participant's previous experience in face-to-face interactions, may have assisted with some insight into this.

As noted earlier, the two largest area of investigation in relation to online therapies is outcomes and satisfaction (Morgan et al., 2008a). The results of the current study contribute to the body of literature that reflects high satisfaction ratings for use of technology to facilitate therapeutic intervention. Both individuals in each couple consistently reflected high satisfaction rating that were consistent across conditions. As postulated in the aims of this study, it was demonstrated that the unique dynamic as two vs one; the couple and the therapist in alternative locations, could be satisfactorily viewed and experienced by couples.

Implications of the Study

This has been the first Australian, and international study, to the author's knowledge, to investigate couples intervention in particular, presented via videoconferencing. Given the statistically significant, and overwhelmingly positive results gleamed from the data collected, this study could be a noteworthy piece of evidence for the expansion of services provided technologically. As noted earlier, given the large rural population in Australia, as well as FIFO, military and other needing populations that display a significant shortage in supply of specialist services, the ability to provide this intervention online, could be a significant step to breaching the demand gap (Simpson & Reid, 2014a). Clients in rural areas may be exposed to clinicians limited in skills, and when faced with the choice of travel for more specialised services, this may produce unfeasible or financially unrealistic options. Videoconferencing allows rural, military, even FIFO workers the opportunity to connect with a therapist that may be more flexible, or better skilled, to address the needs of that client.

The current study was able to evidence the ability of videoconferencing in making this connection effective and viable for these populations. Furthermore, the study was able to evidence that despite adding another client to the therapeutic intervention, in the form of 'the partner', strong rapport could be developed and substantial benefits gained from the intervention. This therefore leaves two main implications evident in the results of the current study. Firstly, that videoconferencing is a viable means of engaging clients that may otherwise not seek therapeutic intervention, and secondly, couples intervention specifically can be conveyed successfully through such a medium.

This study was able to add to research which explores the connection of clients, and specifically couples, to their therapist, despite them not being in the same location. Even though couples were in the same building, it was evidenced that they could engage in the program despite never meeting the therapist face-to-face, and gleam positive results from such an intervention. Many couples noted this was satisfactory as well as convenient, a result found in accordance with similar studies (Griffiths & Christensen, 2006; Halford et al., 2001; Simpson & Reid, 2014b). It must also be noted that participants found the visual element of the videoconferencing allowed for greater and more realistic transmission of content as well as emotions. As noted by a number of studies, the major advantage of

videoconferencing is the ability to convey verbal as well as non-verbal communication (Backhaus et al., 2012; Richardson et al., 2015), which can ultimately enhance the sensory experience by engaging more senses and mimicking a face-to-face experience (Germain et al., 2009; Porcari et al., 2009; Simpson & Reid, 2014b). This contributes greatly to the debate to enhance use of online therapy, and videoconferencing in particular.

Further in relation to the unique dyadic dynamic of this study, and as Day and Schneider (2002) explored, the ability for the varied uses of media in therapy, can also enhance engagement. This study was further able to illustrate the use of technology assisted techniques that would otherwise not be available in a face-to-face setting. Specifically to the Couple CARE program, this involved the ability to playback rehearsal exercises and give clients the ability to constructively evaluate themselves, and each other, which in turn strengthened positive connections. This was invaluable to the therapeutic intervention (Halford et al., 2004), and is reflected in the high satisfaction and strong outcome results. This is exciting for the development and widening of services to couples attempting to engage in couples intervention. Organisations can therefore become more creative in the provision of services, by being able to enhance existing interventions, and potentially increase positive contributions to those in need. The results of the current study further contribute to the justification of more research into this field.

Given the reservations held by some therapist in regards to the ability of videoconferencing to foster a successful and therapeutically relevant relationship (Rees & Stone, 2005b), the results of the current study become even more significant. The finding that the alliance established through videoconference actually compares to that of face-to-face therapy is significant but not unique (Rees & Maclaine, 2015; Richardson et al., 2015). The current study however was able to demonstrate the ability to foster such an alliance with a couple, despite no physical contact. The therapist was able to direct questions at individuals and couples did not feel as if this depersonalised the interaction, or had any disabling effects in terms of building rapport and a collaborative relationship. The results of this study could therefore be used to enhance expansion of services to couples through technology, and counter some of this therapist bias that organisations may have in the past let steer their decision making. The therapist can feel a sense of confidence that clients will accept the technology, outcomes will be congruent to those of face-to-face, and a

strong working alliance can be successfully fostered. It is therefore hoped the results of the current study will be taken into consideration in policy and therapeutic intervention planning, as such have implications on policy directions. In this way the results may have real world implications for clinical settings.

Simpson and Reid (2014a), made a number of recommendations for future research and for integrating videoconferencing into clinical practice specifically in the Australian context. The current study has aimed to contribute to the growing field of telepsychology by addressing these recommendations. One of these was by conducting Australian based research focused on the effectiveness of a specific standardised intervention to evaluate whether it is equivalent to the benefits provided by the same intervention presented face-to-face. Given the positive outcomes gained from the study and the mixed design, as further suggested by Simpson, this is a noteworthy contribution to enhancing services within the Australian context. As will be discussed in the future directions section, this was the first study of its kind, and although future research is needed to examine three different points of contact, or engaging minority populations within the Australian context, this study provides the platform for such research. Given the high degree of discord in FIFO families (UWA, 2009), this study provides evidence to larger corporations, to spend resources on further funding the development of the National Broadband Network. This will increase quality and access to internet, and provide a platform for further investigating the use of videoconferencing to connect workers on the mine sites, with their partners, and a therapist that can continue to facilitate positive change and increase harmony in the home, alleviating distress and tension when they return home. Similar to enhanced use by military, it is hoped this will ultimately assist in alleviating distress, and enhancing productiveness whilst at work.

In an effort to anticipate the needs of an increasingly technological and demanding age, it is the responsibility of policy makers, and therapists alike to provide alternative, creative, accessible and engaging ways of providing therapeutic intervention to the greater population. One such way of doing this is through increased research and innovation (Simpson & Reid, 2014a). In this way clinicians and larger organisations alike can incorporate technology into the provision of evidence based therapeutic interventions. Studies such as this one assist in providing evidence of strong clinical outcomes and satisfaction with the use of

videoconferencing, to engage those populations that would otherwise go without needed therapy.

Strengths and Limitations

The current study boasts a number of strengths that can be seen as a result of robust methodological planning. As noted by Halford et al. (2015) to enhance strength and validity, studies need to identify the clear aim of intervention, and ensure the use of validated measurements. The current study satisfied both of these criteria. The measures utilised in the current study have shown high reliability and internal validity in previous studies (Antony et al., 1998; Attkisson & Greenfield, 2004; Fowers & Olson, 1993; Garbarini et al., 2014; Horvath & Greenberg, 1989; Weiss, Hops, & Patterson, 1973), and high internal consistency also demonstrated in the current study. Similarly, having a previously established intervention (Halford et al., 2004; Petch et al., 2012) that was standardised across conditions, was another strength of the current study. In this way, couples in both conditions were exposed to the identical intervention, allowing for greater comparability between the two conditions based on fewer differences. A single therapist was also used to conduct all interventions, this minimised any therapist confounding variables.

Furthermore, another strength of the current study design was its use of sealed envelopes provided to couples for the return of their WAI questionnaires. This was to ensure participants did not feel a sense of pressure, or fear of negative reprisal from the therapist, based on their feedback. Participants were reassured that results would not be viewed until their completion of the program. Similarly, having an independent researcher conduct the second lot of interviews, allowed participants to be completely honest in their responses without any concern of reprisal from the therapist. In the past participants have been found to be more inclined to give favourable responses, based on the power differential (Stublings et al., 2013). Through the use of the above provisions, the current study therefore mitigated this potential confounding variable.

Halford et al. (2015) further noted the importance of follow-ups in research. Having a follow-up demonstrates not only the immediate effectiveness of an intervention, but also whether these results are sustainable given real-world demands and scenarios. The current study had a 3-month follow up period. Whilst some studies have had longer follow-up periods (Hahlweg & Richter, 2010; Halford et al.,

2007), given the resources and timespan of the research study, this was adequate in demonstrating significant pre to follow-up results. It may be interesting in future research to conduct not only longer follow-ups, to see the sustained effects of the intervention on couple functioning, but also interviews at a later date to see couples reflections on the therapeutic experience using the technology, and any complicating factors that may influence these positive gains in the long term. This will be further discussed in the future directions section of this chapter.

A common criticism of couples intervention research is that couples experiencing moderate to higher degrees of distress are often excluded, limiting the generalisability of results (Halford et al., 2015; Pepping et al., 2015). Given the limited flexibility of the current intervention, and based on ethical restraints of appropriateness, clients experiencing higher degrees of distress were also excluded. However, as opposed to previous research, those who displayed mild-to-moderate distress were allowed to participate in this study. Therefore, the sample consisted of a range of participants with various presenting issues and varying levels of distress. This gives the current study more depth, and an increased ability to generalise results to real world populations.

Employing the use of a randomised control trial design is a further strength of the current study. Having participants randomised to conditions decreases potential for bias, as participants who had more experience in using technology, did not necessarily chose to be in the videoconferencing condition. Alternatively, those couples that were adverse to the use of technology were also given no choice to avoid the condition. This was aimed at ultimately negating possible bias effects. The design implemented reflected a randomised, active control. Despite strongly motivated by ethical reasons in ensuring couples were not left in distress, the use of an active control is in fact a stronger test of efficacy of videoconferencing. This is due to the direct comparisons to the ‘gold-standard’ face-to-face therapeutic intervention, therefore results based on direct comparisons reflected significant findings, and overall represent a stronger test. The current study used a mixed method design in order to strengthen the validity of themes identified by the qualitative analysis, and ultimately provide evidence for the aforementioned hypotheses.

Limitations of the study are consistent with the challenges faced by most studies in this area (Rochlen et al., 2004; Simpson & Reid, 2014b). One potential limitation is the sample size, however there were a number of reasons for this. Firstly

being more of an exploratory study, the numbers matched the aims of the current study. Secondly with a very limited budget, the ability to recruit, advertise and have the appropriate resources to provide couples, were all restricted. The sample size was not large enough to have sufficient power to detect smaller effects, however as reviewed earlier, sufficient to produce statistically significant results and moderate effects, and furthermore justified by other, similar studies (Stubbings et al., 2013; Théberge-Lapointe et al., 2015). So actually the sample size used here, compares very well with other studies, and is actually larger than many (Jedlicka, 2001; Stubbings et al., 2013; Tambling & Johnson, 2010).

One criticism of telepsychology is the engagement of severely distressed clients (Kramer et al., 2015). Couples were screened and risk assessments completed prior to their engagement in the intervention, to ensure suitability. Therefore many potential risks that may be encountered in real-world scenarios were mitigated. Unique to this technological modality however, is that risk is actually negated by the very nature of videoconferencing. Because everything is recorded, this becomes an incentive for partners to maintain ‘good behaviour’, otherwise evidence could be presented for prosecution of any violent or malicious acts. Alternatively having supports, or clearly defined locations, police or emergency response personnel could be sent to would need to be explored, especially for remote couples. A contract may also need to be signed, designating a support person/emergency contact that could be employed by the therapist to ensure safety and enhanced support.

The researcher in the current study completed the therapy, as well as the initial interviews, reflecting both a potential limitation, as well as strength. The rationale around this was purely based on availability of resources. With close supervision by two clinical psychologists specialising in couples therapy, and one of the co-authors of the couple CARE program, couples were afforded the highest quality of intervention. The initial interviews were also completed by the researcher, again because of necessity. However given the potential conflict of interest in conducting the final interviews, and that the clinic at which couples presented was operational, masters students were used to complete these interviews for all couples.

Having the couples come to the psychology clinic was a strategic choice of the current study, but also effected somewhat by budgetary constraints, including the availability of computers and the appropriate software. Having one computer for the couples set up in the clinic, and one for the therapist, was based on availability and

resources. This was however also reflective of a good design feature because it controlled for effect of location. Furthermore, engaging couples that did actually have access to technology, and alternatives for couples therapy, mitigated any effects of couples biasing results by simply being ‘grateful’ for their acceptance into the study.

Finally, a limitation of the technology itself, as experienced in the current study, was issues with transmission of data. On occasion, especially when the weather was bad, the picture became unclear and it was more difficult to hear the participants, due to the transmission cutting out. This however did accurately represent the real-world issues often experienced with the technology. When using online technologies we cannot control for all factors. We cannot affect weather conditions, quality of technology available, or issues with internet connection. The potential however is that with greater investment into this technology, we can better internet speeds, and strengthen connection and quality of data transmission.

Future Directions

Perhaps having each member of the dyad in the same room helped build on the feeling of presence, and made it easier for couples to immerse themselves in the therapeutic process. Because this was one of the first studies of this nature, future studies could explore the effects on the dynamic including the working alliance, by separating both partners to each other, as well as the therapist. This would result in a scenario where each individual is connected to the session from a varying location, and the therapist residing in a third location. Including couples that may be experiencing more significant levels of distress, or those facing issues such as drug or alcohol abuse that were excluded from the current study, could further evidence the appropriateness of videoconferencing for couples intervention and, perhaps even more intensive therapy.

Furthermore, future research could also focus on varying interventions, ones that are perhaps more intensive, and less structured. Again being one of the first studies of its kind, it was important to use a structured intervention that could truly be compared by exposing couples in both groups to the same intervention. However it would be interesting to explore whether a more emotionally vested, intensive, less structured intervention such as Emotion Focused Therapy would be affected by the technological element of videoconferencing. In this way the question of whether the

same depth of alliance would be established via video, as that when couples enter the same physical room as the therapist, could be further explored.

Obviously having a larger sample size would be useful to further explore comparisons between face-to-face and videoconferencing conditions, as this may show smaller discrepancies. A more mixed sample may also be able to explore the effects of having very distressed couples engaging in the intervention, and whether these couples are also able to engage in the process fully when in a video condition. Or even how other elements such as couples with comorbid conditions, effect suitability for online intervention. An interesting and noteworthy future study could explore how various personality types could affect preferences for videoconferencing therapy. More specifically to couples, this context could also be explored, in that some personality types may have a stronger preference, and individual diagnoses may further affect preference as well as engagement.

In terms of the structure of the study and data collection, limited studies have been produced that have longer follow-up periods available for comparison (Simpson & Reid, 2014b). Therefore whilst studies such as the current one can show successful outcomes from a specific therapeutic intervention, more research is needed on whether these results can be sustained for longer periods of time. These results could then be further compared between conditions, and therapy that is presented through a technological medium.

Participants in the current study noted some worries in regards to confidentiality and anonymity. This however became more specifically a concern regarding the placement of the rooms in the clinic, and whether those outside the session could overhear the content. Future research could examine how confidentiality is maintained in real-world samples where clients connect from a variety of locations including from home. Similarly, studies particularly aimed at examining the effect and potential issues of connecting with the therapist from various locations is important in again expanding the use of technology mediated therapy. If in fact connecting from a public library or hospital, produces similar intervention effects as that of a client connecting from home, and this is comparable to face-to-face therapeutic gains, this would undoubtably be worthwhile research.

It will consequently however be important to explore any further ethical issues that may arise as a result of connecting from various locations, or engaging more distressed populations. The effect of this perceived lack of confidentiality, on

elements such as disclosures, accountability and therapeutic engagement, could also be explored further through qualitative research. Ensuring that clients confidentiality as well as their safety is protected, is a large rationale for holding sessions in hospitals when a psychology clinic is not available. But the point of making psychological services available to couples is to make this simple, convenient, and accessible, so constricting it to certain settings may be counterproductive. Therefore further study is important to explore the unique issues that may arise as a consequence of varied settings, and to test it out in terms of practicality and logistics.

Closing Words

This study has significantly contributed to the growing body of research reflecting the use of technology to facilitate therapeutic intervention as a satisfying and ultimately viable option for clients. The hope for this study is that it assists in demonstrating the validity of such interventions, and the use of technology, which will ultimately expand services to various ‘in need’ populations, and therefore assist in breaching the existing demand gap. It has in the past been the narrow mindedness of clinical organisations, and even therapists themselves, as well as unfounded worries around the use of such technologies, that has stunted growth in the area (Simpson & Reid, 2014a). Nevertheless, in recent years the use of online therapies and technology itself has increased exponentially, despite some pervasive notions about online therapeutic interventions not being as effective as traditional face-to-face therapy. Given the strong evidence base which the current study has contributed to, and the niche, yet significant market for couples intervention online, it is hoped that this growth continues. It would be a shame, given the significant technological advances humanity has made, if we did not harness these gains, and use them to enhance peoples’ wellbeing everywhere. One such example of how this can be achieved is by increasing supply, and as such the accessibility to therapeutic intervention to all.

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Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged.

Appendix A

Advertise for interest

Potential participants register interest, and are contacted by the researcher, given additional information, and a general duty screen is conducted. An information package is sent out, with a consent form to be completed and returned should they wish to proceed with their participation.

Once consent forms are received, potential participants are sent a number of questionnaires including the PDSQ, DAS, DASS-42, AC, and a demographics questionnaire. Once these are completed, participants send these back in a reply paid envelop.

Provided participants do not meet any further exclusion criteria, the researcher then contacts the participants and an appointment time is made. Participants are also informed of their group allocation (F2F or video). Participants come to the clinic.

Therapist greets couple in the clinic and guides them to their therapy room to begin session.

Clients are given instructions and helped by clinic staff to their therapy room. Therapist appears on screen and session begins.

1st half of session: information gathering

2nd half: semi-structured interview (*Appendix B*)

Session 2-3, after session 3 participants complete WAI

Session 6, followed by Semi-structured interview with alternative researcher (*Appendix C*)

Participants are asked to complete WAI, DAS, DASS-42, AC, CSQ

Participants contacted at 3 months follow-up and asked to complete DASS-42, DAS

Appendix B

Client Experiences in Couples Therapy via Videoconferencing

(PRIOR TO COMMENCEMENT OF THERAPY)

Interview Protocol

Interviewer: Therapist

Couple Interviewed:

Date:

Time:

Length of Interview

Place:

Introduction:

- **Purpose:** going to ask questions about the participant's expectations of engaging in couple's therapy conducted via video conferencing. "I am interested in hearing about your expectations in using video conferencing in your therapy"

- **Confidentiality:** Review confidentiality, and stipulate that nobody outside of this study will have access to this information; this does include yourself (the therapist), and the study supervisors. Ensure you tell the participants that no negative consequences will arise as a result of what they say in this interview.

I am interested in finding out your expectations about what therapy will be like when it is conducted via video conferencing

1. What are your initial impressions?

2. What do you expect from therapy in general?

3. Do you think the using video conferencing will affect this in any way?
 - i. How?
 - ii. Why?
 - iii. How do you expect to overcome this?

4. Do you expect any challenges?
 - i. How do you expect to overcome these?

5. Are there any positive elements of this you are looking forward to?

Your feedback is an essential part of this study, thank you for your time

Appendix C

Client Experiences in Couples Therapy via Videoconferencing

(POST THERAPY)

Interview Protocol

Interviewer:

Couple Interviewed:

Date:

Time:

Length of Interview

Place:

Introduction:

- **Purpose:** you are going to ask questions about the participant's experience of engaging in couple's therapy conducted via video conferencing. "I am interested in hearing about your experience in using video conferencing in your therapy"

- **Confidentiality:** Review confidentiality, and stipulate that nobody outside of this study will have access to this information; this does include yourself (the interviewer), the therapist, and the study supervisors. Ensure you tell the participants that they can feel comfortable discussing all aspects of their experience knowing no negative consequences will arise as a result.

The following interview questions provide a general framework, you may find you do not need to ask all of these questions, or you may use some of them as prompts.

1. Have your expectations changed since beginning this therapy?

2. Can you describe to me your experience of using video conferring for couple's therapy?
 - i. Were there any challenges
 - ii. If so...how did you overcome these challenges?
 - iii. Was there anything you would change about the process?
 - iv. Were there any positive aspects?
 - v. Was there anything you found easier as a result of using video conferencing?

3. When you reflect on your experience, what stands out as meaningful?

4. Do you believe the camera effected the interaction between yourself and the therapist?
 5. Can you think of an example when it was easy for you to tell your therapist about something?

 - i. What do you think made it easy?
 6. Can you think of an example when it was hard to tell your therapist something?

 - i. What do you think made it hard?
 7. Was there a time you wished you were in the same room as your therapist?

 - i. Why?
 - ii. How did you overcome not being in the same room?
 8. Do you believe the camera affected the interaction between yourself and your partner?
- (Only ask the next question if the couple were in different rooms to each other)**
9. Was there a time you wish you were in the same room as your partner?

 - i. Why?
 - ii. How did you overcome not being in the same room?
 10. Can you describe your relationship with your therapist?

 - i. How did it start?
 - ii. Has it changed?
 - iii. (here you can ask a question specific to the client's answers to the previous questions regarding working alliance e.g. "*what do you think caused this change in your relationship with your therapist?*")
 11. Is there anything else you would like to tell me about your experience of couple's therapy via video conferencing?

Your feedback is an essential part of this study, thank you for your time.

Appendix D

FREE COUPLES COUNSELLING

Do you feel there are constant problems in your relationship?

Do you find yourself wishing you'd reacted or handled things differently?



If you answered yes, this could be for you!

Couple CARE is a skills-based program that can help you enhance intimacy, communication and overall satisfaction with your relationship.

Researchers from Curtin University are testing a new way to deliver this well-regarded program. If you would like to be involved, you will receive all six to eight Couple Care sessions **FREE**.

Start the therapy process as soon as possible to ideally improve your relationship, and strengthen the bond between you and your partner.

If you are interested in participating and would like more information please phone Andrea Kysely at the Curtin University Psychology and Speech Clinic on (08) 9266 3436 or email Andrea at andrea.kysely@postgrad.curtin.edu.au

(This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 157/2011)

(08) 9266 3436
Free Couples Therapy

Appendix E

Halford, K., Moore, E., Wilson, K., Dyer, C., & Farrugia, C. (2006). *CouleCARE: A guidebook for life partners*. Bowen Hills, QLD. Australian Academic Press.

UNIT 1: Self-Change

Part A: To explore relationship expectations

Part B: To help you develop a shared vision of your relationship

Part C: To introduce self-change as a way of achieving your relationship vision

UNIT 2: Communication

Part A: To help you understand the key elements of good communication

Part B: To assist you to look at how you communicate now and develop ideas about what you do well and which areas you might want to improve

Part C: To encourage you to explore subtle communication that often occurs in couples

Part D: To help you to develop ways of improving your communication by focusing on what you can do

UNIT 3: Intimacy and Caring

Part A: To help you develop good mutual support for each other in your relationship

Part B: To explore how you show caring now, and how you can express caring more fully

Part C: To review the balance of individual and couple interests and activities in your life

UNIT 4: Managing Differences

Part A: To review how you manage differences with your partner at present

Part B: To assess and improve the way you manage conflict with your partner

Part C: To look at how you recover after conflict with your partner, and review whether that aspect of your conflict management can improve

UNIT 5: Sexual Intimacy

Part A: To explore your ideas and attitudes about sex, and debunk some common myths about sex

Part B: To assess and improve your communication about sex

Part C: To explore how to keep sex satisfying

UNIT 6: Looking Ahead

Part A: To explore likely changes that will occur in your life, and how they will impact on your relationship

Part B: To help you develop ways to keep your relationship a priority in your life

Part C: To give some suggestions for what to do if your relationship is not working out as you like

Appendix F

Information Sheet

The Experience of Couples Undergoing Couples Therapy via Videoconferencing

My name is Andrea Kysely and I am currently completing research for my PhD in Clinical Psychology at Curtin University of Technology.

Purpose of the Research

Families that are geographically separated either from each other, or all together from specialist services such as relationship counsellors, currently may not have access to the treatments and interventions they need. Investigating whether couples therapy presented via videoconferencing is possible will potentially enable this to become accessible to these populations.

In this study I am looking at the participants' experience of being in couple's therapy which is conducted via videoconferencing.

Your Role in This Study

I am interested in finding out about your experience of undergoing couples therapy via videoconferencing. This means that you and your partner will be in different locations to the therapist, but connected with via a screen on which you can clearly see and hear each other. In some instances you and your partner will also be separated into different rooms, to reflect real life scenarios where one partner travels. Your allocation into either of these situations will be completely random, and you are encouraged to discuss any concerns or questions you may have with your therapist should you choose to continue.

You will be asked to do a thorough assessment, and from this will start the Couple CARE program, targeting those areas that have been identified by you and your partner as causing you some level of distress.

You will go through the process of therapy using videoconferencing, and all that I will ask of you, as part of your participation will be to fill out some questionnaires and participate in two chats about your experience.

Risks

This study does not aim to produce any psychological harm. However any residual distress, which may result due to the emotionally evocative nature of the therapy, will be treated with the highest of urgency, ensuring you feel supported. Additionally, referral number will be provided to you should you seek further assistance. You can also discuss concerns with me, or my supervisors Associate Professor Brian Bishop, and Dr Rosanna Rooney at any time.

The process of Couple CARE has been found to need on average 6 to 7 sessions; these will be provided to you at no cost. If you would like to continue therapy after this process, we can provide you with referral agencies where if you chose to, you may continue therapy, however this will be at your own cost.

Consent to Participate

Your involvement in the study is entirely voluntary. You have the right to withdraw at any time without consequence. If you sign the attached consent form I will assume you have agreed to participate in this study. I will however again ask if you have any further queries or concerns before proceeding.

Confidentiality

All therapy sessions will be recorded to enable my supervisors to ensure I have provided you with the highest quality service. Only I and my two supervisors will have access to these recording. Any additional information you provide, such as the questionnaires you complete will not have your name or any other identifying information on them and in adherence to university policy, the data will be kept in a locked filing cabinet for five years, before being destroyed.

So what now?

If you have read the above information and you are interested in participating in the study you will need to read and sign the consent form attached. You will also need to complete the demographic questionnaire, the Areas of Change Questionnaire, and the Dyadic Adjustment Scale, also attached, and return both of them using the reply paid envelop included in this package.

After this is received, you will be contacted by Andrea Kysely, via telephone. I will ask you a few short questions to see if you are suitable for the intervention that this study offers. After this, a time that is convenient for you and your partner will be made for you to attend your first session.

Further Information

This research has been reviewed and given approval by Curtin University of Technology Human Research Ethics Committee (Approval number xxxxxxx). If you would like further information about this study, or have any questions, please feel free to contact me at the School of Psychology and Speech Pathology on 9266 9266 or by email at andreakysely@postgrad.curtin.edu.au. Alternatively, you can contact my supervisor Associate Professor Brian Bishop on 9266 7181 or at B.Bishop@curtin.edu.au

I look forward to hearing from you soon, and thank you very much for your involvement in this research, your participation is greatly appreciated.

Appendix G

Consent Form

Title of project: The Experience of Couples undergoing Couples Therapy via Videoconferencing

Supervisors: Professor Brian Bishop, and Dr Rosanna Rooney

Researcher: Andrea Kysely, PhD student, School of Psychology and Speech Pathology, Curtin University

Please read and complete:

- I _____ have read and understand the information provided to me about the research project on the experience of couples undergoing couples therapy via videoconferencing
- Any questions I may have been raised, discussed, and answered to my satisfaction. If I have any questions in the future I am aware of the contact details provided to me to allow me to do so.
- I am aware that my participation in this study is voluntary and that I can withdraw at any time without consequence
- I understand that all information collected as part of this study will remain confidential, and I agree that if information is published all unedifying information will be withheld
- I am 18 years of age or older
- I give consent to participate in this study
-

If this is all correct, please sign below and provide your contact details:

Name: _____ **(Please print)**

Signature: _____

Date: _____ **Contact number:** _____

Appendix H

Please complete and return this page

Your assistance in providing the following information would be greatly appreciated, please circle the appropriate responses.

1) What is your age group?

- a) Under 20
- b) 21-35
- c) 36-45
- d) 45-60
- e) 60 and over

2) What is your gender?

- a) Female
- b) Male

3) Please circle the amount that best represents your annual family income.

- a) Less than \$25 000
- b) More than \$25 000 but less than \$75 000
- c) More than \$75 000 but less than \$100 000
- d) More than \$100 000

4) Please circle each answer that applies to you.

- a) I have completed primary school
- b) I have completed high school
- c) I have completed/completing a TAFE certificate
- d) I have completed/completing a university degree or higher

5) Please circle which answer best applies to you.

- a) Unemployed
- b) Casual
- c) Part-time
- d) Full-time

Please specify your job type: _____

6) Please circle which answer applies to you.

- a) Australia
- b) Indigenous Australian/Torres Strait Islander
- c) Other, please specify _____

This completes this section, thank you for your input, it is greatly appreciated.

Appendix I

The Client Satisfaction Questionnaire (CSQ)

Please help us improve our program by answering some questions about the services you have received. We are interested in your honest opinions, whether they are positive or negative. *Please answer all of the following questions.* We also welcome comments and suggestions. Thank you very much, we appreciate your help.

CIRCLE YOUR ANSWER

1. How would you rate the quality of service you received?

4	3	2	1
Excellent	Good	Fair	Poor

2. Did you get the kind of service you wanted?

1 No, definitely not	2 No, not really	3 Yes, generally	4 Yes, definitely
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3. To what extent has our program met your needs?

4 Almost all of my needs have been met	3 Most of my needs have been met	2 Only a few of my needs have been met	1 None of my needs have been met
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4. If a friend is in need of similar help, would you recommend our program to him/her?

1 No, definitely not	2 No, not really	3 Yes, generally	4 Yes, definitely
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5. How satisfied are you with the amount of help you received?

1 Quite satisfied	2 Indifferent or mildly satisfied	3 Mostly satisfied	4 Very satisfied
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6. Have the services received helped you to deal more effectively with your problem?

4 Yes, they helped a great deal	3 Yes, they helped somewhat	2 No, they really didn't help	1 No, they seemed to make things worse
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7. In an overall, general sense, how satisfied are you with the service you received?

4 Very satisfied	3 Mostly satisfied	2 Indifferent or mildly satisfied	1 Quite satisfied
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8. If you were to seek help again, would you come back to our program?

1 No, definitely not	2 No, not really	3 Yes, generally	4 Yes, definitely
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WRITE COMMENTS BELOW

Appendix J

Reliable Change Calculation

Reliable change = $(X_{\text{pretest}} - X_{\text{posttest}}) / \sqrt{2} (\text{SE})^2$,

X_{pretest} = an individual's pre-test score on an outcome measure,

X_{posttest} = the individual's post-test score on an outcome measure

SE = the standard error of measurement = $S_1 \sqrt{1 - \text{rel}}$, where S_1 is the approximate variability in the outcome measure before the intervention, and rel is the reliability of the measure.

Appendix K

Progress Note: Unit 6 – Maintaining a Relationship Focus

Reviewer: _____

Date: _____

Topic	Not Completed	Some Completed	Partially Completed	Substantially Completed	Completed	Rate satisfaction out of 10
Review of Unit 5-self change plans	1	2	3	4	5	—
Overview of Unit 6- discussion of change (activity 6.2) “identifying likely changes in our life together”	1	2	3	4	5	—
Discussion of managing changes: planning and effects of change (example done in session; activity 6.3)	1	2	3	4	5	—
Review of relationship vision	1	2	3	4	5	—
Developing celebration rituals	1	2	3	4	5	—
The importance of practicing what you have learnt (activity 6.6): Couple CARE Relationship Skills Checklist explained	1	2	3	4	5	—
Introduction to unacceptable behaviours	1	2	3	4	5	—
Final reflection, and finalisation of session	1	2	3	4	5	—
External Interviewer – discussion of experience with videoconferencing	1	2	3	4	5	—

Overall mean completion score for this session: _____

Overall satisfaction score for this session: _____

Appendix L

Progress Note: Introduction and Unit 1 – Self-Change

Session date _____ Session time _____

Client Names _____

Presentation _____

Significant Events _____

The session covered the following objectives (tick appropriate heading)

Covered	Not Covered	Objective
		The program introduced
		Confidentiality
		Feedback on questionnaires provided
		Program goals discussed
		Overview of unit
		Expectation of relationship discussed
		Each partner's expectations discussed and goals set
		A vision of the relationship discussed
		Overview of self-change steps
		Expectation about video conferencing discussed
		Take home exercises given: “My plan to improve my relationship vision” (activity 1.7), and “Intent-Impact Model Memory Check” (activity 2.2)

Outcome of Session:

■ Next Session Scheduled for:

■ Treatment Terminated (as initiated by
client) _____

FORM COMPLETED BY

NAME: _____

SIGNATURE AND DATE: _____

SUPERVISOR

SIGNATURE: _____