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Using Electronic Communication to Bridge the Research to Practice Gap Among
Mentoring Professionals

Abstract

The field of mentoring includes a broad base of stakeholders, such as researchers and practitioners who implement mentoring programs. The research- to- practice gap is an ongoing area of concern in many fields of social science including mentoring. One reason for this is that researchers and practitioners often operate in isolation. Technology is playing an ever-increasing role in the professional lives of practitioners and researchers, therefore, this study explored the engagement of both groups through the YOUTHMENTORING list serve; a resource provided by the University of Illinois-Chicago. Through a comprehensive qualitative study of list serve content, connections, and engagement it was found that the YOUTHMENTORING list serve promoted collaboration among stakeholders. Members found the resource to be valuable to their practice. Implications for the field and future research are discussed.

Keywords: mentoring, research- to- practice gap, communication, technology, social networking.

Using Electronic Communication to Bridge the Research-to-Practice Gap Among Mentoring Professionals

Mentoring as an intervention for children and adolescents is prolific and the number of mentoring programs have dramatically increased in the twenty-first century (Wheeler, DuBois & Keller, 2010). However, empirical research in this area has struggled to keep pace. One problem that may hinder effective research and the dissemination of that knowledge is the research-to-practice gap (Murray, 2009). The research-to-practice gap, recognized within many different social science fields (Bansal, Bertels, Ewart, MacConnachie, O'Brien, 2012; McFarlane, Kahili, Johnson, 2014; Tasca, Grenon, Fortin-Langelier, Chyurlia, 2014), reflects the likelihood of research findings to go unnoticed by practitioners. This is a problem, because it hinders the use of available evidence based treatments and may compromise the quality of care to individuals who are most in need by preventing professionals from delivering the most high quality care, makes errors more likely and encourages procedures that are unhelpful or even harmful (Murray, 2009; Proctor, 2004).

Specifically within the field of mentoring, programs which operate without an adherence to recognized best practices and validated by the most recent empirical findings are likely to do more harm than good to a population of vulnerable children and youth (Dubois & Karcher 2005; Rhodes, 2002). DuBois et al (2011) strongly emphasized the importance of aligning program practices and policies to empirical research as a method of increasing program quality to facilitate positive youth outcomes. Further, increasing the amount of effective communication between researchers and practitioners was emphasized as a way to reach these goals. Even though finding effective ways to help researchers and practitioners break down barriers such as

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time, distance and philosophical differences is not an easy task, it is important to keep working towards this goal.

Communication and collaboration among professionals is often hampered by barriers such as time and distance. Many organizations are attempting to facilitate communication through different types of electronic communication such as email or social media. It is common today for both profit and nonprofit organizations to communicate with customers, students or other stakeholders by platforms such as Facebook or Twitter. The utilization of electronic communication by organizations between stakeholders such as researchers and practitioners has the potential to increase collaboration (Osterrieder, 2013). One example of this type of supported communication is the electronic YOUTHMENTORING list serve; a resource provided by the University of Illinois-Chicago and administered by Dr. David DuBois, a professor in the Division of Community Health Sciences, School of Public Health, University of Illinois at Chicago. The YOUTHMENTORING list serve was specifically developed to promote collaboration and disseminate knowledge within the youth mentoring community. Currently there are more than 700 members, both researchers and practitioners, located in different countries around the world such as the United States, Canada, Australia, New Zealand, and the United Kingdom. Practitioner members represent individuals with various roles in small and large programs such as program coordinators and program directors in paid and volunteer positions. The purpose of this study was to investigate the way the participants utilize the YOUTHMENTORING list serve such as frequency of use and types of subjects discussed as well as the participants perception of the usefulness of the resource. A better understanding of this electronic communication and how it is used by stakeholders may provide insights as to more effective ways to disseminate the results of research to practitioners who are providing

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essential services to those in need of services, in other words, to help bridge the research-to-practice gap (Jamieson & Lohmann, 2012).

Review of the Literature

Literature reviewed for this discussion is focused specifically on communication between research and practice communities and possible barriers to this communication. The research-to-practice gap is well documented across many different disciplines such as education (Callahan, Henson, & Cowan, 2008), health services (McFarlane, Kahili, & Johnson, 2014) and business management (Bansal, Bertels, Ewart, MacConnachie, & O'Brien, 2012). After reviewing the literature, we identified three specific factors which the research suggests may perpetuate the research-to-practice gap. First, researchers and practitioners may have different priorities, goals, or areas of focus in their work. Next, these two groups of professionals have different backgrounds with specific areas of expertise, specific knowledge bases and vocabulary. Finally, members of each group often work in different settings and this may present logistical problems for ongoing collaboration such as time and distance.

Diverse Goals and Viewpoints

Researchers and practitioners often have different priorities, goals and areas of focus, often without adequate relationships between the two groups to understand the divergent goals and viewpoints of the other (Murray, 2009; Schneider, 2014). The viewpoint of practitioners are generally normative, personal, particular, and experiential, focusing on the needs or abilities of a particular patient or student, while researcher's views are more likely to be analytical, intellectual, universal, and theoretical (Light & Gnida, 2012; Parsons et al., 2013). Practitioners may view research as irrelevant to their field, while researchers may feel that practitioners tend to ignore their research (Murray, 2009). For example, in educational settings, teachers often feel

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that naturalistic settings are more beneficial than a prescribed approach. However, this makes it unlikely that the intervention will be implemented multiple times in exactly the same way.

Callahan, Henson, and Cowan (2008) contended that this focus on individual needs is related to social validation and may impede the widespread use of research based interventions for students with autism. If teachers and parents do not feel the goals of the intervention are worthwhile, or the method of implementation is impractical for the classroom or other setting, it may not be utilized by teachers and/or parents. Curry (2012) discussed the idea of reciprocity between researchers and practitioners, or the idea that each party receives something of value from the relationship. However, this may be difficult because of the divergent goals of the two parties. Practitioners want specific information that can be readily used with students while researchers want to understand the nuances of the practice such as the underlying reasons why an intervention may or may not be successful.

Bansal et al. (2012) mentioned that researchers tend to focus very methodically and carefully on a particular variable or characteristic of an intervention, while practitioners must make changes quickly to respond to the varying conditions and individual needs in a clinical or classroom setting. Practitioners are more likely to want concrete information that they can implement quickly rather than theoretical information often valued by researchers, adopting evidence based practices that fit their schedules and are proven to be effective (Ellis, 2005). Further, practices that do not require extensive training and are delivered in clear language may be more readily adopted (Schneider, 2014). In addition, practitioners are more likely to adopt a new innovation which is viewed positively by their social network (Dearing, 2004; Rogers, 2003; Valente, 1996).

Ongoing collaboration which assists practitioners and researchers to mutually integrate their social networks could make the adoption of new innovations more likely. Curry (2012) described a qualitative study in which the participants (educators) were involved in the data analysis. Meetings of a group of K-12 colleagues were videotaped and then reviewed to identify ways to improve their collaboration. Each group, educator participants and researchers, felt at the end of the study they had gained valuable knowledge. The educators felt they could improve their collaborative sessions with colleagues by improving their communication techniques and changing the way they prepared for meetings. The researchers gained a better understanding about the nuances of professional learning groups and better understood the differences between the learning patterns of individuals as opposed to the learning of professional communities. One conclusion from Curry (2012) was that a measure of transparency was achieved concerning the research process. The practitioner participants were better able to understand the reasoning and motivations of the researchers including such things as political considerations.

One factor that is important for a research based intervention to be accepted by practitioner groups is social validity (Callahan, Henson, & Cowan, 2008). For instance, many interventions for students with autism have overwhelming evidence to demonstrate success, however, if teachers do not feel the method is socially valid, the intervention is less likely to gain widespread use. Five common areas were determined to be of importance to practitioners supporting an intervention method. The program must be (a) individualized, (b) allow for the collection of data, (c) utilize strategies that are evidence-based strategies, (d) allow for collaboration, and (e) focus on long-term outcomes. It is essential to know and incorporate this criterion when creating training programs for professionals, parents and students. However, it is

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also important to clearly communicate the ways in which the intervention will be socially valid to the participants.

Diverse Knowledge Bases and Backgrounds

It is important for research information to be presented in a format that is easily understood and applied in classrooms and other programs (Light & Gnida, 2012). For example, researchers often use statistical procedures that are difficult for practitioners to comprehend because they may have little training in these procedures (Murray, 2009). This difference was highlighted in a study conducted by the Network for Business Sustainability (Bansal et al., 2012). The researchers and practitioners recorded their thoughts in personal journals, which were subjected to analysis. After listening to a research presentation a practitioner participant recorded in his journal: "I'm eager to apply your theory on asymmetrical interventions to what I do in practice, but I don't know what it means" (Bansal et al., 2012, p. 79). Translation to a more practitioner friendly dialogue may improve the relationship between researchers and practitioners and make research findings more usable for practitioners (Bangert & Baumberger, 2005; Lundervold & Belwood, 2000). Practitioners may have more relevant information concerning the needs of the student or client than researchers and researchers who listen carefully to practitioners may be able to formulate more relevant research questions (Tasca et al., 2014).

Traditionally, publication in scholarly journals has been the most common means of presenting research but the development of interpersonal communication between researchers and practitioners may be more effective (Bansal et al., 2012; Murray, 2009; Rogers, 2003). Researchers often have made assumptions that teachers and other practitioners have access to published research (Borg, 2010). Vanderlinde and Braak (2010) conducted focus groups and

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found that although research participants said that they disseminated their work through practitioner journals, the practitioners in the group were largely unfamiliar with these journals. Even when practitioners have access to published research, they may lack sufficient time to carefully read the material. This discussion brought to light an additional barrier: the research participants shared that their work is often assessed (i.e. tenure and promotion) by the impact factor score of the journal, and practitioner journals generally have a lower score. Systemic policies such as this often seem to create more incentives for researchers to produce new research than to disseminate information by engaging with practitioners (Khurana, 2007; Van de Ven & Johnson, 2006).

Logistical Barriers to Collaboration

Collaboration between researchers and practitioners is essential if the two groups are to share information and understand the viewpoints and needs of each group (Murray, 2009; Ozdemir & Giannotta, 2014). However, practitioners and researchers typically work in physical spaces that are removed from each other with logistical barriers such as time and distance making collaboration difficult (Bearman, Wadkins, Bailin & Doctoroff, 2014; Kim & Fortner, 2007; Schneider, 2014). Considering the previously discussed barriers to sharing research findings between these groups through scholarly publications, collaborative relationships between researchers and practitioners may be a more effective method to help practitioners determine which findings may be effective and relevant to their particular practice (Bansal et al., 2012). There is evidence that practitioners would be open to such collaborative efforts. Elementary and secondary teachers (n=194) who responded to a mailed survey (Kim & Fortner, 2007) querying their attitudes towards collaboration with research scientists (94.8%) indicated that they feel it is important for research scientists to be involved in educational projects.

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However, 94.4% of respondents indicated that time was a barrier to involvement and 94.3% indicated that they did not know how to get involved in educational collaboration with scientists.

Bansal et al (2012) contended that it is challenging for a single researcher or practitioner to bridge the research-to-practice gap on their own and is therefore more useful for organizations to provide supports which will help the groups work together. Further, because researchers and practitioners necessarily have different perspectives, if the two groups were to work too closely together, the objectivity needed for research may be compromised. However, organizational structures may be able to help position supports for the two groups to communicate effectively together.

Development of Methods to Overcome Barriers

The well-documented research-to-practice gap is evidence of the concern about this problem, and also of the difficulty of changing the behavior of both groups, researchers and practitioners. The sheer amount of literature on this subject in various disciplines such as education, psychology, social services, occupational therapy and others attests to the widespread frustration of all involved. Therefore, it is important to move past identifying the problem and develop effective methods to help close the gap (Ozdemir & Giannotta, 2014). It is clear that the solution is complicated and encompasses many different variables including diverse goals, knowledge bases and backgrounds of both parties as well as logistical barriers such as lack of time, differing work locations and difficulty in effective communication. However, a common theme is the need for supported opportunities for effective communication that will help to develop collaborative relationships between researchers and practitioners. It is important to develop methods of communication between researchers and practitioners that is cognizant and

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respectful of the individual backgrounds, understanding and goals of each party. Also, any communication method must support the day to day routines and responsibilities of each group.

Concerning the area of psychotherapy research-to-practice issues, Vivian et al., (2012) proposed a four level model to integrate practice and research. This model included research on the specific practices and techniques, used integrated research into training of new clinicians and researchers, utilization of the information from clinicians to research and finally integration of the two. Central to the success of this model, the authors believed, was the immersion of research and clinician students within research and research based practices, because they will be more likely to support future collaborative efforts to continually lessen the research-to-practice gap. This interactive model is consistent with the concept of “reciprocity” between researchers and educators, as discussed by Curry (2012). Reciprocity is the idea that both parties will derive something useful from the activity or relationship. It is reasonable to assume that both researchers and practitioners can benefit from collaborative relationships, however, as mentioned earlier, organizations may be better able to provide the context and support for these reciprocal relationships, rather than expecting the two groups to manage on their own.

An example of this type of supported relationship is the Psychotherapy Practice—Research Network (PPRNet) which was created specifically to allow researchers and practitioners to collaborate and lessen the research-to-practice gap in the area of Psychotherapy (Tasca et al., 2014). This intervention was based on Ajzen’s (1991) theory of planned behavior which held that a person’s intention or motivation to engage in a behavior is highly correlated to the likelihood of actually performing the behavior. Practitioners (n=68) who attended a conference focusing on psychotherapy were administered a survey (modified from a questionnaire developed by Wilson et al., 2011), to understand the four constructs of this theory

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including: intention to use research, subjective norms, perceived behavioral control and attitudes. The information gathered was utilized to understand the barriers to research involvement by the practitioners for the purpose of more effective intervention design. Results of the survey indicated that practitioner attitudes toward research are likely to be the greatest predictor of their intention to use research. The authors believe that the practitioners who joined the PRN after attending the research conference may have a greater interest of and involvement in research based practices because of their involvement and interaction with the researchers. This may lead to a greater understanding of research based interventions and encourage collaborative relationships between the practitioners and researchers.

We sought information regarding the possible impact of the YOUTHMENTORING list serve on the research-to-practice gap. The YOUTHMENTORING list serve, in operation since 2006, is administered by Dr. David DuBois of the University of Illinois Chicago. DuBois is a recognized expert in the field of mentoring research, and created the YOUTHMENTORING list serve as a method of raising awareness of mentoring and allowing mentoring researchers and practitioners to interact and share information. Currently, there are more than 700 members of the YOUTHMENTORING list serve, and DuBois estimates the members to be composed of approximately 20% researchers and 80% practitioners. If a member wishes to participate, they send their message or information via the email address of the YOUTHMENTORING list serve. The email is received by a moderator, who in turn sends the message out to all members. Members may respond and the response is again sent to the entire group, creating an online discussion. Typical information may include the posting of upcoming conferences or events of interest to the members, questions concerning best practices, recently published research articles or reports, or job postings by mentoring organizations.

Methods

In this qualitative study, we strived to better understand the interactions among researchers and practitioners within the online communications of an electronic list serve dedicated to mentoring practitioners and scientific mentoring researchers. Beyond the interactions we also explored the perceptions of those who subscribe to the list serve. By examining the interactions and perceptions of researchers and practitioners we sought to gain insight of the research-to-practice gap. Information concerning the study was submitted to the Institutional Review Board of the institution of the first and second authors and approval was granted for the study. Information was gathered via the public communications of this online forum from two specific six month periods of time with a two year gap in between. These data were analyzed in an effort to better understand the manner of interactions, topics discussed and attempt to understand if this electronic communication is a forum that is likely to impact the mentoring research-to-practice gap. Social network analysis was used to examine the communication patterns among participants. In addition, an online survey was administered to understand the perspectives of YOUTHMENTORING list serve members.

Research Questions

We utilized a three-pronged approach to gather qualitative data and better understand the content discussed, the participants involved and the perceptions of the participants as to the usefulness of the conversations. The research questions guiding this study were, (a) What content was discussed on the YOUTHMENTORING list serve during two different six month periods?, (b) Who is engaging in conversations on the YOUTHMENTORING list serve during two different three month periods?, and (c) What are the perceptions of YOUTHMENTORING list serve members regarding the impact of participating in the YOUTHMENTORING list serve?

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To address these questions, first the content of the discussions was analyzed to better understand the subject matter of the YOUTHMENTORING list serve. Next, a social network analysis was completed to explore the connection among and between both researchers and practitioners engaging in the YOUTHMENTORING list serve discussions. Finally, a survey was developed and administered to the YOUTHMENTORING list serve members to better understand the demographics of the participants as well as their participation, communication habits and potential impact.

Data Sources

There were two main sources of data for this exploration. The first source included all electronic communication from the YOUTHMENTORING list serve for two separate six month time periods across two years. The second source was a 12-question survey designed specifically to elicit information concerning the perceptions of the members. All members of the YOUTHMENTORING list serve were invited through a posting to participate in the survey and share information regarding their experiences in regard to the YOUTHMENTORING list serve. Specifically, the participants were asked to indicate their involvement and what potential impact they felt the YOUTHMENTORING list serve has had on them as a participant. The survey consisted of 12 questions. At the time the survey was administered (fall academic semester, 2014), there were 750 members. Sixty eight members responded to the survey resulting in approximately a 9 % rate of response. Multiple methods of data analysis was utilized in order to develop a holistic picture of the manner of impact of the YOUTHMENTORING list serve upon the mentoring community.

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Analysis of Electronic Communications

First analysis period. There were two periods of analysis for the electronic communication data. Each period of analysis included a separate research team with the first author being a common participant across the two teams. The first analysis period utilized online communications of the YOUTHMENTORING list serve from January 1 through June 30, 2010. The research team for this first period consisted of the first author and two students, a graduate assistant and an undergraduate Honors student, who qualitatively analyzed the data in terms of the content and the interactions among participants.

Second analysis period. The second analysis period utilized information from January 1 through June 30, 2013. The research team consisted of the first and second author and an undergraduate Honors student. The research team analyzed this data in terms of content and participant interactions and then compared the two analyses as to differences in terms of overall usage and the depth of conversation content.

Content analysis. Content analysis is a common tool to analyze content from written works. This study employed a conventional approach with themes arising directly from the YOUTHMENTORING list serve messages (Hsieth & Shannon, 2005). During each period of analysis the specific research teams mentioned, coded and analyzed the electronic data. The process of data analysis was similar to the coding stages used for grounded theory: a) open coding, b) axial coding, and c) selective coding (Glaser & Strauss, 1967). Initially, each member of the research team worked independently, reading and re-reading the YOUTHMENTORING list serve postings multiple times, to become familiar with the data. Individual team members independently identified open codes within the postings. Next, the research team collectively identified themes present in the initial coding, a process similar to axial coding (Glaser &

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Strauss, 1967). This led to the identification of final themes which related to the content within the YOUTHMENTORING list serve conversations, thus presenting our selective codes. Unlike grounded theory we were not exploring a particular theoretical frame however a similar coding process allowed us to develop our final themes as described above.

Social network analysis. Beyond an interest in exploring the content of the messages, we also wanted to explore the interactions among participants, particularly researchers and practitioners. To do this, we mapped the interactions of the participants through social network analysis (Barnhill, 2014). The focus of social network analysis is to look at interactions and linkages of the participants, which may be dyads, triads, subgroups, or networks (Scott, 2012). Although the information analyzed from a six month period as previously explained, a select three month period (February, March, and April) was included for the purpose of the social network analysis. The rationale for choosing these three months for analysis was due to the academic calendar. Since a large number of the YOUTHMENTORING list serve participants are affiliated with education, either higher education or Kindergarten through 12, the three months in the middle of academic semesters is generally the center of the academic calendar. To explore the impact of the research/practice gap on the YOUTHMENTORING list serve, we labeled each contributor as either a researcher or practitioner. We then mapped the interactions of participants by having each individual who contributed to the YOUTHMENTORING list serve as a node; if someone responded to the post it was linked as an additional node. Each node was color coded to allow us to see the interactions among and between researchers and practitioners.

Survey. In order to better understand the perceptions of the YOUTHMENTORING list serve members regarding the impact of their participation, a 12-question survey was developed

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and the YOUTHMENTORING list serve members were invited to participate via a posting on the list serve. Information was submitted to the Institutional Review Board a second time specifically regarding addition of the survey. After approval was received from the Institutional Review Board, an invitation was posted on the YOUTHMENTORING list serve announcing the survey and inviting the members to participate. A link was included to the survey which was administered by Qualtrics (2013). Two subsequent reminder emails were posted to the YOUTHMENTORING list serve approximately two weeks apart, for a total of three invitations. The survey asked participants to describe their interactions with the YOUTHMENTORING list serve as well as whether they self-identified as a researcher or a practitioner. The survey also asked what impact the member felt their participation had upon their professional practice.

The survey was developed by the research team of the second analysis period (i.e., first and second author and one student) and was patterned after a survey described by Isett and Phillips (2009) in their work to better understand interactions between childhood traumatic stress practitioners and researchers who communicated electronically for the purpose of creating relationships and exchanging information between the two groups. Eight of the questions solicited information concerning the perceptions and beliefs of the participants concerning their interaction and use of the YOUTHMENTORING list serve. Three of the questions were demographic in nature and one question was open ended, inviting the participant to add information, comments as they wished. The survey was analyzed using descriptive statistics and the results are reported including frequency, percentage response distributions and dispersion measures.

Rigor and Trustworthiness of the Data

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Padgett (2008) presented six strategies for enhancing the rigor of research: prolonged engagement, triangulation, peer debriefing and support, member checking, negative case analysis, and auditing. While this research did not engage all six strategies, four of them were employed. This research project spanned across two years (prolonged engagement) allowing for a more developed story and in depth understanding of the phenomenon. Triangulation occurred throughout analysis; survey data was supported through document reviews and social network analysis. Peer debriefing and support has been an ongoing element of this research; several students participated to review documents, highlight themes, and engage in discussions. Auditing, having an outsider do a comprehensive review of the research, was another element that was included. We solicited two colleagues to review our work prior to submission to ensure quality.

We use the term trustworthiness instead of the traditional validity and reliability, as is common in qualitative research (Denzin & Lincoln, 1994; Padgett, 2008). Denzin and Lincoln (1994) presented four factors that should be considered in establishing the trustworthiness of findings from qualitative research: credibility, transferability, dependability, and confirmability. Credibility refers to the confidence one can have in the truth of the findings. Credibility was measured in this research through data triangulation. Transferability is the degree to which the results can be generalized to another context. To enhance transferability, the context for the research was described in great detail. Dependability refers to the stability of the findings over time (Denzin & Lincoln, 1994). To account for dependability, the changing context of the research was highlighted and taken into account. Confirmability is the degree to which the findings could be corroborated by other scholars. For this study, the data were checked and

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rechecked by the research faculty and student assistants. Another element of confirmability was the implementation of a peer review process, as previously discussed.

Findings

Content

The first research question asked what content was discussed on the YOUTHMENTORING list serve during two different six month periods. The themes identified by all three researchers were very similar across both reporting periods and included (a) YOUTHMENTORING list serve operation, (b) requests for information, resources (solicited and unsolicited) and (c) information-only posts. List serve operations included items such as how to subscribe, organize the digests and member removal. Examples of direct requests for information included, "Is anyone familiar with effective implementation of e-mentoring with system involved youth?" and "I am soliciting validated scales for one of agencies to use to assess youth physical health, youth physical activity, or youth effectiveness in caring for their physical health. If you have any validated scales you can share or point me towards, I would really appreciate it." The sharing of resources was another common theme and was subdivided into two categories, solicited and unsolicited. When individuals asked for specific information these were typically met with a response providing either a direct connection to the resource or a way to access the resource. If resources were shared without a direct request they were coded as unsolicited resources. This was frequently done by the YOUTHMENTORING list serve administrator who shared resources he had received from other sources. Common types of information shared included calls for grants, conferences, papers, abstracts and news items related to mentoring. Information only postings were commonly job postings and occurred less

frequently. Table 1 shows the frequency of content themes across the second six month period (spring of 2013).

Table 1
Frequency of content themes (Spring 2013)

	January	February	March	April	May	June
Listserv operation	<i>n</i> = 6	<i>n</i> = 3	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 4	<i>n</i> = 7
Request for information	<i>n</i> = 11	<i>n</i> = 7	<i>n</i> = 7	<i>n</i> = 8	<i>n</i> = 8	<i>n</i> = 9
Solicited resources	<i>n</i> = 24	<i>n</i> = 25	<i>n</i> = 20	<i>n</i> = 15	<i>n</i> = 31	<i>n</i> = 14
Unsolicited resources	<i>n</i> = 6	<i>n</i> = 3	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 1	<i>n</i> = 1
Information only- jobs	<i>n</i> = 4	<i>n</i> = 0	<i>n</i> = 2	<i>n</i> = 1	<i>n</i> = 0	<i>n</i> = 0

Engagement

The second research question asked who is engaging in conversations on the YOUTHMENTORING list serve during two different three month periods. We were interested in understanding not only the roles of the participants but how information was exchanged between researchers and practitioners. Through mapping of the discussions, it was apparent how conversations flowed and who was interacting. Using social network analysis, we were able to see patterns within the communication flow. The five figures below show the interactions among and between researchers and practitioners during four distinct periods in 2010 and 2013. Posts initiated by researchers are coded with R and P delineates a practitioner post. The distinctions for each group were made based on email signature lines and personal knowledge of the first author as to contributors. A letter which stands alone in the figure indicates a posting without a response. Figures 1 and 2 illustrate the conversations in February 2010 and February 2013, respectively. Figure 3 displays ongoing conversations that occurred across the

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months of February and March in 2013. The last two Figures, represents March 2010 conversations (Figure 4) and the continuation of March 2013 conversations (Figure 5) from Figure 3.

Insert Figures 1, 2, 3,4, 5 here.

Perceptions

The final research question explored the perceptions of members regarding the impact of their participation in the YOUTHMENTORING list serve. In order to answer this question, the members (n~750) of the YOUTHMENTORING list serve were invited to participate in the specifically designed survey. Sixty four individuals completed the survey, for a response rate of 9%. Of those individuals 56% (n=33) identified as practitioners who were primarily involved in the day to day operations of a mentoring program. Forty-four percent of participants (n=26) identified as researchers who were primarily involved in evaluation of mentoring programs or participated in academic research of the subject. Five participants didn't elect to choose one of these designations, a few explained this in the qualitative reporting portion. One person stated this question was intentionally left blank because “. . . not only do I bridge the gap between research and practice but also as a consultant to many mentoring programs (design, implementation and evaluation).” Another person stated “I am not a practitioner or researcher - I provide support to direct practice programs through technical assistance and capacity-building.” This information is illustrated in Table 2.

Table 2

Length of participation in the Youth Mentoring list serve

Length of time	n	%
6 months or less	7	11
6-12 months	7	11
1-2 years	8	13
More than 2 years	42	66
	64	100

Participants answered eight questions regarding their perceptions of their YOUTHMENTORING list serve engagement. The general themes identified from the responses focused around collaboration and increased knowledge. The responses indicated that the majority of the participants felt their involvement in the YOUTHMENTORING list serve was positive and provided them with opportunities to connect with other professionals and gain information to be more knowledgeable and effective concerning current mentoring practices. For instance, an overwhelming majority of respondents (n=54) felt they were introduced to new concepts, perspectives or skills because of their involvement. More than two thirds of the respondents (n= 43) indicated that their involvement has influenced the manner in which they engage in their daily professional activities. All but one respondent (n=59) indicated that they felt their involvement was worthwhile and intend to continue their involvement. This information is related in Table 3.

Insert Table 3 here

Discussion

Our three research questions addressed who is engaging in the list serve, the content of the conversations and their perceptions of the impact of these interactions. These questions allowed us to consider the broader research to practice gap that continues to limit the dissemination and use of information. The data analysis indicates that in the area of youth mentor research, an online venue such as YOUTHMENTORING list serve may be an effective way to increase open communication between researchers and practitioners in the field. Increasing effective communication between these two sets of stakeholders may allow for more relevant research and provide practitioners who develop and manage mentoring programs with information providing for higher quality programming. The three specific factors previously identified as possible barriers to effective communication include: divergent priorities, goals and areas of focus, differing backgrounds, and logistical problems such as time and distance. The results of this study suggest that the YOUTHMENTORING list serve provided avenues to combat each of these barriers to some extent.

Bridging Diverse Goals and Viewpoints

Even though both groups, researchers and practitioners, had different goals and viewpoints, the questions asked by each group within the YOUTHMENTORING list serve conversations represented common access points of engagement. For instance, practitioners might ask for ideas and suggestions as to effective support for a particular population of mentors (i.e., college age mentors or retired individuals). Researchers might query as to practitioner use of specific types of assessment instruments or procedures. These requests for information and

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shared resources provide practical support for each group and allow each group to view the information through different lenses. Interactions of this sort allow research to be disseminated in a practical manner, as a response to a specific question or problem. Researchers are able to gain insights into specific activities of practitioners, which may allow them to focus specific research questions on problems relevant to the community of practice.

Most interesting is that when people asked for information about procedures or resources, the community responded quickly, often with multiple suggestions. Information requests were typically the most active area of the YOUTHMENTORING list serve. The causal, helpful nature of the interactions spoke to the culture of community among the YOUTHMENTORING list serve members. As one survey participant expressed: "... it has people from across the entire spectrum of research to practice...the particular culture that surrounds the [YOUTHMENTORING] list serve is also part of what makes it such a valuable resource." Further evidence of relationship development was demonstrated by the increased engagement from 2010 to 2013. As shown in Figures 1-5, 2013 conversations had a significantly higher level of interaction, often with multiple responses from researchers and practitioners. This leads us to believe that the YOUTHMENTORING list serve is becoming known and accepted within the field as a venue for exchange of information.

The Meeting of Diverse Knowledge Bases and Backgrounds

One of the problems identified as a part of the research-to-practice gap is the difficulty researchers and practitioners often have to engage in effective communication because of a lack of trust and understanding of the respective roles of each (Murray, 2009). The groups are likely to view themselves as working in separate fields with little connection. Examination of our data shows the majority of the interactions are between researchers and practitioners demonstrating

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active engagement among both groups. This is consistent with the perceptions of survey respondents (n=64) who overwhelmingly reported (n=63) that they feel more confident in their current knowledge of evidence based practices since their involvement. Further, approximately two thirds of respondents (n=44) indicated they would be likely to consult with people whom they considered knowledgeable concerning mentoring best practices. Our analysis of the data is consistent with the comment of one of the respondents who felt the YOUTHMENTORING list serve “[is]... enriching the dialogue and bridging groups that in other fields are much less comfortably bridged.”

Logistical Barriers to Collaboration

Even when professionals desire to interact for collaboration, they must be able to overcome the logistical barriers of time and distance. The YOUTHMENTORING list serve membership locations spans many countries and affiliations with a diverse group of institutions. This information is evidenced by the information in the individual posts regarding professional affiliations and locations. The electronic communication provides a platform for diverse communication around the world. But not only are the professionals able to communicate with colleagues despite distance and location, they are able to create relationships because of their participation in the YOUTHMENTORING list serve. As one member commented: “. . . I have connected with others in the industry though the list serve. These relationships would have never started had I not been a part of the [YOUTHMENTORING] list serve.” Another comment from a member spoke to the value for the member in the areas of research and practical skills: “I find it extremely beneficial for staying current in mentoring research plus the opportunity to learn from other practitioners I may never meet.” It is clear that these participants feel the YOUTHMENTORING list serve supports collaboration in a convenient manner regardless of

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geographic barriers with professionals they may not have had the opportunity to meet and interact with otherwise.

Limitations

We have provided important insights into the interactions of professionals who communicate via the YOUTHMENTORING list serve and may provide information to help bridge the research-to-practice gap. However, there are limitations to this work. First, we examined one electronic communication platform which focuses on one program which supports the area of youth mentoring. Additional platforms may have differing results. Although we believe many characteristics of the YOUTHMENTORING list serve may be similar to other electronic communication methods, the information here may or may not transfer to other forms of electronic communications. The data gathered from the participant communications were from two specific periods of time, and may or may not be representative of all periods of communication. Finally, the survey was created specifically for this study and therefore has not been validated by use in other research studies. The survey participants also represented a fairly small percentage of professionals who are members of the YOUTHMENTORING list serve so we can not assume that everyone who subscribes perceives the impact similarly. Future research should focus on similar groups across different disciplines.

Implications

Youth mentoring is a highly diverse field with a wide variety of groups, ranging from small community organizations operating on limited budgets to those that are much larger and more structured. Supports for youth mentoring professionals must consider not only the diverse needs of the organizations, but also the logistical barriers of bringing all of the practitioners and researchers together for meaningful interactions. Online communication venues such as the

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YOUTHMENTORING list serve can certainly provide a way for busy professionals with diverse areas of focus who are miles or even continents apart to interact and form meaningful professional relationships.

The information from this study supports much previous research regarding efforts and barriers to closing the research-to-practice gap among professionals across diverse fields such as business, psychology, education and medicine (Bansal, et. al., 2012; Bearman, Wadkins, Bailin & Doctoroff, 2014; McFarlane, Kahili, Johnson, 2014; Schneider, 2014). The online communication would seem support the positive interaction of professionals from different backgrounds who may not interact as easily in a more traditional, face to face setting even if the opportunity were provided. Online communication also crosses the barrier of time and accessibility. Professionals working in different fields and different time zones also have vastly different schedules and work patterns. Being able to communicate across these different work times and schedules would largely negate the barrier of varying schedules. Institutionally supported electronic communication such as the YOUTHMENTORING list serve may provide a venue for these two groups of professionals to interact and collaborate more effectively allowing for the dissemination of the latest research in a manner that can be put into use by youth mentoring practitioners.

To be effective, interactions must provide opportunities for the development of professional relationships based on mutual trust and respect. Additionally, both groups of professionals must feel the relationship is worthwhile. As the field of youth mentoring expands, the challenges of effective communication for the professionals involved will likely become even more challenging. The development and utilization of institutionally supported online

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communication venues such as the YOUTHMENTORING list serve may be one way to support those who endeavor to develop and implement effective methods for mentoring our youth.

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