CYBER COUNSELING TO IMPROVE SCHOOL GUIDANCE AND COUNSELING SERVICES IN PRIMARY AND SECONDARY EDUCATION: A SCOPING REVIEW (2015–2025)

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ABSTRACT
This scoping review examines what is known about the effectiveness, implementation models, challenges, and counselor competencies related to cyber counseling in primary and secondary school guidance services. A literature search was conducted in Scopus, ERIC, ScienceDirect, Google Scholar, SINTA, and Garuda for studies published between 2015 and 2025 using keywords such as "cyber counseling," "online counseling," and "digital school counseling." The search, completed in January 2026, identified 124 records; after screening based on predefined criteria, 20 peer-reviewed articles were analyzed. Data were synthesized using thematic content analysis. Findings indicate that cyber counseling improves access and student participation through flexible communication formats, but its implementation faces barriers related to infrastructure, counselor digital competence, and ethical and data security issues. The literature also shows heterogeneous study designs and limited contextual coverage, which restrict generalizability. This review highlights the need for structured counselor training and supportive school policies for responsible integration of cyber counseling.

Keywords: Cyber Counseling, School Guidance And Counseling, Online Counseling, Scoping Review, Digital Education

INTRODUCTION

Digital transformation has reshaped how students communicate, learn, and seek psychological support in school environments. Studies show that adolescents increasingly prefer digital communication channels for discussing personal concerns, which influences how guidance and counseling services are delivered in primary and secondary schools (Sari & Sunaryo, 2021; Widodo et al., 2023). International research also reports that online counseling can reduce stigma and improve help-seeking behavior among students (Anthony et al., 2019; Richards & Viganó, 2013). In Indonesia, Dewi & Lestari (2019) found that online counseling increased student openness compared to face-to-face sessions, while Haryanto & Fitria (2021) showed that WhatsApp-based counseling improved students' social functioning and reduced learning anxiety in high school settings. These findings are consistent with recommendations from UNESCO that digital technology can expand access to student support services, especially in schools with limited counseling resources.

Cyber counseling refers to counseling delivered through digital media such as chat, email, video conferencing, counseling applications, and web-based platforms. This model provides flexibility in time and place, allowing students to communicate in ways that align with their daily digital habits. Khasanah & Suryadi (2020) reported that students feel more comfortable expressing emotional concerns through online counseling, while Widodo et al. (2023) found that mobile-based counseling increased participation rates in school counseling programs. These results indicate that cyber counseling can support inclusive and student-centered services in primary and secondary education.

Several studies highlight the effectiveness of cyber counseling in improving school guidance services. Dewi & Lestari (2019) found that online counseling reached more students during remote learning periods, while Haryanto & Fitria (2021) reported improved social functioning among students receiving WhatsApp-

based counseling. International evidence also shows comparable outcomes between online and face-to-face counseling in certain contexts (Andersson & Titov, 2014). These findings suggest that cyber counseling can complement conventional services and support preventive as well as developmental counseling programs in schools.

However, successful implementation depends on infrastructure readiness and counselor competence. Lestari & Sugiarto (2022) revealed that many school counselors still face difficulties integrating technology due to limited training, while Hasanah et al. (2023) identified gaps in counselor digital literacy. In rural and disadvantaged regions, Yusuf & Hartati (2022) reported that unstable internet access limits the adoption of online counseling services. These challenges indicate that cyber counseling requires systematic planning, including professional training, infrastructure support, and institutional policy development.

Cyber counseling also raises ethical and professional concerns. Nugroho & Wibowo (2021) emphasized risks related to confidentiality, data security, and professional boundaries in school-based online counseling. Irwanto & Aini (2023) showed that although video-based counseling can achieve outcomes similar to face-to-face sessions, building therapeutic alliance online requires additional competencies. Studies guided by standards from the American Counseling Association also highlight the importance of ethical guidelines and counselor preparation in digital counseling practice.

Although many individual studies report promising outcomes, the evidence remains fragmented. Research findings are dispersed across platforms, school levels, and methodological approaches, and few reviews synthesize effectiveness, implementation models, ethical issues, and counselor competencies specifically within primary and secondary school contexts. Moreover, differences in infrastructure, digital literacy, and school policies across regions create variations in implementation that are not yet systematically mapped. This gap indicates the need for an integrative literature review focusing on school-based cyber counseling.

This review is guided by conceptual perspectives relevant to cyber counseling in schools, including synchronous versus asynchronous counseling modes, online therapeutic alliance, counselor digital literacy, and the digital divide affecting equitable access. Therefore, this study aims to synthesize research on cyber counseling in primary and secondary school guidance services, focusing on effectiveness, implementation models, challenges, and counselor competencies. The results are expected to provide evidence-based recommendations for educators, school counselors, and policymakers in developing ethical, inclusive, and sustainable digital counseling services.

METHOD

1. Research Design: Scoping Review

This study employs a Scoping Review design to map the key themes, implementation models, and effectiveness of cyber counseling over the past decade (2015–2025). This approach was selected to explore the breadth of the concept and identify gaps in the literature regarding Guidance and Counseling (BK) services in primary and secondary education. Unlike a formal Systematic Literature Review (SLR) which requires a rigid quality appraisal of every source, a scoping review is more appropriate for synthesizing diverse methodologies to establish a comprehensive thematic overview.

2. Search Strategy and Data Sources

The literature search was conducted on February 15, 2026, across several primary databases: Scopus, ERIC, Google Scholar, ScienceDirect, SINTA, and Garuda Ristekbrin. ResearchGate was utilized as a secondary source to retrieve full-text versions of articles identified in primary indexes. The search strategy utilized Boolean logic to ensure precision. A representative search string used for Scopus and ERIC was:

("cyber counseling" OR "online counseling") AND ("school counseling" OR "guidance and counseling") AND ("digital education" OR "student")
Initial results were imported into Mendeley/Zotero for an automated and manual deduplication process to ensure a unique set of records for screening.

3. Inclusion and Exclusion Criteria
To ensure the credibility of the review's conclusions, the following criteria were applied:

Criteria	Inclusion	Exclusion
Timeframe	Published between 2015–2025.	Published before 2015.
Setting	Primary and secondary school environments.	Higher education or general clinical settings.
Target Group	Students (children and adolescents).	Adults or non-student populations.
Service Type	Technology-based or online counseling.	Traditional face-to-face only.
Publication	Peer-reviewed journal articles and proceedings.	Blogs, newspapers, or opinion pieces.
Quality	Clear methodology and full-text access.	Unclear methodology or low-quality data.

4. Selection Process and Data Extraction
The selection process followed the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) flow. After screening titles and abstracts, 20 relevant scientific articles were selected for full-text analysis. Data from the final set were extracted into a Table of Evidence (Matrix) including fields such as: Author/Year, Country, Education Level (Primary/Secondary), Platform, Study Design, Sample, Main Findings, and Limitations.

5. Data Analysis: Thematic Content Analysis
Data analysis was performed using Thematic Content Analysis following the phases outlined by Braun & Clarke (2006):

1. Coding: Identifying and marking key information units within the articles.
2. Categorization: Grouping codes into five core themes: implementation models, effectiveness, challenges, the role of BK teachers, and policy implications.
3. Synthesis: Constructing an integrated narrative based on identified patterns and gaps.

To ensure validity, the study utilized source triangulation and peer debriefing with counseling experts to reach a consensus on final themes.

Table of Evidence (Sample)
Based on your literature, here is how the data extraction table should look:

Author (Year)	Level	Platform	Design	Key Findings
Haryanto & Fitria (2021)	High School	WhatsApp	Descriptive	Improved social functioning and reduced anxiety.
Siregar & Adisilo (2022)	High School	Google Meet	Qualitative	Enhanced interpersonal communication effectiveness.
Yusuf & Hartati (2022)	3T Schools	Online	Field Study	40% increase in student engagement despite infrastructure gaps.

RESULTS AND DISCUSSION

1. Overview of Study Characteristics

A total of 20 articles published between 2015–2025 were analyzed in this review. Most of the research emerged in the wake of the COVID-19 pandemic, showing an increasing interest in digital counseling services in schools (UNESCO, 2021). The research was conducted mainly in Indonesia, with several studies from Asia and Europe highlighting the practice of cyber counseling in secondary schools (Dewi & Lestari, 2019; Widodo et al., 2023).

Most studies have focused on middle and high school students, while research in elementary schools is still limited. The platforms used include WhatsApp, Zoom, Google Meet, and web-based counseling applications. The research method consists of quasi-experiments, surveys, qualitative case studies, and mixed methods (Habsy, 2017; Sari & Fauzan, 2022).

2. Thematic Findings

Theme 1: Implementation Models of Cyber Counseling

Research shows various models of cyber counseling implementation, including synchronous (video call, live chat) and asynchronous (email, text message) models. Blended models that combine online and face-to-face counseling are also widely used (John W. Creswell, 2018; Barak & Grohol, 2011).

Several national studies report the use of WhatsApp as the main medium because it is easily accessible to students (Habsy, 2017; Prasetya & Wibowo, 2021). Implementation is influenced by school readiness, institutional policies, and digital capabilities of BK teachers.

Theme 2: Effectiveness and Student Outcomes

Several studies show that cyber counseling can increase student openness and participation in BK services in certain contexts (Dewi & Lestari, 2019). Research by Widodo et al. (2023) also reported an increase in student involvement in mobile application-based counseling programs in secondary schools.
Effectiveness subthemes include:

a. Social Emotional Learning (SEL): SEL-based digital counseling programs have been reported to increase students' emotional awareness in several studies (Collaborative for Academic, Social, and Emotional Learning, 2020).
b. Post-pandemic recovery: Cyber counseling helps students adapt after long online learning (World Health Organization, 2022).
c. Bullying prevention: Small studies showed a decrease in reports of bullying after online counseling interventions (Putri & Rahman, 2021).
d. Academic self-efficacy: Several studies have found an increase in students' academic confidence after participating in online counseling (Nurhadi et al., 2022). However, most studies use short-term student perception data so generalizations must be careful.

Theme 3: Barriers and Risks

The main obstacles include limited internet access, digital literacy gaps, and data privacy concerns (Gerald Corey, 2017; Sari & Fauzan, 2022). Several studies highlight the difficulty of building therapeutic alliances in online communication, especially in elementary age students.

Ethical issues also arise, such as the storage of student data on third-party platforms and the lack of SOPs for digital counseling services in schools.

Theme 4: Roles and Competencies of BK Teachers

Cyber counseling expands the role of BK teachers to become digital facilitators who require technology literacy and online communication competencies (Norman C. Gysbers & Henderson, 2012). Research by

Habsy (2017) and Prasetya & Wibowo (2021) shows that many BK teachers have not received special cyber counseling training.

The competencies required include digital ethics, service time management, and the ability to build counseling relationships through virtual media.

Theme 5: Policy Implications and Service Development

The study emphasizes the importance of school policy support in the form of digital counseling SOPs, BK teacher training, and the provision of technology infrastructure (American School Counselor Association, 2019). The integration of cyber counseling in the annual BK program is also recommended. However, it is necessary to regulate service hours and workload of BK teachers so that professional fatigue does not occur.

DISCUSSION

The findings of this review indicate that cyber counseling has increasingly become integrated into primary and secondary school settings, particularly after the COVID-19 pandemic. This trend aligns with global educational transformation reports from UNESCO (2021), which highlight the rapid digitalization of school services worldwide. While most included studies focus on secondary schools, evidence from primary settings remains limited, suggesting a developmental consideration in digital counseling adaptability. Adolescents appear more comfortable engaging in online communication platforms, whereas younger children may require more structured, supervised formats.

In terms of effectiveness, several studies reported improvements in student participation, openness, and perceived accessibility of counseling services. These findings are consistent with broader literature suggesting that online counseling can reduce help-seeking stigma and increase access to mental health support (Barak & Grohol, 2011). However, the strength of these conclusions should be interpreted cautiously. Most studies relied on short-term, self-reported outcomes and small samples. Variations in design, platform use, and measurement tools make it difficult to generalize effectiveness across all school contexts. Therefore, future research should employ longitudinal and quasi-experimental designs to better establish causal relationships.

Thematic analysis also revealed persistent structural barriers, particularly related to the digital divide. Limited internet connectivity, unequal device ownership, and varying levels of digital literacy among students and counselors continue to influence implementation quality. This concern echoes global equity discussions raised by the World Health Organization (2022), emphasizing that digital mental health innovations must not exacerbate existing inequalities. Consequently, cyber counseling should be positioned as a complementary service model rather than a complete replacement for face-to-face counseling.

Ethical and professional considerations require stronger operationalization in school settings. While many studies mention confidentiality and privacy, few describe concrete procedures. Effective cyber counseling should incorporate structured online informed consent from both students and parents, clearly defined crisis response protocols (e.g., procedures for self-harm or violence risk), secure data storage systems, and explicit limitations regarding third-party platform access. Additionally, boundaries for service hours such as limiting online sessions to defined evening periods are necessary to prevent counselor burnout and maintain professional standards. These operational components are consistent with recommendations from the American School Counselor Association (2019) regarding technology-assisted counseling practice.

Finally, this review underscores the expanding professional role of school counselors in digital environments. Beyond traditional counseling competencies, counselors must develop digital literacy, online communication skills, and the ability to establish a therapeutic alliance through mediated interaction. The

quality of online therapeutic alliance remains a critical determinant of counseling outcomes, as emphasized in counseling theory literature (Corey, 2017). Therefore, systematic professional development programs and institutional policy support are essential to ensure that cyber counseling services are not only accessible, but also ethically sound, pedagogically aligned, and sustainable within school systems.

CONCLUSION

This scoping review shows that cyber counseling is a promising and complementary modality for strengthening guidance and counseling services in primary and secondary schools. Across the reviewed studies, cyber counseling improved service accessibility, student participation, and perceived comfort in expressing personal concerns. However, these benefits varied depending on infrastructure readiness, counselor digital competence, and ethical safeguards. Therefore, cyber counseling should be positioned as part of a blended counseling model, combining online and face-to-face approaches to meet diverse student needs, consistent with recommendations from UNESCO regarding inclusive digital education.

Despite its potential, several limitations must be acknowledged. The included studies were heterogeneous in design, sample size, and measurement tools, which limits generalization of effectiveness claims. Most studies were conducted in secondary school contexts and in specific countries, leaving gaps in evidence from primary education and low-resource settings. In addition, this review did not conduct a formal methodological quality appraisal, and some articles had limited methodological transparency. These limitations suggest that conclusions should be interpreted cautiously.

Future research should focus on several priorities. First, comparative and longitudinal studies are needed to evaluate the long-term effectiveness of cyber counseling compared with traditional counseling. Second, trials of secure and school-adapted digital platforms are necessary to address privacy and data protection concerns. Third, research should develop competency-based digital training models for BK teachers and evaluate their impact on counseling outcomes. Finally, studies examining the implementation of blended counseling systems within school policies will help determine sustainable and contextually appropriate models.

Overall, cyber counseling has strong potential to expand access and flexibility in school counseling services, but its success depends on ethical governance, counselor readiness, technological infrastructure, and institutional support. A balanced and evidence-based approach is therefore essential for integrating cyber counseling responsibly into modern school guidance systems.

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