

An empirical study of the effectiveness of online counseling services from various job settings and features

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Submitted: 22-10-2022, Revised: 24-03-2023, Accepted: 16-05-2023

Abstract: The challenge for future counselors is using technology in counseling. Online counseling is a strategy that can be applied amid the counselee's doubts about the effectiveness of existing counseling services. This study aims to identify the point of online counseling services from various counseling service settings. The qualitative systematic literature review design is sourced from 9 scientific journals through the semantic scholar database and has been reputable from 2013-2022. The PRISMA flow diagram model is presented—data analysis of 9 articles (out of 588 invalids) through descriptive narrative. The data findings show that it is more effective than face-to-face. School, college, addiction, health, and community counselors can apply for it. Telephone, chat, video, and text features can support multiple counseling approaches. Counselors need to develop the skills and competencies of counselors with online counseling through training and webinars.

Keywords: Counseling services; mental health; online counseling

Introduction

The evolution of technology affects social systems, so humans use gadgets and smartphones (Elmaghraby & Losavio, 2014). The sophistication of technological development is strongly influenced by networks that will always grow and impact technological and social innovation (Desmarchelier et al., 2020). Even though the growing technology is increasingly sophisticated, jobs are helped by technological developments, especially jobs in social services. Technological innovation is a bridge to help solve problems (Li & Piachaud, 2019), one of which is for counselors in counseling services.

The COVID-19 pandemic has dramatically helped the development of technology, especially in mental health services (Both et al., 2021). The use of technology in counseling by counselors has excellent benefits. The use of digital technology in counseling, although counselors must immediately adapt to various technologies (Supriyanto et al., 2020). Counselors must also be able to hone counseling skills with non-verbal and verbal cues during online counseling (Ojo, 2012).

Online counseling services are an alternative to helping individuals, although they need to be tested regarding the effectiveness of their interventions on mental health or diverse populations (Harris & Birnbaum, 2015). The basic concept of counseling is communication between the counselor and the counselee in his role in solving global and specific problems of the counselee (Kargulowa, 2012). Needs to implement online counseling because specific individuals require face-to-face meetings in person. Counseling services can be applied in and outside education (Umoh, 2014). Another doubt is that online counseling needs to be proven not only applicable at school but also outside of school.

Improvements in online counseling are constantly emerging (Mishna et al., 2013). The study found that technology helps the implementation of guidance and counseling (Soler Costa & Soler Santaliestra, 2017). Discussions about effectiveness studies have emerged from various studies but must be studied in depth in different counseling settings. The effectiveness of online counseling in the work setting of counselors must be found to support the curriculum in colleges. Online counseling services by professional counselors still have to pay attention to

the competence and needs of the counselee, privacy, security, communication with the use of technology, and the counselee’s problems (Stoll et al., 2020).

A summary of empirical studies on the effectiveness of online counseling should be found in various counseling service settings—empirical evidence as a basis for curriculum development in universities in online counseling services. Online counseling support with adequate resources will benefit counsees who need it (Stallman, 2012). Indonesia, with various counseling service settings, also requires online counseling services and develops human resources who can apply for it. This study aims to identify the effectiveness of online counseling services from various settings.

Method

The research design uses a systematic literature review (SLR) to identify, evaluate, and synthesize factual conditions (Booth et al., 2016; Okoli & Schabram, 2010) about the effectiveness of online counseling services from various counseling service settings. A qualitative approach to the SLR design, through an assessment of scientific article data from various databases related to the effectiveness of online counseling services through Semantic Scholar.

The inclusion criteria in this study were reputable international journal articles (Scopus) published from 2013-2022, full English text, individual subjects from various school settings and outside of school, and findings from systematic literature or meta-analysis. The exclusion criteria needed to be completed article composition, reputable international journals, published in 2013-2022, and individuals with various problems. Researchers use keywords including “effectiveness”, “meta-analysis”, “cyber counseling”, and “online counseling”. Then the following process is to make judgments and selections to get articles relevant to the research objectives. The search above found that 558 articles based on keywords and nine scientific articles will be analyzed using a descriptive narrative approach in this paper. The findings of the search are depicted in a PRISMA flow diagram.

Results and Discussion

The following is a PRISMA flowchart for the article screening process used in the systematic literature review.

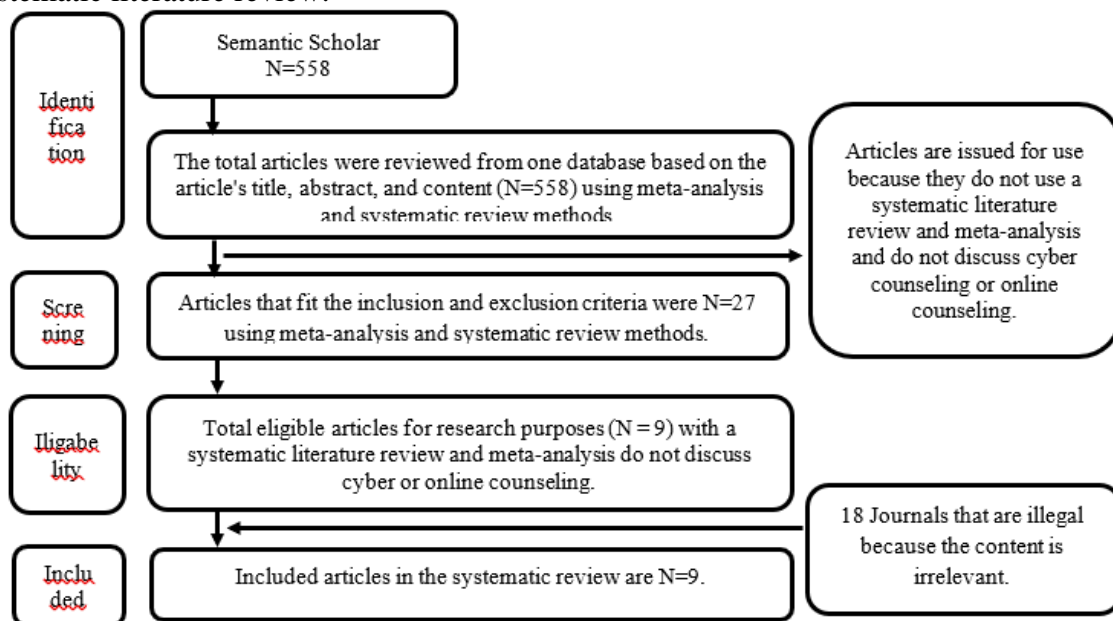


Figure 1. PRISMA Flow Diagram

The initial search for articles started by entering keywords into the Semantic Scholar database and then searching with the keywords “effectiveness”, “meta-analysis”, “cyber counseling”, and “online counseling” combined with the Boolean Operator “AND” and got 558 articles. Articles that did not meet the inclusion and exclusion criteria were excluded. As many as 531 articles and 27 articles left. Eight articles were excluded because they needed to be by the research objectives. After all, the content was not relevant to the research objectives. Twelve papers were reviewed to discuss factors supporting self-efficacy for recovering from GPZ. Researchers analyzed the data using critical appraisal. Eighteen articles were analyzed further. Based on the analysis results, three themes were obtained: online counseling settings, online counseling features, and the effectiveness of face-to-face counseling compared to online counseling.

Table 1. Data Review of the Effectiveness of Online Counseling Services in Various Counseling Settings

No	Title/ Author/ Year	Research purposes	Setting	Research finding
1	The Prevalence of Cyber-Counseling: A Systematic Literature Review on Effectiveness and Preferences (Zainudin et al., 2020)	Explore and discuss the prevalence of online counseling in reaching all possible clients and improving counseling experiences and outcomes for all.	Students, Youth, and Disabilities	The study’s findings indicate that online counseling’s effectiveness is comparable to face-to-face counseling through various features in technology. Online counseling makes counselors and counsees more flexible in implementing counseling without time limits.
2	Systematic review and meta-analysis of Internet interventions for smoking cessation among adults (Graham et al., 2016)	Determine the effectiveness of Internet interventions in promoting smoking cessation among adult tobacco users compared with other forms of intervention recommended in treatment guidelines.	Health in Smokers	Internet intervention, telephone counseling, and face-to-face counseling were practical, and there was no significant difference.
3	Effectiveness of Individual Real-Time Video Counseling on Smoking, Nutrition, Alcohol, Physical Activity, and Obesity Health Risks: Systematic Review (Byaruhanga et al., 2020)	They tested the effectiveness of individually delivered real-time video counseling on risk factors for smoking, nutrition, alcohol consumption, physical activity, and obesity.	The health of smokers, alcoholism, physical fitness, and obesity.	Video counseling is potentially more effective than other forms of support in dealing with physical inactivity and obesity and is no less effective in modifying cigarette and alcohol consumption. It is essential to consider the relative merits of video counseling in terms of other policy and practice decision-making factors, such as cost and feasibility.
4	Internet interventions for perfectionism: A meta-analysis and proposals for the college setting (Iliakis & Masland, 2021)	Identify the efficacy of Internet and psychotherapeutic interventions for perfectionism as potential tools for overburdened college counseling centers where perfectionism is highly prevalent.	There are students with psychological and mental health problems.	There was a similar effect to Internet-mediated and non-Internet-mediated interventions in counseling. Most interventions using cognitive-behavioral perfectionism therapy can be implemented face-to-face or online, and Internet counseling interventions for perfectionism reduce perfectionism and concurrent psychopathology.
5	Application of Synchronous Text-Based Dialogue Systems in Mental Health Interventions: Systematic Review	We are reviewing the current evidence for the feasibility and effectiveness of online one-on-one mental health interventions using text-based synchronous chat.	Mental health	Research shows significant and sustained improvements in mental health outcomes following synchronous text-based counseling interventions and post-treatment improvements that are equivalent to but not superior to face-to-face

No	Title/ Author/ Year	Research purposes	Setting	Research finding
	(Hoermann et al., 2017)			counseling (face and telephone counseling) for problems of anxiety, distress, depression, eating disorders, and addictions.
6	Online synchronous chat counseling for young people aged 12–25: a mixed methods systematic review protocol (Tibbs et al., 2022)	Effectiveness and therapeutic processes that contribute to work	Teen mental health	Online synchronous chat counseling for youth aged 12-25 years provides a modality for online counseling. Under-researched and unique. Online synchronous chat counseling assists mental health professionals in designing, implementing, and evaluating online synchronous chat counseling with diverse youth.
7	Interventions to improve self-management of adults living with HIV on Antiretroviral Therapy: A systematic review (Areri et al., 2020)	Identify and evaluate the effectiveness of telephone counseling interventions to improve the self-management of adults living with HIV taking antiretroviral therapy.	Health	Telephone counseling is commonly used and effective in improving self-management and self-management outcomes. Counseling with used and practical manuals is also assisted by technology. The most widely measured findings were maintenance of medication adherence and quality of life, symptom management, self-efficacy, coping, and social support.
8	Real-time video counseling for smoking cessation (Zainudin et al., 2020)	Assess the effectiveness of real-time video counseling delivered individually or in groups in improving smoking cessation, cessation efforts, intervention adherence, satisfaction, and therapeutic alliances, and provide an economic evaluation of real-time video counseling.	Smoker's health	There is very little evidence of the effectiveness of real-time video counseling in quitting smoking. There is no difference between video and telephone counseling to help people quit smoking. Online counseling proves it is effective in assisting individuals to quit smoking, but it needs further evidence.
9	Telephone counseling for smoking cessation (Matkin et al., 2019)	Evaluate the effect of telephone support to help smokers quit, including proactive or reactive counseling or providing other information to smokers who call helplines.	Smoker's health	Proactive telephone counseling assists smokers seeking help from smoking cessation lines, and the evidence confirms that proactive telephone counseling increases smoking cessation rates elsewhere.

The application of online counseling has a variety of activities. These activities can be applied through synchronous and asynchronous modes (Supriyanto et al., 2020). The findings show that online and face-to-face counseling is equally effective, with advantages and disadvantages. Another mode of combining face-to-face and online counseling is blended counseling, which can develop mental health (Supriyanto et al., 2021) and student discipline (Ekawati et al., 2022). The face-to-face and online counseling models can be further researched and tested for effectiveness. Integrating online and face-to-face counseling is an innovation (Van der Vaart et al., 2014), but it needs to be tested to determine its effectiveness.

The facts show that online counseling is relevant for students in schools and colleges. College students have needs and priorities to help develop mental health with the characteristics of counselors and online applications (Yurayat & Seechaliao, 2021). Initial assessment of the counselor as a basis for assisting students. Counselors need various digital technologies with the consent of the counselee (Zeren et al., 2020). This technology can use virtual modes such as Zoom meetings, Webex, google meetings, chat, and telephone (Supriyanto et al., 2020).

Online counseling services can also be applied in health and community settings. Counselors in the community, addiction counselors in rehabilitation, and counselors in health can use technology to help counselees. Counselors in the community can use the website to help counselees (Gowen et al., 2012), and counselors can be there. Online counseling services indirectly help individuals in career development (Scanlan & Still, 2013).

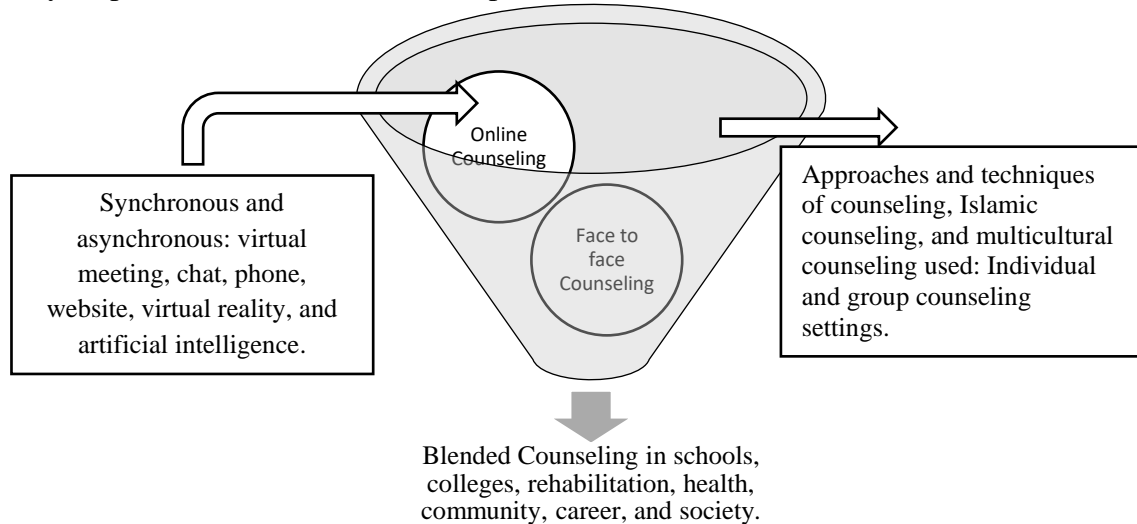


Figure 2. Combination face to face counseling and online counseling

The challenge in the future is the technology that is developing rapidly. Online counseling services are a necessity and are constantly evolving—virtual reality is an innovation in online counseling services. Virtual reality counseling should include features to encourage counselor and counsee trust (Wray & Emery, 2022). In addition to virtual reality, artificial intelligence is part of communication (Antel et al., 2022) between counselors and counsees. Another fact is that virtual reality can overcome individual anxiety (Sarpourian et al., 2022). In this condition, the effectiveness of online counseling is constantly developing and being tested. Besides being tested, it can be measured and evaluated (Ito et al., 2018).

Conclusions and Suggestions

Online counseling services can and are effective in helping individuals or counsees. Schools and colleges' health, community, and education settings are relevant for applying for online counseling services. It can be used through telephone, real-time video, chat counseling/text-based counseling, or other features. It helps individuals with health problems such as smoking, alcoholism, obesity, and physical issues. It can be applied to individuals with special needs and disabilities in the community. It is also used for adolescents, youth, and students in schools and colleges with psychological and mental health problems. It utilizes the internet to help counselors and counsees. The fact that online counseling and face-to-face counseling are unavoidable, with their advantages and disadvantages. It is a big challenge for counselors with network problems in Indonesia. The online counseling mode needs to grow the skills and competencies of school counselors, college counselors, health counselors, addiction counselors, and counselors in the community. Various pieces of training and webinars are very supportive of the development of the quality of counselors who use online counseling

References

- Antel, R., Abbasgholizadeh-Rahimi, S., Guadagno, E., Harley, J. M., & Poenaru, D. (2022). The use of artificial intelligence and virtual reality in doctor-patient risk communication: A scoping review. *Patient Education and Counseling*.
- Areri, H. A., Marshall, A., & Harvey, G. (2020). Interventions to improve self-management of adults living with HIV on antiretroviral therapy: A systematic review. *PLoS One*, *15*(5), e0232709.
- Booth, A., Sutton, A., & Papaioannou, D. (2016). *Systematic approaches to a successful literature review*.
- Both, L. M., Zoratto, G., Calegaro, V. C., Ramos-Lima, L. F., Negretto, B. L., Hauck, S., & Freitas, L. H. M. (2021). COVID-19 pandemic and social distancing: Economic, psychological, family, and technological effects. *Trends in Psychiatry and Psychotherapy*, *43*, 85–91.
- Byaruhanga, J., Atorkey, P., McLaughlin, M., Brown, A., Byrnes, E., Paul, C., Wiggers, J., & Tzelepis, F. (2020). Effectiveness of individual real-time video counseling on smoking, nutrition, alcohol, physical activity, and obesity health risks: Systematic review. *Journal of Medical Internet Research*, *22*(9), e18621.
- Desmarchelier, B., Djellal, F., & Gallouj, F. (2020). Mapping social innovation networks: Knowledge intensive social services as systems builders. *Technological Forecasting and Social Change*, *157*, 120068.
- Ekawati, J. I., Supriyanto, A., Suprihatin, B., Hendiani, N., & Mulawarman, M. (2022). Individual Blended Counseling Design for Disciplinary Responsibilities. *Jurnal Pendidikan Tambusai*, *6*(1), 3694–3705.
- Elmaghraby, A. S., & Losavio, M. M. (2014). Cyber security challenges in Smart Cities: Safety, security, and privacy. *Journal of Advanced Research*, *5*(4), 491–497.
- Gowen, K., Deschaine, M., Gruttadara, D., & Markey, D. (2012). Young adults with mental health conditions and social networking websites: Seeking community-building tools. *Psychiatric Rehabilitation Journal*, *35*(3), 245.
- Graham, A. L., Carpenter, K. M., Cha, S., Cole, S., Jacobs, M. A., Raskob, M., & Cole-Lewis, H. (2016). Systematic review and meta-analysis of Internet interventions for smoking cessation among adults. *Substance Abuse and Rehabilitation*, *7*, 55.
- Harris, B., & Birnbaum, R. (2015). Ethical and legal implications on the use of technology in counseling. *Clinical Social Work Journal*, *43*(2), 133–141.
- Hoermann, S., McCabe, K. L., Milne, D. N., & Calvo, R. A. (2017). Application of synchronous text-based dialogue systems in mental health interventions: Systematic review. *Journal of Medical Internet Research*, *19*(8), e7023.
- Iliakis, E. A., & Masland, S. R. (2021). Internet interventions for perfectionism: A meta-analysis and proposals for the college setting. *Journal of American College Health*, 1–6.
- Ito, T., Kamita, T., Matsumoto, A., Munakata, T., & Inoue, T. (2018). Virtual reality course based on the SAT counseling method for self-guided mental healthcare. *2018 IEEE International Conference on Healthcare Informatics (ICHI)*, 299–306.
- Kargulowa, A. (2012). *Counseling in the satellite communication era*.
- Li, B., & Piachaud, D. (2019). Technological innovations and social development in Asia. In *Journal of Asian Public Policy* (Vol. 12, Issue 1, pp. 1–14). Taylor & Francis.
- Matkin, W., Ordóñez-Mena, J. M., & Hartmann-Boyce, J. (2019). Telephone counseling for smoking cessation. *Cochrane Database of Systematic Reviews*, *5*.
- Mishna, F., Levine, D., Bogo, M., & Van Wert, M. (2013). Cyber counseling: An innovative field education pilot project. *Social Work Education*, *32*(4), 484–492.

- Ojo, O. D. (2012). Faceless counseling: Trend of technological development. In *Online guidance and counseling: Toward effectively applying technology* (pp. 14–23). IGI Global.
- Okoli, C., & Schabram, K. (2010). *A guide to conducting a systematic literature review of information systems research*.
- Sarpourian, F., Samad-Soltani, T., Moulaei, K., & Bahaadinbeigy, K. (2022). Virtual reality therapy and counseling affect students' public speaking anxiety: *Health Science Reports*, 5(5), e816.
- Scanlan, J. N., & Still, M. (2013). Job satisfaction, burnout, and turnover intention in occupational therapists working in mental health. *Australian Occupational Therapy Journal*, 60(5), 310–318.
- Soler Costa, R., & Soler Santaliestra, J. R. (2017). *Using modern technologies in educational counseling in high schools in Spain (web application-e-portfolio)*.
- Stallman, H. M. (2012). University counseling services in Australia and New Zealand: Activities, changes, and challenges. *Australian Psychologist*, 47(4), 249–253.
- Stoll, J., Müller, J. A., & Trachsel, M. (2020). Ethical issues in online psychotherapy: A narrative review. *Frontiers in Psychiatry*, 10, 993.
- Supriyanto, A., Hartini, S., Irdasari, W. N., Miftahul, A., Oktapiana, S., & Mumpuni, S. D. (2020). Teacher professional quality: Counseling services with technology in the COVID-19 pandemic. *Counsellia: Jurnal Bimbingan Dan Konseling*, 10(2), 176–189.
- Supriyanto, A., Mulawarman, M., Soesanto, S., Sugiharto, D. P. Y., & Hartini, S. (2021). Blended Counseling as a Solution for the Development of Mental Health and Understanding Herd Immunity for Society. *KONSELI: Jurnal Bimbingan Dan Konseling (E-Journal)*, 8(2), 169–180.
- Tibbs, M., O'Reilly, A., O'Reilly, M. D., & Fitzgerald, A. (2022). Online synchronous chat counseling for young people aged 12–25: A mixed methods systematic review protocol. *BMJ Open*, 12(4), e061084.
- UMOH, I. S. (2014). Appraisal of guidance and counseling services in schools and non-school settings in Nigeria: The way forward. *Journal of Resourcefulness and Distinction*, 7(1).
- Van der Vaart, R., Witting, M., Riper, H., Kooistra, L., Bohlmeijer, E. T., & van Gemert-Pijnen, L. J. (2014). Blending online therapy into regular face-to-face therapy for depression: Content, ratio, and preconditions according to patients and therapists using a Delphi study. *BMC Psychiatry*, 14(1), 1–10.
- Wray, T. B., & Emery, N. N. (2022). Feasibility, appropriateness, and willingness to use virtual reality as an adjunct to counseling among addictions counselors. *Substance Use & Misuse*, 57(9), 1470–1477.
- Yurayat, P., & Seechaliao, T. (2021). Needs Assessment to Develop Online Counseling Program. *International Education Studies*, 14(7), 59–71.
- Zainudin, Z. N., Asri, A. S., Talib, M. A., Hassan, S. A., Ahmad, N. A., & Yusop, Y. M. (2020). The prevalence of cyber-counseling: A systematic literature review on effectiveness and preferences. *International Journal of Academic Research in Business and Social Sciences*, 10(10), 731–751.
- Zeren, S. G., Erus, S. M., Amanvermez, Y., Genc, A. B., Yilmaz, M. B., & Duy, B. (2020). The Effectiveness of Online Counseling for University Students in Turkey: A Non-Randomized Controlled Trial. *European Journal of Educational Research*, 9(2), 825–834.

