

## **Effectiveness of Cyber Counseling to Improve Educational Counseling Services: Content Analysis from 2019-2024**

## **Efektivitas Siber Konseling Untuk Meningkatkan Layanan Konseling Pendidikan: Analisis Isi dari tahun 2019-2024**

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### **ABSTRACT**

Background by the absence of meta data documenting evidence of the effectiveness of cyber counseling in the context of educational counseling services for students. The objectives of the study: 1) to review the literature on technology used in cyber counseling in educational counseling services; 2) to review the effectiveness of cyber counseling to improve educational counseling services. This study uses content analysis on n = 20 literatures. This study uses a comprehensive review of n = 20 literatures. Literature search on the main database, namely SOPUS with the help of the PoP application, spanning the years 2019-2024. Data collection from June 2024 to July 2024. Results of the study: 1) The technology used in cyber counseling in educational counseling services includes: Skype, Silver Cloud, email, SMS, online sync video technology, website, IZ Hero Challenge, iCBT, Whatsapp, and computer-internet. Cyber counseling utilizes technology to facilitate individual counseling services, career counseling, psychological counseling, and social counseling. 2) Evidence of the effectiveness of cyber counseling that uses technology assistance to improve educational counseling services is seen from the results of counseling increasing (n = 16) and decreasing (n = 4). Proven to increase resilience, subjective risk intelligence, career adaptability, self-efficacy, optimism, and life satisfaction; understanding of social support in online peer groups for career counseling; students' humility; career decision-making skills; mental health; positive affect; subjective well-being; and future perspectives; access information; and assist students in getting counseling. Proven to reduce mental stress, anxiety, depression, obsessive-compulsive disorder, interpersonal sensitivity, and anxiety. These investigations include investigations in Indonesia, the United States, Turkey, Singapore, Iran, Ghana, Malaysia, Germany, Europe, and Italy.

**Keywords:** *Educational Counseling Services, Effectiveness, Improvement, Technology*

### **ABSTRAK**

Dilatar belakang oleh kekosongan meta data yang mendokumentasikan bukti efektivitas siber konseling dalam konsteks layanan konseling pendidikan pada siswa. Tujuan penelitian: 1) meninjau literatur tentang teknologi yang digunakan dalam siber konseling dalam layanan konseling pendidikan; 2) meninjau efektivitas siber konseling untuk meningkatkan layanan konseling pendidikan. Penelitian ini menggunakan analisis konten terhadap n = 20 literatur. Pencarian literatur pada data base utama, yaitu SOPUS dengan bantuan aplikasi PoP, rentang tahun 2019-2024. Pengumpulan data pada bulan Juni 2024 ke Juli 2024. Hasil penelitian: 1) Teknologi yang digunakan dalam cyber counseling dalam layanan konseling pendidikan meliputi: Skype, Silver Cloud, email, SMS, teknologi online sync video, website, IZ Hero Challenge, iCBT, Whatsapp, dan komputer-internet. Cyber counseling memanfaatkan teknologi untuk memfasilitasi layanan konseling individu, konseling karir, konseling psikologis, dan konseling sosial.; 2) Bukti efektivitas cyber counseling yang menggunakan bantuan teknologi untuk meningkatkan layanan konseling pendidikan terlihat dari hasil konseling yang meningkat (n=16) dan menurun (n=4). Terbukti meningkatkan resiliensi, kecerdasan risiko subjektif, adaptabilitas karir, efikasi diri, optimisme, harapan, dan kepuasan hidup; pemahaman dukungan sosial dalam kelompok sebaya online untuk konseling karir; kerendahan hati siswa; keterampilan pengambilan keputusan karir; kesehatan mental; afek positif; kesejahteraan subjektif; dan perspektif masa depan; mengakses informasi; dan membantu siswa dalam mendapatkan konseling. Terbukti mengurangi stres mental, kecemasan, depresi, gangguan obsesif-kompulsif, kepekaan interpersonal, dan kecemasan. Investigasi tersebut meliputi investigasi di Indonesia, Amerika Serikat, Turki, Singapura, Iran, Ghana, Malaysia, Jerman, Eropa, dan Itali.

**Kata Kunci:** *Efektivitas, Layanan Konseling Pendidikan, Peningkatan, Teknologi*

### **INTRODUCTION**

The counseling field has made substantial progress by incorporating technology into counseling sessions, a practice that is commonly referred to as "cyber counseling." The term "cyber counseling" denotes the provision of counseling services via the Internet, in which the counselor and client are not physically present in the same location and communicate through computer-mediated communication technologies ([K. D. Baker & Ray, 2011](#)). Instant messaging, synchronous conversation, text messaging, video conferencing, and asynchronous email are among the diverse modalities that cyber counseling incorporates. The increased accessibility of counseling services through internet platforms is a benefit of cyber counseling ([Barnett, 2005](#)). Cyber-counseling is the process of providing psychological therapy or interventions through cyberspace, utilizing information and communication technology, when the counselor and client are in separate locations ([Manhal-Baugus, 2001](#)). Online mental counseling, e-mental counseling, Internet-based counseling, computer-based counseling, and cyberspace counseling are all terms that are similar ([Maples & Han, 2008](#)).

Multiple cyber counseling analysts have discovered substantial evidence affirming the effectiveness of cyber counseling in addressing a diverse range of mental issues, such as social anxiety, eating disorders, depression, panic disorder, and post-traumatic stress disorder ([McBain et al., 2023](#); [Skinner & Zack, 2004](#); [Sloan et al., 2011](#)). In addition to addressing mental health issues, cyber counseling also facilitates the enhancement of student learning ([Hernawati et al., 2018](#)). The use of cyber counseling has been recognized as an effective means to enhance counseling services pertaining to self and identity, social interactions, and relationships. These factors include enhanced anonymity, less significance of physical appearance and physical distance as constraining factors for the establishment of relationships, and increased authority over the timing and pace of engagement ([McKenna & Bargh, 2000](#)).

The American Counseling Association Code of Ethics ([ACA, 2014](#)) include guidelines for distant counseling, technology, and social media, recognizing the reality that counseling services may now be provided via many technical means. For the field of school counseling, the use of digital information and communication technologies is crucial. Digital information and communication technology support to increase productivity and efficiently meet work demands in a distinctive manner. Digital information technology reduces costs, facilitates direct engagement with individuals, and improves collaboration, communication, and coordination processes ([Abdallah Altarawneh & Awwad Alomoush, 2022](#)). This has the capacity to improve productivity and efficiently meet work demands in a distinctive way. Digital information technology reduces costs, facilitates direct engagement with individuals, and improves collaboration, communication, and coordination processes

Online and cyber-counseling have been referred to by a number of terms, including cyber-counseling, online or Internet therapy, e-counseling, e-therapy, email therapy, Internet counseling, and Web counseling. Research by the following authors has provided support for these terms: [Alleman \(2002\)](#), [Cook & Doyle \(2002\)](#), [Jones \(2013\)](#), [Li et al. \(2013\)](#), [McCrickard & Butler \(2005\)](#). Online/cyber counseling can be provided through a variety of communication channels, such as phone ([Mallen & Vogel, 2005](#); [Mohr et al., 2008](#)), non-concurrent mail, content chat, or messages posted

on discourse-board chat rooms ([Joinson et al., 2008](#)), as well as real-time synchronous chat via web-based and in-person Webcam sessions ([Bambling et al., 2008](#)).

According to [Rohland \(2001\)](#), Professionals need to recognize the significance of this kind of innovation, according to [Rohland \(2001\)](#). According to [Li et al. \(2013\)](#) and [Wagner et al. \(2014\)](#), any problems that an Internet counselee or client has while interacting in a virtual environment should be taken seriously, according to [Li et al. \(2013\)](#) and [Wagner et al. \(2014\)](#). Online counseling provides a host of benefits to clients, such as increased resource availability, reduced anxiety for particular clientele groups, affordability, and appropriateness for those living in remote locations or unable to attend in-person counseling sessions for a variety of reasons ([de la Varre et al., 2010](#); [Krist, 2011](#)). Educators at schools may interact with people who are interested in or concerned about their job and take part in online communities centered on professional development by using social media sites like Facebook, Instagram, LinkedIn, and Twitter ([Carpenter & Krutka, 2015](#)).

Many empirical studies have been conducted on internet/online/cyber counseling, but based on searches, no research has been found that provides meta data on the effectiveness of cyber counseling in education.

Many empirical studies have been conducted on internet/online/cyber counseling, but based on searches in the publish or perish application with the scopus database, with restrictions from 2019 to 2024, using the keywords "effectiveness of cyber counseling to improve educational counseling services." No research has been found that provides meta data on the effectiveness of cyber counseling in education. Investigations into the use of technology in school counseling are still lacking ([Mason et al., 2018](#)). In real conditions in the field, counselors or BK teachers use cyber counseling to provide psychological services ([Marks et al., 2007](#)), career services ([D. C. Baker & Bufka, 2011](#)), learning services ([Hayden et al., 2008](#); [Putri Harahap et al., 2023](#)), mental health services ([Levin et al., 2022](#); [Ritterband et al., 2003](#)), social services ([Skinner & Zack, 2004](#)), and personal services ([Kw & S., 2019](#); [Rochlen et al., 2004](#)).

The previously mentioned review of prior studies demonstrates that cyber counseling is still advancing, since it is backed by study findings that substantiate its efficacy. Furthermore, cyber counseling is used within the realm of educational counseling services, namely in the areas of social, personal, learning, career, and mental health counseling. The use of technology in counseling services is justified by its ability to effectively address the aforementioned issues. The objective of this literature review is to ascertain the quantity of empirical studies that have undergone peer review on educational counseling services delivered by counselors and guidance counseling teachers to students through cyber/online counseling. Additionally, it aims to assess the efficacy of such services in order to offer guidance for future research recommendations. (delate)

Although the interest of counselors and counseling teachers and research results to use cyber/online counseling in educational counseling services is increasing, there has been no literature review that shows a focus on mapping the use of cyber counseling and its effectiveness. The research questions raised are as follows: (RQ1) What are the types of cyber

counseling technology used in educational counseling services? (RQ2) How effective is cyber counseling in improving educational counseling services?

## LITERATURE REVIEW

Alleviating clients of their stress, anxiety, and concerns is the main objective of therapy. In order to build on a client's strengths and enhance general functioning, counseling aims to return individuals to their pre-crisis condition ([Mallen et al., 2005](#)). Cyber counseling must also follow the initial goals of counseling. Using synchronous chat, asynchronous email, videoconferencing, and self-directed programs, cyber counseling has been the subject of several research. Research on cyber counseling has shown improvements in client satisfaction as well as positive evaluations of working alliance, usefulness, and impact ([Barak & Bloch, 2006](#); [Knaevelsrud & Maercker, 2006](#); [Richards & Tangney, 2008](#)).

Cyber counseling can be done with online counseling and therapy software; counselors are increasingly conducting online counseling and consultation sessions via the Internet ([Wilczenski & Coomey, 2006](#)). [Teo, Shi, Hoi, & Huang \(2020\)](#) stated that the increasing popularity of cyber counseling—which combines modern Internet technology with traditional face-to-face psychological counseling—is a result of rapid technological advances, its various benefits (such as time saving, convenience, and privacy protection), and the increasing demand for mental health services in modern society.

Another benefit is that cyber counsees often talk more openly when they feel they are in a safe and non-judgmental environment, are accustomed to disclosing more deeply to psychologists, and express their problems more quickly than they might in a face-to-face session ([King et al., 2006](#)). Text-based communication creates a written record that can be useful for both the client and the counselor or psychologist ([Kessler et al., 2009](#)).

Cyber counseling, which may take many different forms, including online counseling and therapeutic software, is a novel kind of treatment for psychological health. Rather of providing traditional face-to-face therapy, counselors are increasingly conducting online counseling and consulting sessions via the Internet ([Wilczenski & Coomey, 2006](#)). [Teo, Shi, Hoi, & Huang \(2020\)](#) state that the rising popularity of cyber-counseling—which blends modern Internet technology with traditional in-person psychological counseling—is a result of the technology's quick advancement, its many benefits (like time savings, convenience, and privacy protection), and the rising demand for mental health services in modern society.

Cyber counsees frequently converse more unreservedly when they feel they are in a secure, non-judgmental environment, habitually make more profound revelations to the psychologist, and disclose their problems sooner than they might in a face-to-face session ([King et al., 2006](#)). Text-based communication creates a composed record that possibly benefits both counsees and counselors or psychologists ([Kessler et al., 2009](#)). In truth, numerous counsees of virtual stages cite the capacity to be in control of their environment as one of the reasons they take part in cyber counseling ([Partala, 2011](#)).

## METHODS

A comprehensive review of the available literature was done to locate peer-reviewed articles that investigate the effectiveness of cyber counseling to enhance educational counseling services. Rapid evidence evaluations are an effective way to assess the quality of significant research in a short amount of time ([Ganann et al., 2010](#); [Meibos et al., 2017](#)). The goal of this study was to discover underexplored areas of research on the efficacy of cyber counseling to improve educational counseling services, as well as to locate specific empirical data that is presently lacking.

From June 2014 to July 2024, a comprehensive review of published, peer-reviewed research on the subject of cybercounseling's ability to enhance educational counseling services was carried out. The main database in this study is articles indexed in SCOPUS as a search result with the help of the Publish or Perish tool. The following search phrases were combined in order to do the search: (cyber\* OR counseling\*) AND (online\* OR counseling\*) AND (internet\* OR school counseling\*).

Inclusion criteria in this review: 1) written in English; 2) peer-reviewed journal articles, published between 2019 and 2024. The authors completed the search and filtered the articles first through title and abstract review, followed by full-text review. Articles were excluded with the following criteria: 1) The article focused outside of education (e.g., the use of cyber counseling in rural adolescents); 2) the article did not show the effectiveness of cyber counseling on improving educational counseling services.

The database search yielded a total of 175 prospective articles. The review of titles and abstracts led to the inclusion of 45 articles. Twenty-five articles were removed for the following reasons: articles outside of educational counseling (n = 10); articles that did not report the effectiveness of cyber counseling, online counseling, or internet counseling (n = 5); and articles that did not include college students (n = 10). The full search yielded 20 peer-reviewed articles that met the inclusion criteria for this review. Emerging themes related to studies on the efficacy of cyber counseling to improve student-focused educational counseling services were qualitatively synthesized, and narrative summaries were created.

This study uses content analysis; the purpose of its use is to answer the research questions. Because content analysis allows for contextual examination of communication ([Krippendorf, 2013](#)), content analysis is an appropriate method to evaluate how effective cyber counseling is to improve educational counseling services. This study follows four guidelines from [Krippendorf \(2013\)](#) and [Muhammad et al. \(2022\)](#) to conduct content analysis: pooling, sampling, recording, and reducing.

Researchers search for research based on Scopus Index data through several methods, namely: 1) Researchers conduct a search in the Publish of Perish application with a database, namely Scopus data, using search keywords (cyber\* OR counseling\*) AND (online\* OR counseling\*) AND (internet\* OR school counseling\*); 2) The researcher selects the search results data. Researchers only take articles from 2019 to 2024, according to the database. The selection criteria applied are: written in English; peer-reviewed journal articles, published between 2019 and 2024. The author completes the search and filters the articles first through title and abstract review, followed by full-text review. Articles are excluded with the following criteria: articles are focused outside of education (e.g., the use of cyber counseling in rural adolescents); articles do not show the effectiveness of cyber counseling in improving educational counseling services; 3) The database search resulted in a total of 175 prospective articles. Title and abstract review resulted in the inclusion of 45 articles. Twenty-five

articles were removed for the following reasons: articles outside of educational counseling (n = 10); articles that did not report the effectiveness of cyber counseling, online counseling, or internet counseling (n = 5); and articles that did not include college students (n = 10); 4) Inclusion of full articles resulted in 20 articles.

**RESULTS AND DISCUSSION**

**Results**

This comprehensive research included a total of 20 studies. The research took place in countries such as Indonesia n= 3, the United States n = 2, Turkey, China n = 2, Singapore n = 1, Iran n = 1, Ghana n = 1, Malaysia n = 2, Germany n = 1, Europe n = 1, and Italy n = 6. The literature identified two key themes: The literature identified two themes: 1) the types of cyber counseling technologies used in educational counseling; 2) the effectiveness of cyber counseling in improving educational counseling services.

***The Types of Cyber Counseling Technologies Used In Educational Counseling***

The following twelve studies explore technology in cyber counseling as used in educational counseling services: WhatsApp-based mobile computing for student assistance services ([Budianto et al., 2019](#)), IZ Hero Challenge: a live chat portal for personal counseling services ([Kit et al., 2019](#)), Skype for mental health counseling services ([Zeren et al., 2020](#)), WhatsApp messages, emails, WhatsApp videos for Personal counseling services ([Amos et al., 2020](#)), iCBT for Personal counseling services ([Suranata et al., 2020](#)), Mobile messaging application Whatsapp for Social and Career counseling services ([Felgenhauer et al., 2021](#)), Online counseling - Silver Cloud for mental health counseling services ([Pescatello et al., 2021](#)), Computer - internet for Psychological counseling services ([J. Wang et al., 2022](#)), The short messaging service (SMS) provides mental health counseling services ([Alias et al., 2022](#)), Emails for mental health counseling services ([Celia, Tessitore, et al., 2022](#)), Website for career counseling services ([Pordelan & Hosseinian, 2022](#)), online sync video for mental health counseling services ([Novella et al., 2022](#)).

***The effectiveness of cyber counseling in improving educational counseling services***

Twenty studies explored perspectives on the effectiveness of using cyber counseling in student-focused educational counseling services (Table 2).

*Table 2. Technology-related studies report perspectives on effectiveness in educational counseling services.*

First Author/ Year	Country Student	Cyber Counseling	Improving educational counseling
<a href="#">Budianto, 2019</a>	Indonesia N=n/a	WhatsApp based mobile computing	Very helpful for students
<a href="#">Kit, 2019</a>	Singapore N= 23	IZ Hero Challenge - a live chat portal	Effectively become a counselor media to provide assistance and solutions to students who experience interpersonal and/or emotional problems and bullying.

<a href="#">Navarro, 2019</a>	European N = 100	Text-Based Online Counseling	Participants were motivated to use TBOC to increase their sense of safety in response to negative perceptions of their social skills.
<a href="#">Wang, 2020</a>	China N = 440	Online Counseling	Reduce mental stress of students
<a href="#">Zeren, 2020</a>	Turkey N = 60	Sykpe	Effectively increase life satisfaction
<a href="#">Amos, 2020</a>	Ghana N= 8	WhatsApp messages - videos, and emails	Effectively solve client problems, Accessibility, comfort, privacy, and mobility
<a href="#">Savarese, 2020</a>	Italy N= 266	Online Counseling	Increase resilience and identify any psychological issues to implement proper time management.
<a href="#">Suranata, 2020</a>	Indonesia N = 30	Internet CBT	Effectively increase resilience
<a href="#">Zainudin, 2021</a>	Malaysia N= 60	Online Counseling	Increase satisfaction
<a href="#">Felgenhauer, 2021</a>	German N = 70	Mobile messaging application Whats Ap	Improve understanding of social support for career counseling in online peer groups
<a href="#">Naini, 2021</a>	Indonesia N=24	Online Group Counseling	Improve students' humility
<a href="#">Pordelan, 2021</a>	Iran N =30	Online career counseling	Effectively improve career decision making scores
<a href="#">Pescatello, 2021</a>	USA N=5568	iCBT, SilverCloud (SC)	Effectively improve mental health
<a href="#">J.Wang, 2022</a>	China N= 1216	Cyber counseling: Computer - internet	Positive APH (attitude towards psychological help) will increase AUC (attitude towards the use of psychological cyber counseling).
<a href="#">Alias, 2022</a>	Malaysia N= 467	Short message service (SMS)	Effectively helping students to access information and seek early help related to stress and mental health
<a href="#">Celia, 2022</a>	Italy N= 32	Online Counseling: Email	Effectively enhance positive affect, subjective well-being, and future perspectives.
<a href="#">Celia, 2022</a>	Italy N =54	Online counseling	Effectively reduce anxiety
<a href="#">Pordelan, 2022</a>	Iran N =45	Online career counseling: Website	Effectively improve career decision-making skills
<a href="#">Ierardi, 2022</a>	Italy N = 115	Online counseling	Effectively reduces depression, obsessive-compulsive disorder, interpersonal sensitivity, and anxiety.
<a href="#">Novella, 2022</a>	USA N= 49	Online synchronous video counseling	Effectively reduce student anxiety.
<a href="#">Esposito, 2023</a>	Italy N= 66	Online group counseling	Effectively overcome difficulties encountered during an academic career
<a href="#">Zammitti, 2023</a>	Italy N= 30	Online Counseling	Effectively increases: resilience, subjective risk intelligence, career adaptability, self-efficacy, optimism, hope, and life satisfaction.

## Discussion

### Types of Technology in Cyber Counseling and Their Use in Educational Counseling

This comprehensive objective synthesizes information from research. Types of technology and their use in educational counseling services have been evaluated in recent studies involving students. Cyber counseling is used in mental health counseling services (n = 5) using Skype, Silver Cloud, email, short message service (SMS), and online sync video technology, based on the results of 12 studies. Cyber counseling is applied in personal counseling services (n = 2) with the help of IZ Hero Challenge technology and internet cognitive behavior therapy (iCBT). Career counseling services (n = 1) using the help of website technology and the WhatsApp mobile messaging application. Social counseling services (n = 1) using Whatsapp mobile messaging application technology. Psychological counseling services (n = 1) using computer-internet technology. Student assistance services (n = 1) using WhatsApp-based mobile computing technology.

The findings of this study are empirical evidence that supports the development of cyber counseling. Cyber counseling is also an option that can be used according to the purpose of counseling, in addition to face-to-face services. This study found three terms used, namely cyber counseling, online counseling, and internet counseling. The findings of this study also confirm the use of the term cyber counseling based on previous studies, such as online or internet therapy, electronic counseling, electronic therapy, email therapy, internet counseling, and web counseling, and others ([Alleman, 2002](#); [Cook & Doyle, 2002](#); [Jones, 2013](#); [Li et al., 2013](#); [McCrickard & Butler, 2005](#)). In addition, this study successfully identified the use of technology in cyber counseling, including the use of Skype, SMS, Whatsapp, iCBT, Silver Cloud, email, IZ Hero Challenge, computer-internet, online sync video, and website. The findings of this study confirm previous research findings related to the use of technology such as non-concurrent mail, content chat, or messages uploaded in discourse board chat rooms ([Joinson et al., 2008](#)), and real-time synchronous chat via web-based and face-to-face webcam sessions ([Bambling et al., 2008](#)).

Research findings on the types of technology used in cyber counseling indicate that the service infrastructure receives system support from the leadership. Information and communication technology that indirectly provides assistance to clients or facilitates the smooth development of clients and supports the effectiveness and efficiency of the implementation of guidance and counseling services.

#### **The effectiveness of cyber counseling in improving educational counseling services**

Based on the review results, this study found 20 studies that prove the effectiveness of cyber counseling in improving educational counseling services. In addition, researchers also found the use of the term cyber counseling, with the terms online counseling and internet counseling. The effectiveness of cyber counseling is proven by the increase and reduction experienced by students after counseling. The following is a description of the effectiveness in its increase (n = 16): The use of WhatsApp-based mobile computing can greatly assist students in getting counseling assistance ([Budianto et al., 2019](#)), effectively become a counselor media to provide assistance and solutions to students who experience interpersonal and/or emotional problems and bullying ([Kit et al., 2019](#)), Participants were motivated to use TBOC to increase their sense of safety in response to negative perceptions of their social skills ([Navarro et al., 2019](#)), effectively increase life satisfaction ([Zeren et al., 2020](#)), effectively solve client problems, Accessibility, comfort, privacy, and mobility ([Amos et](#)



[al., 2020](#)), increase resilience and identify any psychological issues to implement proper time management ([Savarese et al., 2020](#)), Effectively increase resilience ([Suranata et al., 2020](#)), Increase satisfaction ([Zainudin et al., 2021](#)), effectively enhance understanding of social support in online peer groups for career counseling ([Felgenhauer et al., 2021](#)), improve students' humility ([Naini et al., 2021](#)), Effectively improve career decision making scores ([Pordelan & Hosseinian, 2021](#)), Effectively improve mental health ([Pescatello et al., 2021](#)), Positive APH (attitude towards psychological help) will increase AUC (attitude towards the use of psychological cyber counseling) ([J. Wang et al., 2022](#)), Effectively helping students to access information and seek early help related to stress and mental health ([Alias et al., 2022](#)), effectively enhance positive affect, subjective well-being, and future perspectives ([Celia, Cavicchiolo, et al., 2022](#)), effectively improve career decision-making skills ([Celia, Tessitore, et al., 2022](#)), effectively improve career decision-making skills ([Pordelan & Hosseinian, 2022](#)), effectively overcome difficulties encountered during an academic career ([Esposito et al., 2023](#)), and Effectively increases: resilience, subjective risk intelligence, career adaptability, self-efficacy, optimism, hope, and life satisfaction ([Zammitti et al., 2023](#)).

The following is a description of the effectiveness in reducing it (n= 4): reduce mental stress of students ([X. \(Romy\) Wang et al., 2020](#)), reduce anxiety ([Celia, Cavicchiolo, et al., 2022](#)), effectively reduces depression, obsessive-compulsive disorder, interpersonal sensitivity, and anxiety ([Ierardi et al., 2022](#)), and Effectively reduce student anxiety ([Novella et al., 2022](#)). The findings of this study are in line with previous studies, for example, counselors utilize cyber counseling to provide psychological services (Marks et al., 2007), career services ([D. C. Baker & Bufka, 2011](#)), mental health services ([Hayden et al., 2008](#); [Putri Harahap et al., 2023](#)), social services ([Skinner & Zack, 2004](#)), and personal services ([Kw & S., 2019](#); [Rochlen et al., 2004](#)).

According to [Mallen et al. \(2005\)](#), the main goal of counseling is to relieve stress, anxiety, and concerns of the client. Counseling seeks to return the client to pre-crisis levels while improving general functioning and developing the client's strengths. Research findings on the effectiveness of cyber counseling to improve educational counseling services prove that the use of cyber counseling in education is in accordance with the initial purpose of counseling, namely to alleviate (n=4) and improve (n=16). Thus, the effectiveness of cyber counseling is more widely used in educational counseling to improve students.

## CONCLUSION

This review study found 20 studies that examined the effectiveness of cyber counseling to improve educational counseling services that focus on students. The technologies used in cyber counseling in educational counseling services include: Skype, Silver Cloud, email, short message service (SMS), online sync video technology, website, IZ Hero Challenge, iCBT, Whatsapp, and computer-internet. Of the 12 studies that reported the use of technology in cyber counseling, the purpose was as a medium for individual counseling services, career counseling, psychological counseling, and social counseling.

Evidence of the effectiveness of cyber counseling that uses technology assistance to improve educational counseling services is seen from the results of counseling increasing and decreasing. Sixteen studies reported the effectiveness of cyber counseling, which was proven to increase

resilience, subjective risk intelligence, career adaptability, self-efficacy, optimism, hope, and life satisfaction, understanding of social support in online peer groups for career counseling, students' humility, career decision-making skills, mental health, positive affect, subjective well-being, and future perspectives, access information, and assist students in getting counseling. And four studies reported the effectiveness of cyber counseling, which was proven to reduce mental stress, anxiety, depression, obsessive-compulsive disorder, interpersonal sensitivity, and anxiety.

Evidence of the effectiveness of cyber counseling using technology assistance to improve educational counseling services is seen in Sixteen studies reported the effectiveness of cyber counseling, which was proven to increase resilience, subjective risk intelligence, career adaptability, self-efficacy, optimism, hope, and life satisfaction, understanding of social support in online peer groups for career counseling, student humility, career decision-making skills, mental health, positive affect, subjective well-being, and future perspectives, accessing information, and helping students in getting counseling. And four studies reported the effectiveness of cyber counseling, which was proven to reduce mental stress, anxiety, depression, obsessive-compulsive disorder, interpersonal sensitivity, and anxiety.

Practical Implications: The effectiveness of cyber counseling described in the research results can guide counselors or counseling teachers: 1) choosing the technology used for the right service and the right purpose, 2) increasing the choice of service types, so that not only face-to-face, cyber counseling can also be used in relevant conditions, for example a pandemic, or long distance, 3) to use cyber counseling, counseling teachers or school counselors are expected to be able to first study in theory and practice how to implement cyber counseling, 4) if in conditions where there is no system support, counseling teachers or counselors can choose services that are considered inexpensive, for example SMS or Whatsapp, as supported by the opinion ([Carpenter & Krutka, 2015](#); [de la Varre et al., 2010](#); [Krist, 2011](#))

The findings of this comprehensive literature review did not find effectiveness in learning counseling services, and only one in social counseling services. Thus, future researchers can make this gap in empirical data the focus of research or literature review.

Although this study has found evidence of the effectiveness of cyber counseling, there is not much evidence found on the use of cyber counseling in learning and social services. Thus, further researchers can make this empirical data gap the focus of research or literature review. In other words, future researchers can focus on how effective cyber counseling is in learning and social services.

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