

Effects of a brief education on psychologists' attitudes and diagnostic impressions of paedophilic
obsessive-compulsive intrusive thoughts

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Abstract

This study investigated whether an educational intervention could reduce psychologists' stigma towards clients with paedophilic obsessional intrusions and aid diagnosis. Psychologists ($N = 109$) read a vignette describing someone experiencing paedophilic intrusions, were asked to suggest a diagnosis, and completed measures on negative views and fear, before and after watching a brief educational video on differential diagnosis. Generalised Linear Mixed Models found a reduction in pre- to post-test scores in perception of psychological problem ($F[1, 193] = 9.56, p = .002$, small to medium effect size $\eta^2 = .04$), general concern ($F[1, 193] = 34.95, p < .001$, large effect size $\eta^2 = .15$), and fear ($F[1, 194] = 47.39, p < .001$, large effect size $\eta^2 = .20$). There was a significant difference in the number of psychologists stating obsessive-compulsive disorder (OCD) was the likely diagnosis pre-test (67.3%) versus post-test (97.8%), $t(93) = 31.59, p < .001$. These findings suggest that although psychologists were generally able to identify paedophilic intrusions as OCD, the education reduced scores of negative views and fear, despite psychologists already displaying relatively low scores, and improved recognition of OCD. This research highlights the importance of continued education of clinicians to improve outcomes for clients.

Keywords: obsessive-compulsive disorder; stigma; paedophilia; intrusions; diagnosis, education

Effects of a brief education on psychologists' attitudes and diagnostic impressions of paedophilic obsessive-compulsive intrusive thoughts

Obsessive-compulsive disorder (OCD) is a mental illness whereby persistent and intrusive impulses, images, and/or thoughts cause anxiety and distress, leading to ritualised behaviours aimed at reducing these symptoms (American Psychiatric Association [APA], 2013). While intrusive thoughts are experienced by most people, those with OCD often incorrectly assess these thoughts as reflective of their true values and desires, and/or ascribe greater meaning to the thoughts (Salkovskis et al., 1998). The subsequent compulsive behaviours, designed to restore a sense of safety and alleviate distress, may include overt actions (e.g., cleaning, checking, arranging), but can also present as repeated mental acts with no observable behaviours. Mental compulsions are more common in those experiencing taboo intrusive thoughts (e.g., repugnant sexual thoughts; Williams et al., 2013). This is often referred to as the "Pure obsessional" or Pure O' subtype of OCD.

Shame and stigma have a large impact on help-seeking behaviour across OCD subtypes and themes (Marques et al., 2010). On average, a person with OCD will wait 7.6 years before seeking help, despite daily distress (Demet et al., 2010). For those with the 'Pure O' form of OCD, help-seeking behaviours may be delayed due to fears concerning the meaning of the thoughts, and concerns about negative reactions from health professionals (Rowa & Purdon, 2003; Steinberg & Wetterneck, 2017). It has been suggested that those with 'taboo' sexual thoughts are likely to find it harder to seek treatment than other OCD presentations (e.g., contamination related presentations), given that higher levels of stigma have been associated with these taboo sexual themes (Cathey & Wetterneck, 2013; Weingarden & Renshaw, 2015).

Recent vignette studies observed that sexual intrusive thoughts attract the most stigma and rejection, and are rarely attributed to OCD by non-clinicians. McCarty et al. (2017) provided a community sample with a range of vignettes describing common OCD subtypes. Across all the conditions, OCD was the chosen label by only 49.1% of participants, indicating low recognition of OCD. The sexually taboo intrusions vignette rated the highest in desired social distancing from the individual, fear, and perceived dangerousness, and only 30.9% recognised the vignette as OCD. However, participants who recognised the case as OCD had lower levels on all three measures of desired social distance, fear, and perceived dangerousness. Cathey and Wetterneck (2013) also explored public stigma related to the disclosure of obsessional thoughts, finding that sexually intrusive thoughts were associated with higher scores on social rejection and perception of psychological problem than contamination related thoughts. Furthermore, Warman (2020) found

that undergraduate university students expressed higher desire to socially distance. The students made more rapid decisions while requesting less clarifying information on vignettes that described paedophilic and violent intrusive thoughts when compared to contamination and checking related intrusive thoughts. Participants also incorrectly assumed the individual in the vignette was violent (49%) or a paedophile (77%) based on the description of their intrusive thoughts.

Stigmatising attitudes in mental health professionals are not a new concept to the field (Lauber et al., 2006). However, clinician stigma towards OCD has only been investigated more recently. Steinberg and Wetterneck (2017) randomly assigned one of four vignettes describing a friend experiencing religious/sinful, contamination, violent, or paedophilic sexual intrusive thoughts to 110 clinicians. Participants completed measures of social rejection, perception of how serious or dangerous the psychological problem was, general concern, and willingness to disclose this information if it were them. Social rejection and general concern were found to be the highest in the harming, sexual, and contamination vignettes. There were no significant differences found for disclosure or perception of the psychological problem. Although expected, there was no significant difference between the stigma associated with the sexual thoughts about children, harming, and contamination thoughts. The authors state that perhaps stigma among clinicians is more common for OCD than previously thought.

Identifying OCD when presented with themes of a violent and sexual nature has proven to be a difficult task not only for the general population but also for clinicians (Vella-Zarb et al., 2017). Glazier et al. (2013) found most mental health care providers and students did not identify OCD when the intrusive thoughts had sexual or violent themes. Of the five conditions in the study, sexual intrusions about children (42.9%) was the second most misidentified, behind homosexuality intrusions (77%). Another study by Glazier et al. (2015) found that 70.8% of primary care physicians misdiagnosed patients with paedophilic intrusions as having paedophilia instead of OCD. The combination of stigma and high rates of misdiagnosis could lead to unfavourable health outcomes for clients presenting for treatment. Glazier et al. (2015) found that health care providers who misdiagnosed a vignette describing OCD were less likely to engage the client in a recommended treatment. Misdiagnosis of paedophilia in cases of OCD can have extremely negative outcomes when diagnosed and treated incorrectly; reinforcing the individual's beliefs about themselves and in some cases leading to restricted contact with their children after child protective services are called (Bruce et al., 2018).

The Diagnostic and Statistical Manual (DSM), fifth edition, guides clinicians to differentiate OCD from paedophilia by determining if the individual's thoughts are ego-dystonic or ego-syntonic (APA, 2013). Ego-dystonic thoughts are distressing and shameful for the individual, while ego-syntonic thoughts are consistent with their views (e.g., paedophilic thoughts are consistent with their values; Bruce et al., 2018). Clinicians are informed that if the sexual thoughts regarding children are ego-syntonic they are likely experiencing paedophilia and if they are ego-dystonic they are likely experiencing OCD (APA, 2013). However, this is an oversimplification, some individuals have paedophilia but may be distressed that they experience these sexual feelings. For example, one might value starting their own family but note this is at odds with their desire to engage with children sexually. This suggests an ego-dystonic relationship but is not OCD (Bruce et al., 2018). Similarly, an individual with OCD may experience anxiety which is misinterpreted and over-analysed to be sexual arousal due to a hypersensitive body monitoring during thoughts about, or encounters with, children; this could be perceived as evidence for an ego-syntonic presentation, although it does not represent paedophilia (Bruce et al., 2018). In response to these difficult distinctions, Vella-Zarb et al. (2017) developed a set of key distinguishing characteristics between OCD, paraphilia, and non-paraphilic sexual disorders, which included psychological response to the thought, physiological response to the thought, thought purpose and content, subsequent behaviour, and general sexual behaviour (Vella-Zarb et al., 2017).

Researchers have begun investigating how negative views and misdiagnosis could be reduced, with education emerging as a potential solution. Warman et al. (2015) investigated the effect of education on stigma and recognition of OCD in a community sample, finding that OCD education led to a decrease in desired social distancing and perceived dangerousness, and increased recognition of OCD. Similarly, Snethen and Warman (2018) reviewed rejection and acceptance of a doctor diagnosis in a vignette where the individual was experiencing intrusive sexual thoughts about children. In the respective subgroups, the doctor diagnosis of OCD was rejected and paedophilia was accepted by 80% at pre-education. At post-education, 63% of the entire sample believed the diagnosis was OCD. Those switching their diagnosis to OCD held less stigma towards the individual relative to their pre-education scores. While these two studies provide valuable insight into the effect education can have on OCD diagnosis and stigma, both studies were conducted using a convenience sample of university students. Investigating the utility of education on clinician symptom recognition and stigma is an important area that has not yet been investigated. Cathy and Wetterneck (2013) propose that treatment-seeking individuals'

experiences may be improved by targeting first-line responders with educational programs which debunk stigma inducing assumptions associated with intrusive thoughts.

The current study aimed to investigate if brief education, based on the suggestions for differential diagnosis by Vella-Zarb et al. (2017), could help psychologists reduce negative views and fear towards clients with paedophilic intrusive thoughts and better identify key symptoms to aid diagnosis. In this study, psychologists were presented with one of three case vignettes, which described a person with OCD paedophilic intrusions with a doctor diagnosis of paedophilia, OCD, or no doctor diagnosis. Based on the findings of Snethen and Warman (2018) and Warman et al. (2015) we hypothesized that, (i) at pre-intervention, psychologists assigned to the paedophilia condition will endorse higher scores in negative views and fear than those in the OCD condition, who will in turn endorse higher scores than those in the no diagnosis condition; (ii) At pre-intervention, psychologists assigned to the paedophilia condition will be significantly more likely to agree with the assigned diagnosis over alternative diagnoses, while those in the OCD condition will be more likely to reject the assigned diagnosis in favour of alternative diagnoses; (iii) At post-intervention, psychologists will be significantly more likely to choose the OCD diagnosis over all alternative diagnoses, regardless of condition assignment; (iv) There will be a significant pre- to post-intervention reduction in scores of negative views and fear, regardless of condition assignment; (v) Those switching their diagnosis to OCD will endorse significantly lower post-intervention scores in negative views and fear, than those switching their diagnosis to paedophilia.

Method

Research Design

The current study is a pre-test-post-test experimental design with no control group. This study extends the work of Snethen and Warman (2018) and Warman et al. (2015), with a clinician population rather than a university student convenience sample. Participants were randomly assigned to read one of three vignettes, after which they answered two questionnaires and were asked to provide a potential diagnosis. Education was then provided to participants, after which they were asked to read their vignette, answer the questionnaires, and provide a potential diagnosis again. The independent variables were the vignettes and the introduction of the education. The dependent variables were the clinician's negative views, fear, and selected diagnosis.

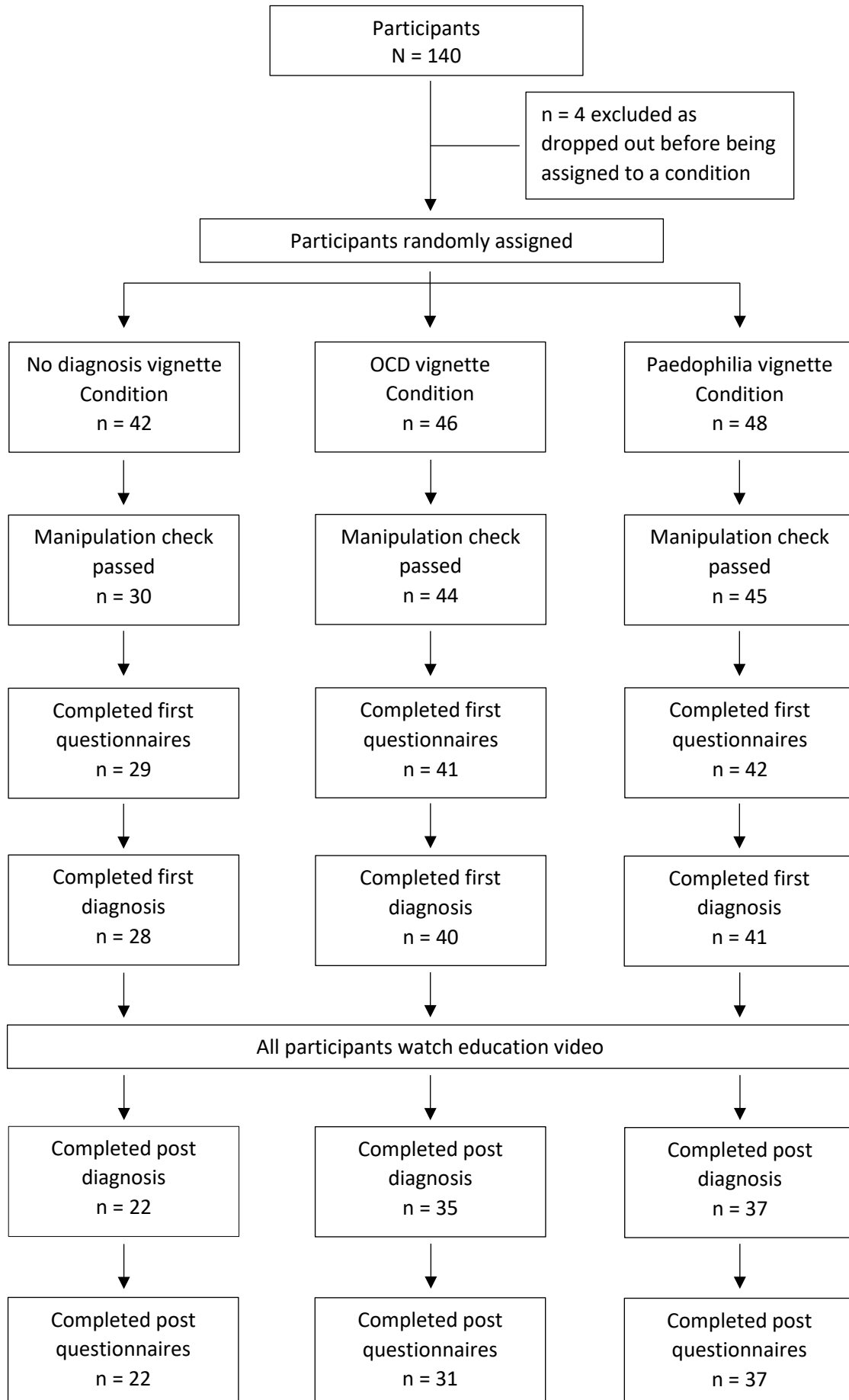
Participants

Participants were recruited using non-probability purposive sampling method targeting registered Australian psychologists and 6th year postgraduate psychology Masters students. The study was posted on the Australian Psychological Society (APS) and Australian Association of Psychologists Inc. websites for members and on psychology-related social media pages. Thirty-nine Australian universities, and over 800 private practices and psychologists from the APS website were emailed asking for their participation and to pass on to colleagues and students. [Redacted for blind review] University staff and students were not directly targeted in recruitment due to familiarity with the subject matter, which could skew the data.

A-priori power analysis using G*Power 3.1 (Faul et al., 2009) estimated a sample size of 120 would be sufficient for an effect size of $\eta^2 = .14$ (Snethen & Warman, 2018; Warman et al., 2015). However, as both studies the current study is based on reported large effect sizes with participant numbers below 100, we estimated 110-120 would be a sufficient sample size (Snethen & Warman, 2018; Warman et al., 2015). The current study had 140 responses. After participants were removed for incomplete data or failing the manipulation check, the total sample size was 109. The mean age of participants was 39.61 ($SD = 12.62$, 95% CI [37.22, 42.01]), and had a mean of 9.24 years practicing ($SD = 8.99$, 95% CI [7.51, 10.97]), see Table 1 for additional demographic information. Due to incomplete data in some responses not all hypotheses used all 109 participants (see Figure 1); as previous studies found large effect sizes with similar sample sizes this was unlikely to impact analysis.

Table 1*Participant Demographic Statistics*

	%	n
Age		
18-24	3.67%	4
25-34	42.20%	46
35-44	16.51%	18
45-54	21.11%	23
55-64	13.76%	15
65+	2.75%	3
Gender		
Male	17.43%	19
Female	82.57%	90
Level of qualification		
General registration	31.19%	34
Clinical/Clinical registrar	23.85%	26
Counselling/Counselling registrar	11.01%	12
Provisionally registered psychologist in 6 th year postgraduate in clinical or counselling program	28.44%	31
Forensic	2.75%	3
Clinical and counselling psychologist	.92%	1
Other	1.84%	2
Primary area		
Private clinic	54.13%	59
Public health	10.09%	11
Public justice setting	1.83%	2
Correction Setting	1.83%	2
Student	23.85%	26
Other	8.26%	9
Years Practicing		
0-5	45.28%	48
6-15	34.91%	37
16-30	16.98%	18
31+	2.83%	3

Figure 1*Participant Number Flowchart by Survey Sections*

Materials

Vignettes

The vignettes for this study were adapted from those published in full by Snethen and Warman (2018), describing an individual, Chris, experiencing symptoms consistent with a differential diagnosis of OCD. Chris' presentation is marked by intrusive sexual thoughts about children. There are three different vignettes, creating three conditions that participants were randomly assigned to. The difference in the conditions is the final sentence of the vignette which stated "his doctor diagnosed him with Obsessive Compulsive Disorder", "his doctor diagnosed him with Pedophilia", or "his doctor did not provide a diagnosis ". The statement that the doctor did not provide a diagnosis was the only adaptation to the original vignettes made for the current study, with this inclusion allowing for a manipulation check.

Brief Clinical Training

At the midpoint of the survey participants were presented with a short audio-visual PowerPoint presentation created and voiced by [redacted for blind review], a Clinical Psychologist and academic working with OCD for over 19 years. Based on the article by Vella-Zarb et al. (2017), [redacted for blind review] described the five key characteristics used to distinguish sexual thoughts in OCD and paraphilia and is freely available online [website redacted for peer review]. Participants were provided with Table 2 following the video presentation, as a summary of the information in the video.

Measures

Diagnosis

Participants were asked which one diagnosis they believe the client's symptoms were most consistent with. They were provided with an open text box to answer in. Guided by Snethen and Warman (2018), each answer was then coded into 'OCD', 'paedophilia', 'other diagnosis', 'no diagnosis', or 'don't know' by the researchers.

Vignette Questionnaire (VQ)

Cathey and Wetterneck (2013) adapted the VQ from Marcks et al. (2007), to measure psychology students' reactions to vignettes on intrusive thoughts. The questionnaire measures four constructs: social rejection, perception of psychological problem, general concern, and disclosure (Cathey & Wetterneck, 2013; Marcks et al. 2007). We did not use the disclosure measure as it is not being investigated in this study. Each of the constructs has high internal

consistency; social rejection (Cronbach's $\alpha = .92$), perception of psychological problem (Cronbach's $\alpha = .89$), and general concern (Cronbach's $\alpha = .86$; Cathey & Wetterneck, 2013). In the current study, the Vignette Questionnaire also had high internal consistency (social rejection

Table 2*Key Characteristics to Distinguish OCD and Paraphilic Disorder*

	OCD	Paraphilic Disorder
Psychological response to the thought	Thought associated with distress during- and post-thought.	Thought usually associated with arousal and/or excitement. Potentially distressing post-thought.
Physiological response to the thought	Fear and avoidance behaviours correlated with thought. May have trouble differentiating anxiety from arousal and interpret normal bodily functions as evidence of arousal.	Sexual arousal and low fear response correlated with thought.
Thought purpose and content	Similar content but in non-specific detail. No purpose - elicits anxiety and distress.	Similar content but in more explicit detail. Thought purpose – elicits pleasure and sexual satisfaction.
Subsequent behaviour	Avoid triggers. Engage in behaviours such as mental rituals or thoughts suppression to reduce distress caused by the thoughts.	More likely to seek stimuli. Engage with thoughts in increasing detail. Participate in solitary sexual activities while engaging in the thoughts.
General sexual behaviour	Partnered activity more likely to be primary means of orgasm.	Masturbation more likely to be primary means of orgasm. Spends 1-2 hours a day engaging in sexual fantasies or behaviours related to their sexual interest.

Note: Based on content from Vella-Zarb et al. (2017).

Cronbach's $\alpha = .76$; perception of psychological problem Cronbach's $\alpha = .76$; general concern Cronbach's $\alpha = .82$).

Questions are answered on a Likert scale ranging from strongly disagree (0), to strongly agree (4), the positive items are reversed, and higher scores on the scale indicate higher negative views. The three constructs create a total of 25 items, seven under social rejection, 11 under perception of psychological problem, and seven under general concern. Two items were deleted in the social rejection construct as they related to personal relations rather than a client-clinician relationship and could not be re-worded to better fit the study. As a result, the scale has a total of 23 items due to the social rejection construct containing five instead of seven items. Further to this, four items were slightly re-worded to describe a client-clinician relationship rather than a personal one. For example, "I would not like to spend any more time with this person" has been changed to "I do not wish to continue this clinical relationship".

Attribution Questionnaire - Fear and dangerousness construct (AQ-FC)

Corrigan et al. (2003) developed the Attribution Questionnaire to measure several constructs in participants after reading a vignette. The original scale contained constructs on mental illness familiarity, responsibility beliefs, fear, pity, anger, dangerousness, helping behaviours, and segregation. Brown (2008) conducted an exploratory factor analysis on this scale and found that fear and dangerousness loaded together and had good internal consistency, test-retest reliability (intraclass correlation coefficient = .86), and convergent validity with other measures of stigma. The fear and dangerousness scale has since been used as a single construct measure in other studies, having high internal consistency (Cronbach's $\alpha = .86$; McCarty et al., 2017). In the current study, the scale also had high internal consistency (Cronbach's $\alpha = .87$). The AQ-FC has six items which are answered on a Likert scale ranging from not at all (1), to very much (9). The only change made to the scale was changing the individual's name to match the study's vignette. An example of a question is "I would feel threatened by Chris".

Procedure

The study was approved through [redacted for blind review] University Human Research Ethics Committee (HRE2020-0262) and all subjects provided informed consent prior to participating. Qualtrics (XM; Qualtrics, Provo, UT) was used to conduct the survey. Participants entered demographic information, before being randomly assigned to one of the three conditions using block randomisation. Participants then read their assigned vignette, and were administered a manipulation check, asking what the client was diagnosed with in the vignette. Consistent with the no diagnosis vignette, participants could note that the doctor had not provided a diagnosis in

the vignette. Those participants failing the manipulation check were removed from the dataset ($n = 17$) as it indicated they either did not correctly read or understand the vignette provided to them. Participants then completed the VQ and AQ-FC to measure their negative views and fear towards the individual, before being asked to indicate in an open text box what diagnosis the client's symptoms could be consistent with. Next, the brief education video was shown, following which they were provided with a summary table of the video content and their assigned vignette again. After re-reading the vignette they were asked to provide a diagnosis and complete the VQ and AQ-FC again. Participants then received a short debriefing summary and were offered the opportunity to enter a draw for a gift voucher.

Results

Hypotheses one and four, concerning vignette assignment and the intervention impact on negative views and fear, were analysed using four Generalised Linear Mixed Models (GLMM), one for each negative view and fear construct. No least significant difference tests were used as there were no significant main effects found for vignette assignment. We chose GLMMs as it was predicted that the data would not be normally distributed; this was the case and the robust statistics option in SPSS was used to account for violations in assumptions of normality and homogeneity of variance. Hypothesis two, concerning impact of the vignette assignment on pre-diagnosis decision, was analysed with a chi-square test of contingencies, for which all assumptions were met. Hypothesis three, concerning impact of the education intervention on post-diagnosis decision, was tested using a one-samples t-test comparing two independent proportions. The post diagnosis coding was used to create a new variable, 'OCD' remained as is, 'paedophilia' and 'other diagnosis' were grouped together and 'no diagnosis' and 'don't know' were excluded. Hypothesis five, that those switching their diagnosis to OCD will endorse significantly lower post-intervention scores in negative views and fear than those switching their diagnosis to paedophilia, was unable to be tested as there were no participants who switched their diagnosis to paedophilia.

The data set began with 140 participants. Four were excluded as they stopped after providing demographic information but before being assigned to a vignette, leaving 136 participants. Seventeen participants failed the manipulation check and were also deleted from the data. Any participants who did not complete the first diagnosis or the pre-education questionnaires on negative views and fear were also excluded, leaving 109 participants. Of this 109, 15 did not complete the post-diagnosis, these 15 plus four others did not complete the post-education questionnaires; one participant did complete the post-fear measure but not the negative view measures. These 19 participants were excluded from testing Hypothesis 3 and 4 but remained in the data set as they were able to be used for Hypothesis 1 and 2. After removing

incomplete cases, missing values analysis indicated there was only one missing value, a single item in one participant's post-education scale of perception of psychological problem. This data was missing completely at random (Little's MCAR $p = .648$). As there was only one missing value it was replaced with the mean score for that question. Descriptive statistics for dependent variables are reported in Table 3, along with measure scores from previous studies for comparison.

Bivariate correlations for demographics and dependent variables are reported in Table 4. Before analysis, correlations were checked to see if there were any correlations between demographics and dependent variables, so they could be controlled for in the analysis. There were no significant results apart from the fear pre-test being lower in clinicians with higher experience. Controlling for years practising did not have a measurable impact on results likely due to the low correlational strength, therefore the results are reported without any demographic controls.

Vignette assignment and intervention impact on negative views and fear

To investigate hypotheses one and four, four GLMMs were conducted, one for each dependant variable. Hypothesis one stated at pre-intervention, psychologists assigned to the paedophilia condition will endorse higher scores in negative views and fear than those in the OCD condition, who will in turn endorse higher scores than those in the no diagnosis condition. Hypothesis four stated there will be a significant pre- to post-intervention reduction in scores of negative views and fear, regardless of condition assignment. For each GLMM, we investigated the interaction effect between time (pre to post) and vignette assignment (doctor diagnosis of paedophilia or OCD, or no diagnosis given) and the main effects of time and vignette assignment.

Table 3*Descriptive Statistics of Negative Views and Fear Constructs*

	Pre						Post						Comparison mean scores from previous studies
	<i>n</i>	<i>M</i>	<i>SD</i>	Range	95% <i>CI</i>		<i>n</i>	<i>M</i>	<i>SD</i>	Range	95% <i>CI</i>		
					Lower	Upper					Lower	Upper	
Social Rejection	109	4.00	4.01	0-16	2.94	4.53	90	3.09	3.94	0-16	2.26	3.91	9.5 ^{a,b}
Psychological Problem	109	19.56	5.97	4-33	18.14	20.61	90	17.99	4.79	8-33	16.99	18.99	20.7 ^b
General Concern	109	14.72	5.76	0-27	13.35	15.67	90	12.13	5.21	0-26	11.04	13.22	17.6 ^b
Fear	109	1.90	1.01	1-6	1.67	2.06	91	1.50	0.81	1-5.17	1.31	1.67	5.07 ^c

Note. CI = Confidence Interval. Statistics are total scores of the entire sample. ^a = Number of items measuring social rejection differ between current study and previous studies. ^b = averaged scores from Cathey and Wetterneck (2013) sample. ^c = score from Corrigan et al. (2003) total sample. Both studies used university and community college student samples.

Table 4*Bivariate Correlations Between Demographics and Dependent Variables*

	1	2	3	4	5	6	7	8	9	10	11
1. Age	-										
2. Gender	-.12	-									
3. Years Practising	.70**	-.01	-								
4. Pre-Social Rejection	-.11	.16	-.12	-							
5. Pre-Psychological Problem	.06	.06	-.04	.53**	-						
6. Pre-General Concern	-.11	.12	-.15	.71**	.60**	-					
7. Pre-Fear	-.19	.09	-.20*	.66**	.52**	.54**	-				
8. Post-Social Rejection	-.19	.03	-.21	.80**	.43**	.60**	.66**	-			
9. Post -Psychological Problem	.15	.01	.05	.44**	.76**	.51**	.50**	.54**	-		
10. Post -General Concern	-.04	.01	-.14	.57**	.51**	.76**	.50**	.62**	.49**	-	
11. Post -Fear	-.17	.10	-.17	.60**	.37**	.50**	.83**	.74**	.54**	.55**	-

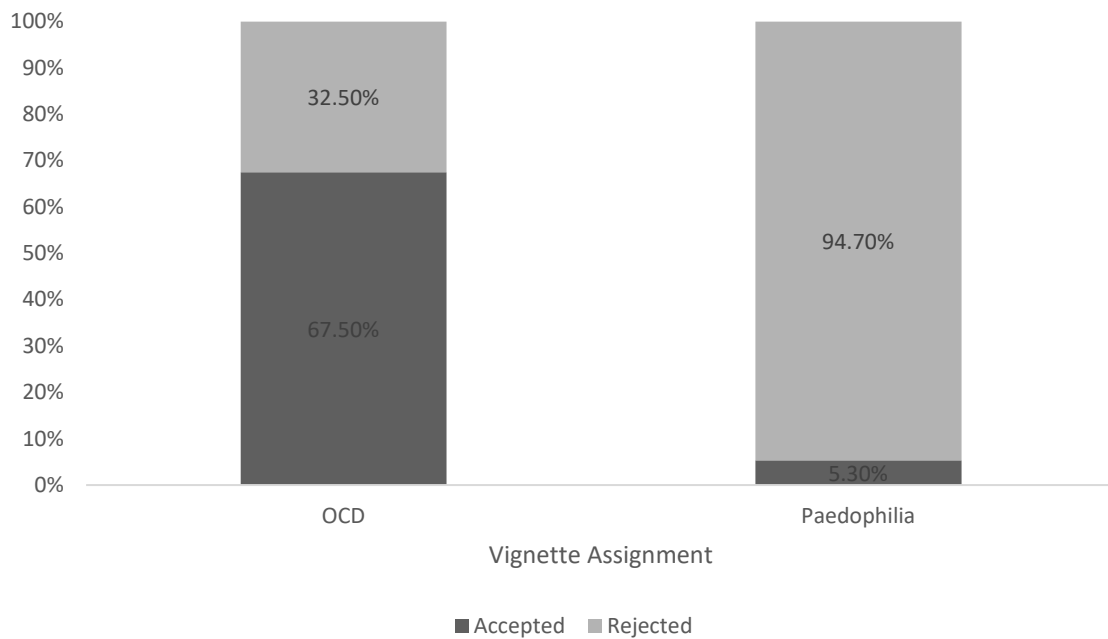
Note. Gender was coded as 0 = Male and 1 = Female. No participants chose the 'Other Gender' option.

* $p < .05$, ** $p < .001$, two-tailed

For social rejection, there was no significant interaction effect between time and vignette assignment, $F(2, 124) = 2.33, p = .102$, therefore main effects were investigated. There was no significant main effect for vignette assignment, $F(2, 124) = 0.68, p = .507$, or for time, $F(1, 124) = 3.44, p = .066$. For perception of psychological problem, the interaction effect between time and vignette assignment was not significant, $F(2, 193) = 2.12, p = .123$. No significant main effect was found for vignette assignment $F(2, 193) = 1.15, p = .320$. However, the main effect for time was significant, $F(1, 193) = 9.56, p = .002$. Across the sample there was a significant pre-to-post reduction in perception of psychological problem, with a small to medium effect size ($\eta^2 = .04$). For general concern, the interaction effect between time and vignette assignment was not significant, $F(2, 193) = 1.68, p = .190$. There was no significant main effect found for vignette assignment, $F(2, 193) = 1.10, p = .337$, but there was a significant main effect for time, $F(1, 193) = 34.95, p < .001$. Across the sample there was a significant pre-to-post reduction in general concern, with a large effect size ($\eta^2 = .15$). For fear, the interaction effect between time and vignette assignment was not significant, $F(2, 194) = 0.79, p = .458$. No significant main effect was found for vignette assignment, $F(2, 194) = 0.12, p = .885$. However, a significant main effect was found for time, $F(1, 194) = 47.39, p < .001$. Across the sample there was a significant pre- to post-reduction in fear, with a large effect size ($\eta^2 = .20$).

Vignette Assignment Impact on Pre-Diagnosis Decision

To investigate hypothesis 2, at pre-intervention, psychologists assigned to the paedophilia condition will be significantly more likely to agree with the assigned diagnosis over alternative diagnoses, while those in the OCD condition will be more likely to reject the assigned diagnosis in favour of alternative diagnoses, we conducted a chi-square test of contingencies. Participants in the OCD condition were significantly more likely to accept their assigned diagnosis than those in the Paedophilia condition, $\chi^2(1, N = 78) = 32.32, p < .001$. This association had a large effect size, $\phi = .64$, and is illustrated in Figure 2.

Figure 2*Paedophilia and OCD Vignette Assignment on Acceptance or Rejection of Doctor Diagnosis***Impact of Education on Post-Diagnosis Decision**

Participants who provided a response to both pre and post diagnosis were analysed to test hypothesis three. This hypothesis stated that, at post-intervention, psychologists will be significantly more likely to choose the OCD diagnosis over all alternative diagnoses, regardless of condition assignment. At pre-intervention, of the participants who provided a diagnosis, 67.29% stated OCD, 17.76% stated paedophilia, 11.21% stated another diagnosis, and 3.74% were unsure. There were 92 participants (97.8%) who chose OCD as the post-diagnosis, one participant chose paraphilic disorder, and one refused to diagnose. A one-samples t-test comparing two independent proportions found a significant difference, indicating participants were more likely to choose OCD post-education regardless of vignette assignment, $t(93) = 31.59, p < .001$.

Discussion

The research aimed to investigate if a brief education based on the suggestions for differential diagnosis by Vella-Zarb et al. (2017), could help psychologists reduce negative perceptions and fear towards clients with paedophilic intrusive thoughts and better identify key symptoms to aid differential diagnosis. Hypothesis one predicted that at pre-intervention, psychologists assigned to the paedophilia condition would endorse higher scores in negative views and fear than those in the OCD condition, who would in turn endorse higher scores than

those in the no diagnosis condition. However, this was not supported in the results, as there were no significant effects found for vignette assignment. This non-significant result shows that the vignette participants were shown, which varied only by a doctor's diagnosis listed on the referral, did not have an impact on their negative views and fear towards the client. Combined with the low negative views and fear reported by the current sample, compared with those reported in previous studies as noted in Table 3, this was an encouraging finding as it indicated that stigma which may exist in the general community towards those experiencing paedophilic intrusive thoughts was not evident in the psychologists included in this study. This finding may be due to psychologists being well trained in empathy compared to members of the general community, or may be explained by prior research suggesting that behaviour, rather than labels, is a crucial factor in determining social distancing responses (Link et al., 1987). Given that all three vignette conditions described identical avoidant behaviours (i.e., avoiding or leaving a situation where children are present, trying to suppress the intrusive thoughts) it is possible that participants viewed the behaviours in the vignette as acceptable, no matter what the assigned diagnosis.

For hypothesis two, we expected that at pre-intervention, psychologists assigned to the paedophilia condition will be significantly more likely to agree with the assigned diagnosis over alternative diagnoses, while those in the OCD condition will be more likely to reject the assigned diagnosis in favour of alternative diagnoses. However, this was not supported, with the opposite outcome occurring. We expected participants in the OCD condition to reject the diagnosis of OCD, however, 67.5% accepted, and 32.5% rejected. While 94.7% of participants in the paedophilia condition rejected the diagnosis and 5.3% accepted. This is different to the outcomes reported in Snethen and Warman (2018), who found that participants in the OCD condition were more likely to reject the diagnosis (65%) and the paedophilia condition more likely to accept the diagnosis (80%). Given Snethen and Warman recruited undergraduate university students for course credit, with no presumed formal training in differential diagnosis, this outcome suggests that training in psychology promotes a better understanding of the nature of paedophilic intrusions related to OCD. Although our sample skewed towards clinicians at earlier stages of their career, with 45.3% being in their first five years of practice, it did not appear that recency of core training played in role in the accuracy of their decision. We did not collect data on whether participants had received specific training and/or worked extensively in an OCD or sexual disorders related setting. Furthermore, the sample was mixed in terms of postgraduate level training (e.g., none, clinical, counselling psychology), which has been linked to differences in diagnostic accuracy (O'Donovan et al., 2005). We therefore cannot rule out that any combination of these factors led to the better-than-expected outcomes for diagnostic accuracy.

To investigate the impact of the education intervention on differential diagnosis, hypothesis three predicted that at post-intervention, psychologists would be significantly more likely to choose the OCD diagnosis over all alternative diagnoses, regardless of condition assignment. This was found to be supported, with 67.3% of participants pre-intervention versus 97.8% post-intervention choosing OCD as the likely diagnosis. This suggests that the education helped clarify the differential diagnosis. Past studies using a university student convenience sample found similar results when providing participants DSM criteria for the diagnoses (Snethen & Warman, 2018; Warman et al., 2015). Warman et al. (2015) found that 12.2 % of participants chose the correct diagnosis pre-education and 74.7% at post-education, and Snethen and Warman (2018) found 17.02% chose correctly at pre-education and 62.77% post-education. In both studies, the post-intervention responses were more uncertain than in the current study. Participants reported a range of post-intervention answers in Snethen and Warman (2018) and Warman et al. (2015) including; the incorrect diagnosis, the belief the client had both OCD and paedophilia, being unsure, or they did not report any diagnosis. This could suggest that while simple education such as the DSM criteria does help to de-mystify diagnosis, the more tailored education provided in this study could lead to better differentiating OCD and paedophilia. This finding may also be due to psychology training in this area leading to more confidence in making differential diagnosis decisions.

For hypothesis four, we expected there to be a significant pre- to post-intervention reduction in scores of negative views and fear, regardless of condition assignment. This was not supported for social rejection. However, there was a significant pre- to post-intervention reduction in the scores on perception of psychological problem, general concern, and fear. This finding suggests the education intervention was successful in reducing participants perception of psychological problem, general concern, and fear toward the client. As was depicted in Table 3 the scores reported by participants were lower in comparison to other studies. Despite lower scores, we still found a meaningful reduction in these markers of stigma, showing that education can help clinicians reduce and potentially maintain low levels of stigma towards clients. The non-significant result for social rejection suggests there is possibly reluctance towards accepting this person as a client. As we reworded these items for this study from rejecting the individual socially to rejecting them clinically, we must consider that some therapists do not accept clients for treatment if it is outside their scope of practice. Furthermore, some clinicians are reluctant to provide exposure therapy for OCD due to their own anxiety about the treatment approach (Hipol & Deacon, 2013; Scherr et al., 2015). Another possibility for this non-significant finding is that there was a floor effect, with low scores making it difficult to observe further changes.

When interpreting the findings, there are some limitations to the study that should be considered. First, it could be suggested that due to the educational material only providing information concerned with distinguishing OCD from paraphilias, it had the potential to 'lead' the participant to a diagnosis of OCD. When presented with a client in practise, clinicians are not usually faced with only two potential diagnoses (as is implied by the training), they have a multitude of diagnoses to choose from. The design of the current study may therefore have inflated the likelihood of choosing the correct diagnosis. Second, the vignettes only describe an individual with OCD, so there was no opportunity to investigate if this education can help with the differential diagnosis of paraphilias. Third, the willingness or capacity of a clinician to overrule a referring doctor's diagnosis may be influenced by different international, cultural and systemic factors. It may be that these results would not translate to non-Australian settings. Future research could include vignettes without any doctor assigned diagnosis. Furthermore, another vignette describing someone with paedophilia could be added to investigate if clinicians are able to differentially diagnose both conditions. This also allows for investigation into negative views and fear toward the people who are experiencing paedophilia to see if the education can help reduce stigma towards these clients also.

We did not investigate (or plan to investigate) the negative views and fear associated by grouping participants based on their stated diagnosis at pre-intervention, we looked at the groups via vignette assignment. These pre-test diagnosis groups were inadequately proportioned, with the number of participants who stated another diagnosis or paedophilia both under 20 and people who stated OCD at 72. Due to this unequal sample size, investigating and comparing these groups would not have resulted in adequately powered results. To have achieved this, we would have either had to provide each participant with multiple vignettes, which could have increased participant attrition, or created more conditions, meaning a larger sample would be needed; this would not have been possible given time restraints for this study. We also did not conduct comparisons based on those who switched versus those who did not switch diagnosis from pre to post testing. While it is possible that switchers had a greater reduction in their negative attitudes, switchers had switched from a variety of pre-test diagnoses, not just paedophilia. This included those who initially said they were unsure, and those who listed another diagnosis as likely. As the study was not sufficiently powered to explore these post hoc comparisons, we cannot rule out that the act of switching from a particular diagnosis to OCD, or from an uncertain to a more certain diagnostic position was responsible for reducing negative attitudes, and suggest that these may be an avenue for future research. Finally, we did not include a control condition, such as a

no-training condition or a neutral or sham educational video of equivalent length. This means that we cannot rule out that the reduction of negative views and fear were not due to habituation.

Finally, the participant population consisted of only 17.4% male participants. While this may represent the lack of gender diversity in the sample, it should be noted that male psychologists represent only 19.6% of the Australian psychology workforce (Psychology Board of Australia, 2021). The sample also mainly consists of psychologists who have less than 5 years of experience. It has been observed that new clinicians often have higher competencies and more knowledge than those who have been in the field for a long time (Vollmer et al., 2013). As this sample is skewed to newer clinicians, their recent training could be influencing results and these findings may not represent the entire field of psychology, as many experienced psychologists in the field did not, or chose not to, participate in the study.

This study was the first to use a clinician sample to investigate the impact of education about OCD marked by paedophilic intrusions on stigma and diagnostic impressions. These findings go some way to addressing the growing body of literature suggesting the need to better educate clinicians on differential diagnosis between paraphilias and OCD (Bruce et al., 2018; Vella-Zarb et al., 2017), and support the requirement of psychologists to participate in professional ongoing development (Psychology Board of Australia, 2015). That psychologists did not appear to hold negative attitudes towards clients based on the referring doctors' diagnostic input and were perhaps better at identifying OCD than suggested in the literature (Glazier et al., 2013), was an encouraging finding. However, even with relatively low stigma and high rates of correct diagnosis, there was still evidence to support the utility of the education. The educational materials were low-cost, and can be easily disseminated via a website link embedded in an email, distribution lists, and online psychology support networks. This research supports the production and evaluation of similar educational materials for other complex OCD differential diagnoses, such as comorbid OCD and eating or autism disorders.

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