



Supervisees' Perceptions of Effective Supervision: A Comparison of Fully Synchronous Cybersupervision to Traditional Methods

Sara Bender & Cass Dykeman

To cite this article: Sara Bender & Cass Dykeman (2016) Supervisees' Perceptions of Effective Supervision: A Comparison of Fully Synchronous Cybersupervision to Traditional Methods, Journal of Technology in Human Services, 34:4, 326-337, DOI: [10.1080/15228835.2016.1250026](https://doi.org/10.1080/15228835.2016.1250026)

To link to this article: <https://doi.org/10.1080/15228835.2016.1250026>



Published online: 01 Dec 2016.



Submit your article to this journal [↗](#)



Article views: 116



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

Supervisees' Perceptions of Effective Supervision: A Comparison of Fully Synchronous Cybersupervision to Traditional Methods

Sara Bender^a and Cass Dykeman^b

^aCentral Washington University, Ellensburg, Washington; ^bOregon State University, Corvallis, Oregon

ABSTRACT

Despite a great increase in the popularity of cybersupervision, little research is provided regarding supervisees' perceptions of its effectiveness. This study examined the differences in Master's level counseling student supervisees' perceptions of participating in cybersupervision as compared to traditional face-to-face clinical supervision. Results indicated no significant difference in the perceived effectiveness between the two conditions. Implications and suggestions for future research and practice are provided.

ARTICLE HISTORY

Received 9 April 2016
Accepted 14 October 2016

KEYWORDS

Cybersupervision;
synchronous online
supervision

Over 3 billion people access the Internet on any given day, which equates to approximately 40% of the world's population (International Telecommunications Union, 2016). With so many people active on the information superhighway, it should come as no surprise that many individuals pursue academic endeavors in this environment. Schroeder (2011) suggested that the Great Recession has changed the very nature of education. With a combination of lower incomes, higher levels of unemployment, decreased property values, and higher energy and food costs, America is left with a culture unable to support the traditional student norms of past generations. These circumstances, coupled with the decreased costs of technology, lead more people to access online education. The use of online learning in higher education is expected to continue to accelerate rapidly over the next decade (Parker, Moore, & Lenhart, 2011). The increased use of technology within higher education led to the introduction of cybersupervision in counselor education programs and yet little is known about this form of supervision.

When reviewing the limited scholarly literature related to cybersupervision, five key areas stand out. These areas are: (a) definitions related to cybersupervision, (b) benefits of cybersupervision to counselor education, (c) drawbacks to online learning, (d) using online communication as an adjunctive tool, and (e) supervisees' perceptions of hybrid methods of supervision. After these

areas are examined, the research questions guiding this study will be delineated.

The use of online learning has brought a number of new terms to higher education pedagogy. Cybersupervision has two main forms: (a) asynchronous cybersupervision and (b) synchronous cybersupervision. Asynchronous cybersupervision involves some combination of the use of e-mail, audio file sharing, and video file sharing, which does not require concurrent (i.e., real-time) interaction between supervisors and supervisees. Synchronous cybersupervision involves some combination of the use of chat, audio file sharing, and video file sharing executed in a concurrent manner, often through a videoconferencing platform such as Adobe Connect. Additionally, hybrid supervision refers to face-to-face supervision in some combination with asynchronous cybersupervision and/or synchronous cybersupervision.

The benefits of cybersupervision to counselor education students are likely reflective of those associated with online learning in general. This service delivery model provides for greater flexibility in one's academic schedule, and requires less travel expense (Crowell & McCarragher, 2007). Past literature also suggests that online learning may help promote critical thinking and reduce student anxiety secondary to an increased sense of psychological safety afforded by the time to fully process one's thoughts in the context of class discussions and complimentary activities (Graf & Stebnicki, 2002; Miller & Dollarhide, 2006; Myrick & Sabella, 1995). Further, researchers suggest that online learning is especially well suited for the training of mental health professionals, as such an environment promotes the refinement of metaskills such as critical thinking, in-depth self-reflection, effective problem solving, and empathetic understanding (Maki, Maki, Patterson, & Whittaker, 2000). In fact, several studies indicate that online and hybrid training seems to contribute to clinicians' increased sense of self-efficacy and may also be an effective strategy to improve clinical skills as well, including case conceptualization skills and specific therapeutic interventions (Haythornthwaite, 2002; Kanter, Tasi, Homan & Koerner, 2013; Kobak, Craske, Rose, & Wolitsky-Taylor, 2013; Paulson & Casile, 2014; Rees & Gillam, 2001; Rees, Krabbe, & Monaghan, 2009; Sholomskas et al., 2005; Sørli, Gammon, Bergvik, & Sexton, 1999; Weingardt, Cuccaire, Bellotti, & Lai, 2009; Weingardt, Vallafranca, & Levin, 2006). Cybersupervision allows both licensed and in-training supervisees access to specialized supervisors increasing their ability to gain focused instruction regarding nuanced diagnoses or treatment interventions, which may not be available in their local areas, further increasing its clinical value and supervisee competency.

Despite numerous advantages, there are a number of drawbacks to online learning, which may likely be extended to the practice of cybersupervision. For example, Muilenburg and Berge (2005) indicate that online learning has the potential to perpetuate student isolation, which could have a negative

effect on academic achievement, satisfaction, and self-esteem (Glazer & Wanstreet, 2011). Similarly, the absence of physical contact may hinder the ability to process nonverbal cues (Gammon, Sørli, & Sørensen Høifødt, 1998). In regards to the education of counseling students specifically, there is concern that a lack of direct face-to-face interaction may compromise the supervisory bond (Nelson, Nichter, & Henriksen, 2010). Further, some suggest that cybersupervision may present increased difficulty in monitoring client welfare, as well as pose an amplified risk of breaching confidentiality (Armstrong & Schneiders, 2003; Glossoff, Renfro-Michel, & Nagarajan, 2016; Hall, Macvaugh, Merideth, & Montgomery, 2007). Despite these concerns, the ever-increasing popularity of telemental health and online education, collectively, suggest that the practice of cybersupervision is likely to be more commonplace. As such, it is important to fully understand student supervisees' perceptions of this process so that it may be properly leveraged in higher education and clinical training in the future.

While many graduate counseling programs resist the transition to fully online supervision, some do find value in using online communication as an adjunctive tool (CACREP, 2016). Utilizing an inductive, qualitative discourse analysis, Luke and Gordon (2011) assessed the impact of supplementary e-mail supervision on school counseling students' internship experiences and determined that the use of e-mail supervision can support the effective development of a supervisee's professional identity. Several other studies, which also made use of e-mail analysis, reached comparable conclusions (Cummings, 2002; Gordon & Luke, 2012, 2013; Graf & Stebnicki, 2002; Stebnicki & Glover, 2001). Clingerman and Bernard (2004) produced similar results via a mixed methods approach examining practicum supervisees' experiences. Correspondingly, Perry (2012) completed a phenomenological analysis of 16 graduate counseling students' experiences engaging in cybersupervision. His analysis concluded that cybersupervision is a viable modality for fostering professional development, which is affected by a number of factors, including: Student background, previous clinical exposure, mentoring by a site provider, exposure to effective learning practices, the ability to practice clinical skills, the presence of effective interpersonal relationships, one's willingness to engage in his or her own self-improvement work, and the use of standardized evaluations. While each of these studies provides valuable insight into the factors affecting the experience of cybersupervision among student supervisees, they do not address the perceived impact of such experiences.

Some researchers have studied supervisees' perceptions of hybrid methods of supervision, which includes a combination of face-to-face and online supervision, as compared to traditional face-to-face supervision. Collectively, these studies suggest that hybrid supervision does appear to be a viable form of clinical supervision, which contributes to the clinical skills and professional

development of supervisees (Gainor & Constantine, 2002; Nelson et al., 2010; Rees et al., 2009). For example, via a series of ANOVAs, Conn, Powell, and Roberts (2009) found that participants receiving hybrid supervision endorsed a supervisory rapport similar to those engaged in traditional face-to-face supervision. Chapman and colleagues (2011) also studied the impact of hybrid supervision in which supervisees had an initial face-to-face meeting with their supervisors and then met with them exclusively online thereafter. Via an intensive single-subject design, which they replicated five times, researchers found that supervisees experienced an increased sense of confidence, competence, and satisfaction with supervision secondary to their cybersupervision experiences. The researchers clarified, however, that those involved in this study maintained a high level of skill pertaining to technology and were quite familiar with online education strategies. Because such circumstances are not true for everyone, they cautioned that the results yielded in this study might not be similar for all who engage in cybersupervision. Coker, Jones, Staples, and Harbach (2002) also examined the supervisory alliance in a hybrid supervisory environment as compared to a traditional face-to-face supervisory environment. T-test analyses revealed that supervisees' perceptions of the quality of their supervisory sessions did not vary significantly between type of session, as both conditions produced a fairly positive response (Coker et al., 2002). Overall, each of these studies suggests that supervision involving an online component might be comparable to that completed on a face-to-face basis, yet none of them examined the use of cybersupervision exclusively.

While there is empirical evidence to support the use of online tools in the formal training of mental health professionals, supervisees' perceptions regarding the usefulness of participating in fully-synchronous cybersupervision as compared to traditional, face-to-face clinical supervision remains unknown. To address this gap in knowledge regarding supervisees' perceptions, the present study was guided by two research questions. The primary research question was: Do supervisees' views of the usefulness of clinical supervision differ based upon delivery modality (i.e., face-to-face vs. synchronous cybersupervision)? A secondary question was: What relationships exist between the following variables: (a) supervisee's level (i.e., practicum or internship), (b) the supervisor's experience, (c) supervisor's gender, (d) delivery modality (i.e., face-to-face or cybersupervision), and (e) supervisees' perceived impact of supervision?

Method

Design

This study employed a posttest-only with nonequivalent control group design (Shadish, Cook, & Campbell, 2002). For the primary research question, the

independent variable was delivery modality (categorical) and the dependent variable was supervisee perception of the usefulness of clinical supervision (continuous). For the secondary research question there were five variables. One variable was continuous (impact of supervision), two were binomial (modality, supervisee training level), two were trinomial (gender, supervisor status).

A post hoc power analysis using G*Power 3.1 produced a power ($1 - \beta$) of .25 using the following parameters: (a) two-tailed, (b) $n = 29$, (c) $d = .241$, and (d) $\alpha = .05$ (Faul, Erdfelder, Buchner, & Lang, 2009). The resultant power was above the point suggested in the literature needed to detect at least a “minimally important difference” (Cuijpers, 2016, p. 1). Potential issues related to statistical power in this study will be addressed in the discussion section.

Participants

This study consisted of 29 participants (22 females, six males, and one person whom chose not to identify) obtained via convenience sampling. Each participant was a candidate for a Master of Science degree with a major in counseling within a program that possessed accreditation from the Council for Accreditation of Counseling and Related Education Program (CACREP). In line with such accreditation, participant supervisees within this program received recurrent group supervision as a part of their regular curriculum. 79.5% of the sample identified as Caucasian, 3.5% identified as Latino, 3.5% identified as Native American, and 13.5% identified as mixed ethnicity. All participants were a part of the same cohort within their program.

Supervision

As per CACREP accreditation standards, participant supervisees received weekly supervision as a part of their coursework. Individuals providing clinical supervision to this cohort were categorized as belonging to one of three groups: faculty ($n = 10$), doctoral students ($n = 12$), or other ($n = 7$). Participant supervisees selected whether to pursue traditional, face-to-face supervision ($n = 17$) or synchronous cybersupervision ($n = 12$). Supervision in both modalities occurred over a time span of 10 weeks for 90 min per week and was guided by the Discrimination Model (Bernard & Goodyear, 2013). The synchronous cybersupervision was delivered via Adobe Connect 7.5 and had the following components: (a) face-to-face interaction between supervisor and supervisee via webcam, (b) video playback of clinical material, and interactive chat. The traditional face-to-face supervision included: (a) face-to-face interaction between supervisor and supervisee, and (b) video playback of clinical material. In this field-based study, the experimental group

was formed from those respondents that had individual supervision delivered via Adobe Connect. The control group was formed from those respondents that had individual supervision delivered face-to-face.

Measures

Demographic survey

The demographic survey requested information pertaining to the participant's gender, ethnic group, age, supervisee training level, supervision delivery modality, supervisor's gender, and supervisor's status. The four demographic variables involved in the second research question were categorical in nature. Gender had three categories (male, female, other). Supervision delivery modality was structured into two categories (face-to-face or cyber-supervision). Supervisee training level was binomial (practicum, internship), supervisor's status was trinomial (faculty, doctoral student, other)

Group supervision impact scale—supervisor impact subscale (GSIS-SI)

The GSIS-SI measures the perceived usefulness of supervision (Getzleman, 2003). Each of the 13 items on the subscale is rated on a 7-point scale partially-anchor Likert scale. The anchors were 1 = *never* to 7 = *always*. Item 13 is reverse scored. A sample statement of this survey is: "Did your supervisor provide you with useful feedback?" Getzleman (2003) found the instrument to maintain good construct validity with the Group Supervisor Impact Scale significantly related to (a) supervisee satisfaction with supervision, (b) supervisee self-efficacy, (c) and the supervisory working alliance. With interitem correlations ranging from .32 to .79 and an overall Cronbach's alpha coefficient of .93, the Group Supervisor Impact Scale also demonstrated excellent reliability (Getzleman, 2003). The GSIS-SI was originally designed for use in a group supervision. Given that for this study the measure was used in an individual counseling setting, the references to group in items 8, 9, and 10 were deleted.

Procedures

Every student within the cohort ($n = 31$) was provided a copy of the packet to complete so that no one, including the researcher, would have the ability to determine who in the room decided to participate and who did not. Two members of the cohort opted-out of the study and, therefore, submitted blank packets. At the end of the 10-week quarter, the primary researcher attended participants' final class meeting, asked them to consider their experiences engaged in supervision throughout the quarter, and to complete an informational packet regarding the same. Each packet contained a demographic survey and a copy of the GSIS-SI.

Data analysis

For the first research question, an independent-samples *t*-test was executed in order to discern if the impact scores differed between the experimental and nonequivalent control groups. For the second research question, a correlation matrix was constructed in an effort to understand the interrelationships between the following variables: (a) supervisee training level, (b) the supervisor's experience, (c) supervisor's gender, (d) delivery modality, and (e) supervisees' perceived impact of supervision. To facilitate the use of a common metric across comparisons, the trinomial variables were collapsed into binomial variables. For supervisor gender, the Other category ($n = 1$) was combined with the Male category. For supervisor status, the Other category ($n = 7$) was combined with the Doctoral Student category. To explore the relationship between continuous and binomial variables, a point-biserial correlation was employed (r_{pb}) (Welkowitz, Ewen, & Cohen, 2014). A Phi-coefficient was utilized to understand the relationship between binomial variables (r_{ϕ}) (Chedzoy, 2006). For all statistical analyses, the significance level was set at $p < .05$. In terms of the Group Supervisor Impact Scale scores, there were 3 missing data points out of 377. To account for this small amount of missing data, average scores for each item, rather than raw scores, were used for the purpose of analysis.

Results

With regard to the first research question, supervision impact scores were normally distributed for participants that engaged in supervision via cyber-supervision, but not those who participated in traditional face-to-face supervision as assessed by Shapiro-Wilk's test ($p < .05$). Further, there was homogeneity of variances, as assessed by Leven's test for equality of variances ($p = .363$). The impact of supervision upon online participants ($M = 6.60$, $SD = 0.41$) was similar to face-to-face participants ($M = 6.33$, $SD = 0.65$). The results for a two-tailed independent samples *t*-test were not statistically significant, $t(27) = -1.289$, 95% CI $[-.71, .16]$, $p > .05$.

In terms of the second research question, the correlation study involving potential confounding variables (delivery modality, training level, supervisor's

Table 1. Correlation matrix.

	Impact	Modality	Level	Status	Gender
Impact	—				
Modality	0.24 ^a	—			
Level	-0.34 ^a	0.25 ^b	—		
Status	-0.13 ^a	0.17 ^b	0.32 ^b	—	
Gender	0.15 ^a	0.11 ^b	0.20 ^b	0.17 ^b	—

Note. No correlation was significant, $p < .05$.

^a r_{pb} , ^b r_{ϕ} .

status, supervisor gender) and supervisor did not produce any significant relationships at the preset alpha level (see [Table 1](#)).

Discussion

This study was one of the first to consider supervisees' perception of supervision in reference to delivery modality. Results indicated no statistically significant difference in the perceived usefulness of clinical supervision when provided in an exclusively online environment versus that which occurred face-to-face. The lack of statistically significant differences cannot be used to declare an absolute nondifference exists (Lane, 2016). However, as evidence mean differences and the confidence interval results, the actual differences were quite minimal. Moreover, the findings align well with previous research conducted in the fields of distance education, online clinical work, and hybrid supervision. The results reflect the extensive research that exists indicating that learning objectives that are achieved in a face-to-face environment might also be mastered online (Bowen, Chingos, Lack, & Nygren, 2012). Further, the results of this study support the work of researchers who found that clinical work conducted online is comparable to that completed in a face-to-face environment (Barak & Hen, 2008; Cook & Doyle, 2002; Fenichel et al., 2002; Finfgeld, 1999; Hyler, Gangure, & Batchelder, 2005). Moreover, the results of the present study also align well with past research specifically focused on online supervision. Overall, the participants studied reported that they felt cybersupervision was an effective form of clinical supervision that supported their growth as counselors. These results corroborate previous researchers' assertions that cybersupervision could effectively foster the development of a counselor's professional identity (Luke & Gordon, 2011; Perry, 2012) and serve to strengthen the claim that cybersupervision is a valuable and viable form of clinical supervision (Chapman et al., 2011). Finally, the elicited results from the present study mirror the conclusions drawn by Conn and colleagues (2009) which suggest that the outcomes of supervision that utilize online interactions do not vary greatly from traditional face-to face-supervision.

Four limitations to this study should be considered. The first limitation involves the researchers' inability to randomly assign participant supervisees to the experimental and control conditions. As such, it is not clear if the nonresults were because of unknown systematic variations between the two groups. For example, it is possible that those whom selected to engage in cybersupervision exclusively maintain a higher level of self-efficacy regarding technology as compared to those in the control condition. As such, it is not possible to determine whether the results elicited from the current study are likely to be reflective of all supervisees, or if they are limited to those with higher technology proficiency levels. A second limitation concerns that it is unclear how professional maturation affected the results, if at all. Could it

be that simply engaging in clinical training may have acted upon the dependent variable in a way independent of the dependent variable (Martella, Nelson, Morgan, & Marchand-Martella, 2013)? It is also important to note that the results obtained were based upon supervisee participants' self-reports. Third, the participants in this study were predominately White. The extent to which the results can be generalized to supervisees of Color is not clear. Finally, it should be noted that this study may be somewhat underpowered according to Cohen's classical definition (Cohen, 1992). The results of this study did align with previous research. Still, the study being statistically underpowered does exist as an alternative explanation for the nonsignificant results encountered.

Keeping the aforementioned limitations in mind, the results of this study suggest that there is not a difference in supervisees' perceptions regarding the usefulness of supervision in reference to delivery modality (i.e., cybersupervision vs. face-to-face). Given the perceived effectiveness of this mode of supervision, it may be that cybersupervision is an alternative to traditional face-to-face supervision. This modality of supervision provides increased access to clinical oversight to those whom are otherwise unable to access it due to location, travel costs, or other factors. Cybersupervision may also provide counselors and other types of mental health professionals with access to an increased pool of qualified clinical supervisors. Rather than be limited to the credentialed supervisors in their area, counselors and similar professionals are empowered by the prospect of cybersupervision to seek out highly-skilled supervisors whom are qualified to address any particularly nuanced diagnosis or treatment modality that may be of interest. As such, counselor preparation programs may want to further investigate the efficacy and pragmatic practicalities of implementing cybersupervision in training circumstances that warrant it.

Further expansion of this delivery modality to in-service counselors should also be considered. Three benefits to this expansion stands out. First, busy preservice counselors and in-service counselors are alike in their desire to gain flexibility in terms of the location of supervisory sessions. Second, cybersupervision allows both groups access to a wider pool of professional counselors as supervisors. Thus, cybersupervision creates the opportunity to seek more appropriate guidance for specific issues at hand. Third, this modality frees supervisees from the often-extensive time and expenses of traveling to face-to-face supervision. This, in turn, may allow counselors to more effectively use their time and serve the mental health needs of more individuals without compromising the integrity of the process of clinical supervision.

Future research efforts should be directed towards randomized control studies of cybersupervision efficacy. Such studies should aim to tease out systemic and personal variables likely affecting supervisory dynamics and subsequent perceptions of supervision modalities. Understanding these factors may further enable counselor educators and those in similar roles to

determine how to best leverage technology in the professional development of emerging helping professionals.

References

- Armstrong, P., & Schneiders, I. (2003). *Video and telephone technology in supervision and supervision training. Technology in counselling and psychotherapy: A practitioner's guide*. Basingstoke, UK: Palgrave.
- Barak, A., & Hen, L. (2008). Exposure in cyberspace as means of enhancing psychological assessment. In A. Barak (Ed.), *Psychological aspects of cyberspace: Theory, research, applications*, (pp. 129–162). Cambridge, UK: Cambridge University Press.
- Bernard, J. M., & Goodyear, R. K. (2013). *Fundamentals of clinical supervision*, (5th ed.). New York, NY: Pearson.
- Bowen, W. G., Chingos, M. M., Lack, K. A., & Nygren, T. I. (2012). *Interactive learning online at public universities: Evidence from random trials*. New York, NY: Ithaca S+R.
- Chapman, R. A., Baker, S. B., Nassar-McMillan, S. C., & Gerier, E. R. (2011). Cyber-supervision: Further examination of synchronous and asynchronous modalities in counseling practicum supervision. *Counselor Education & Supervision*, 50, 298–313. doi:10.1002/j.1556-6978.2011.tb01917.x
- Chedzoy, O. B. (2006). Phi-coefficient. *Encyclopedia of Statistical Sciences*, 9. doi:10.1002/9781118445112.stat00682
- Clingerman, T. L., & Bernard, J. M. (2004). An investigation of the use of e-mail as a supplemental modality for clinical supervision. *Counselor Education and Supervision*, 44(2), 82–95. doi:10.1002/j.1556-6978.2004.tb01862.x
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159. doi:10.1037/0033-2909.112.1.155
- Coker, J., Jones, W., Staples, P. A., & Harbach, R. L. (2002). Cybersupervision in the first practicum: Implications for research and practice. *Guidance & Counseling*, 18, 33–37.
- Conn, S. R., Powell, B. R., & Roberts, R. L. (2009). Attitudes and satisfaction with a hybrid model of counseling supervision. *Educational Technology & Society*, 12, 298–306.
- Cook, J. E., & Doyle, C. (2002). Working alliance in online therapy as compared to face-to-face therapy: Preliminary results. *Cyberpsychology & Behavior*, 5, 95–105. doi:10.1089/109493102753770480
- Council for Accreditation of Counseling, & Related Educational Programs (CACREP). (2016). *Directory*. Retrieved from <http://www.cacrep.org/>
- Crowell, L., & McCarragher, T. (2007). Delivering a social work MSW program through distance education: An innovative collaboration between two universities, USA. *Social Work Education*, 26, 376–388. doi:10.1080/02615470601081688
- Cuijpers, P. (2016). Are all psychotherapies equally effective in the treatment of adult depression? The lack of statistical power of comparative outcome studies. *Evidence Based Mental Health*, 19(2), 39–42. ebmental-2016. doi:10.1136/eb-2016-102341
- Cummings, R. (2002). Cybersupervision: Virtual peer group counseling supervision—Hindrances or help? *Counseling & Psychotherapy Research*, 2, 222–229. doi:10.1080/14733140212331384705
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149–1160. doi:10.3758/BRM.41.4.1149
- Fenichel, M., Suler, J., Barak, A., Zelvin, E., Jones, G., Munro, K., ... Walker-Schmucker, W. (2002). Myths and realities of online clinical work. *CyberPsychology and Behavior*, 5, 481–497. doi:10.1089/109493102761022904

- Finfgeld, D. L. (1999). Psychotherapy in cyberspace. *Journal of the American Psychiatric Nurses Association*, 5, 105–110. doi:10.1177/107839039900500401
- Gainor, K. A., & Constantine, M. G. (2002). Multicultural group supervision: A comparison of in-person versus web-based formats. *Professional School counseling*, 6, 104–111.
- Gammon, D., Sørli, T., Bergvik, S., & Sørensen Høifødt, T. (1998). Psychotherapy supervision conducted via videoconferencing: A qualitative study of users' experiences. *Nordic Journal of Psychiatry*, 52(5), 411–421.
- Getzelman, M. A. (2003). Development and validation of the group supervision impact scale (Unpublished doctoral dissertation). University of Southern California, Los Angeles.
- Glazer, H. R., & Wanstreet, C. E. (2011). Connection to the academic community: Perceptions of students in online education. *Quarterly Review of Distance Education*, 12, 55–62.
- Glosoff, H. L., Renfro-Michel, E., & Nagarajan, S. (2016). Ethical issues related to the use of technology in clinical supervision. In T. Rousmaniere & E. Renfro-Michel (Eds.), *ACA using technology to enhance clinical supervision*, (pp. 31–46). Alexandria, VA: American Counseling Association.
- Gordon, C., & Luke, M. (2012). Discursive negotiation of face via email: Professional identity development in school counseling supervision. *Linguistics & Education*, 23, 112–122. doi:10.1016/j.linged.2011.05.002
- Gordon, C., & Luke, M. (2013). Re-and pre-authoring experiences in email supervision: Creating and revising professional meanings in an asynchronous medium. In D. Tannen & A. M. Trester (Eds.), *Discourse 2.0 language and new media*, (pp. 167–181). Washington, DC: Georgetown University Press.
- Graf, N. M., & Stebnicki, M. A. (2002). Using email for clinical supervision: A qualitative analysis. *Journal of Rehabilitation*, 68(3), 41–49.
- Hall, R. C., Macvaugh, G. S., Merideth, P., & Montgomery, J. (2007). Commentary: Delving further into liability for psychotherapy supervision. *Journal of the American Academy of Psychiatry and the Law Online*, 35(2), 196–199.
- Haythornthwaite, S. (2002). Videoconferencing training for those working with at-risk young people in rural areas of Western Australia. *Journal of Telemedicine and Telecare*, 8(2), 29–33.
- Hylar, S. E., Gangure, D. P., & Batchelder, S. T. (2005). Can telepsychiatry replace in-person psychiatric assessments? A review and meta-analysis of comparison studies. *CNS Spectrums*, 10, 403–413. doi:10.1017/s109285290002277x
- International Telecommunications Union. (2016). *Facts and figures 2015*. Retrieved from <http://www.itu.int/ITU-D/ict/facts/2011/material/ICTFactsFigures2011.pdf>
- Kanter, J. W., Tasi, M., Homan, G., & Koerner, K. (2013). Preliminary data from a randomized pilot study of Web-based functional analytic psychotherapy therapist training. *Psychotherapy*, 50, 248–255. doi:10.1037/a0029814
- Kobak, K. A., Craske, M. G., Rose, R. D., & Wolitsky-Taylor, K. (2013). Web-based therapist training on cognitive behavior therapy for anxiety disorders: A pilot study. *Psychotherapy*, 50, 235–247. doi:10.1037/a0030568
- Lane, D. M. (2016). Interpreting non-significant results. In D. M. Lane (Ed.), *Online statistics education: A multimedia course of study* (pp. 329–369). Houston, TX: Rice University. Retrieved from <http://onlinestatbook.com/>
- Luke, M., & Gordon, C. (2011). A discourse analysis of school counseling supervisory e-mail. *Counselor Education and Supervision*, 50, 274–291. doi:10.1002/j.1556-6978.2011.tb00124.x
- Maki, R. H., Maki, W. S., Patterson, M., & Whittaker, D. P. (2000). Evaluation of a web-based introductory psychology course: I. Learning and satisfaction in on-line versus lecture courses. *Behavior Research Methods, Instruments & Computers*, 32, 230–239. doi:10.3758/BF03207788

- Martella, R. C., Nelson, J. R., Morgan, R. L., & Marchand-Martella, N. E. (2013). *Understanding and interpreting educational research*. New York, NY: Guilford Press.
- Miller, G. M., & Dollarhide, C. T. (2006). Supervision in schools: Building pathways to excellence. *Counselor Education & Supervision, 45*, 296–303. doi:10.1002/j.1556-6978.2006.tb00005.x
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance Education, 26*, 29–48. doi:10.1080/01587910500081269
- Myrick, R. D., & Sabella, R. A. (1995). Cyberspace: New place for counselor supervision. *Elementary School Guidance and Counseling, 30*(1), 35–45.
- Nelson, J. A., Nichter, M., & Henriksen, R. (2010). On-line supervision and face-to-face supervision in the counseling internship: An exploratory study of similarities and differences. *VISTAS, 2010*, 10.
- Parker, K., Moore, A., & Lenhart, A. (2011). *The digital revolution and higher education*. Washington, DC: Pew Research Center.
- Paulson, L. R., & Casile, W. J. (2014). Building bridges: A pilot program for training and support of rural supervisors. *The Clinical Supervisor, 33*, 204–227. doi:10.1080/07325223
- Perry, C. W. (2012). Constructing professional identity in an online graduate clinical training program: Possibilities for online supervision. *Journal of Systemic Therapies, 31*, 53–67. doi:10.1521/jsyt.2012.31.3.53
- Rees, C. S., & Gillam, D. (2001). Training in cognitive-behavioral therapy for mental health professionals: A pilot study of videoconferencing. *Journal of Telemedicine and Telecare, 7*, 300–303. doi:10.1258/1357633011936561
- Rees, C. S., Krabbe, M., & Monaghan, B. J. (2009). Education in cognitive-behavioral therapy for mental health professionals. *Journal of Telemedicine and Telecare, 15*, 59–63. doi:10.1258/jtt.2008.008005
- Schroeder, R. (2011, May). *The open future of online learning*. Paper presented at the e-Cornucopia annual conference, Rochester, MI.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Harcourt.
- Sholomskas, D. E., Syracuse-Siewert, G., Rounsaville, B. J., Ball, S. A., Nuro, K. F., & Carroll, K. M. (2005). We don't train in vain: A dissemination trial of three strategies of training clinicians in cognitive-behavioral therapy. *Journal of Consulting and Clinical Psychology, 73*, 106–115. doi:10.1037/0022-006X.73.1.106
- Sørli, T., Gammon, D., Begvik, S., & Secton, H. (1999). Psychotherapy supervision face-to-face and by videoconferencing: A comparative study. *British Journal of Psychotherapy, 15*, 452–462. doi:10.1111/j.1752-0118.1999.tb00475.x
- Stebnicki, M. A., & Glover, N. M. (2001). E-Supervision as a complementary approach to traditional face-to-face clinical supervision in rehabilitation counseling: Problems and solutions. *Rehabilitation Education, 15*(3), 283–293.
- Weingardt, K. R., Cucciare, M. A., Bellotti, C., & Lai, W. (2009). A randomized trial comparing two models of Web-based training in cognitive-behavior therapy for substance abuse counselors. *Journal of Substance Abuse Treatment, 37*, 219–227. doi:10.1016/j.sat.2009.01.002
- Weingardt, K. R., Villafranca, S. W., & Levin, C. (2006). Technology-based training in cognitive behavior therapy for substance abuse counselors. *Substance Abuse, 27*, 19–26. doi:10.1300/J465v27n03
- Welkowitz, J., Ewen, R., & Cohen, J. (2014). *Introductory statistics for the behavioral sciences*. Amsterdam, The Netherlands: Elsevier Science. Retrieved from <http://www.ebilib.com>