### **Article Review**

# Exploring Media-Based Interventions for Adolescent Mental Health: Literature Review

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### **ABSTRACT**

Media-based interventions show promise in addressing the rising mental health concerns among adolescents, surpassing challenges associated with traditional care. This review critically assesses the effectiveness of media-based interventions in promoting adolescent mental health, with a specific focus on social media, digital applications, and film. The methodology employs a comprehensive approach, utilizing Google Scholar, Scopus, and PubMed databases (2012-2022) with keywords such as "mental health," "media," and "adolescents." the methodology is refined for enhanced clarity, explicitly detailing the search strategy, inclusion and exclusion criteria, and selection process. Findings from the analysis of 13 selected articles highlight promising outcomes of digital interventions in screening and treating mental disorders in adolescents. Emphasizing scalability, accessibility, and personalization benefits, the review recognizes the importance of addressing privacy concerns and the potential drawbacks of relying solely on digital platforms. Additionally, it emphasizes the impact of using booklets for mental health self-management in schools. The review improves organization and flow, eliminating repetition for a clearer presentation of information, providing a detailed evaluation of their strengths and limitations, enhancing the overall credibility of the review, the abstract explicitly discusses limitations related to inclusion criteria, such as language restrictions and the exclusion of specific study designs. This comprehensive approach contributes to a more robust understanding of the literature, providing valuable insights for researchers, practitioners, and policymakers involved in developing effective interventions for adolescent mental health. The implications stress the need for further research, evidence-based intervention development, and considerations for implementation and user experience in digital interventions.

Keywords: Media, Mental Health, Based intervention, Adolescents

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## INTRODUCTION

Adolescence is a critical period characterized by rapid physical, emotional, and cognitive changes, making. It a vulnerable stage for the development of mental health issues. The prevalence of mental health disorders among adolescents has been on the rise, with significant implications for their overall well-

being and long-term functioning. Recognizing the urgency to address this global concern, researchers and practitioners have begun to explore innovative interventions that leverage media platforms to promote adolescent mental health<sup>1,2</sup>.

Media, including television, film, social media, and digital applications, has become an integral part of the lives of today's teenagers. It provides an unprecedented opportunity to reach and engage with adolescents on a large scale. By strategically utilizing media, interventions aimed at enhancing mental health outcomes can potentially overcome barriers such as stigma, accessibility, and limited resources that often hinder traditional approaches to care<sup>3</sup>.

Media-based interventions have emerged as a promising approach to address the growing mental health concerns among adolescents. by leveraging various forms of media, such as social media, digital applications, and film, these interventions can potentially overcome.

Barriers to traditional approaches to care, such as stigma, accessibility, and limited resources. overall, media-based interventions have the potential to improve adolescent mental health outcomes. however, it is important to continue to evaluate the effectiveness of these interventions and ensure that they are designed and implemented in a responsible and ethical manner<sup>4,5</sup>.

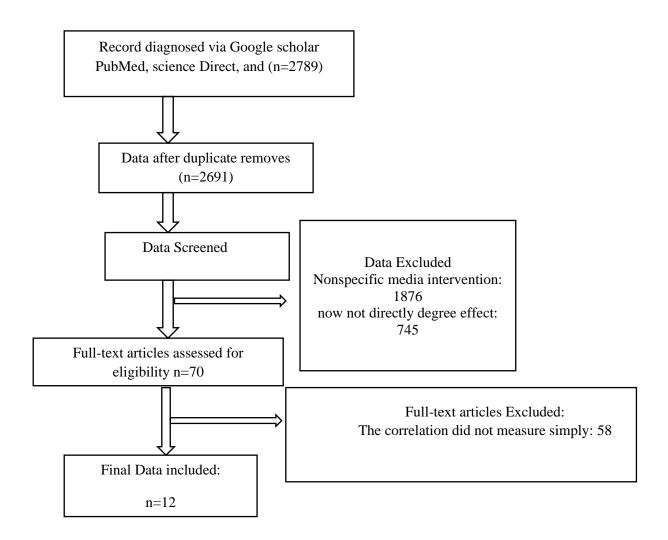
This article aims to explore the growing of media-based interventions field adolescent mental health, it will examine the various forms of media that have been utilized. the theoretical frameworks that underpin these interventions, and the emerging evidence of their effectiveness. By understanding the potential benefits and challenges of employing media in this context, we can gain insights into how best to design and implement interventions that meet the unique needs of adolescents.in conclusion. exploring media-based interventions for adolescent mental health opens up new avenues for reaching and engaging with this population, by harnessing the power of media platforms, we can create innovative and accessible interventions that have the potential to make a significant impact on the mental well-being of adolescents. however, further research is needed to fully understand the effectiveness, limitations, and long-term outcomes of these interventions. by delving into this emerging field, we can contribute to the development of evidencebased practices that will shape the future of adolescent mental health interventions<sup>6</sup>. This review critically assesses the effectiveness of media-based interventions in promoting adolescent mental health, with a specific focus on social media, digital applications, and film.

## **METHOD**

In June 2023, a comprehensive literature search was conducted on Google Scholar, PubMed, and Science Direct databases to identify research publications. The search strategy employed was "(Media Or (Mental Health)) and (Adolescent) And (Intervention)." The inclusion criteria comprised articles published in English between 2012 and 2022, focusing on genuine research among children. Both qualitative and quantitative studies were considered.

The screening process involved the application of the Figure 1 technique to exclude articles that did not directly address media's impact on adolescent mental health. Before entering the screening process, plagiarism checks were conducted. Out of the initial 2691 articles examined, 1876 did not specify assessed media interventions for adolescent mental health. Subsequently, 745 papers did not directly evaluate the effects of media-based interventions, resulting in 70 articles undergoing a comprehensive review.

Twelve publications were excluded primarily based on inclusion criteria, as they did not assess the relationship between social assistance and its impact. Thirteen papers in all were examined for the purpose of extracting statistics. Pre- and post-intervention data collection, analyzing and synthesizing relevant literature to examine the impact of social media on adolescent mental health, intervention and control groups, and data were collected through pre- and post-intervention questionnaires. Structured interviews with adolescents to gather their understanding, knowledge, and attitudes towards depression, involved data collection through the PHQ-9 teen questionnaire and statistical analysis to assess the validity and reliability of the instrument, searching, selecting, and synthesizing relevant literature to provide an overview of these interventions, involved the development of a mobile application for mental health care during the covid-19 pandemic and evaluated its usability using the system usability scale (sus), involved analyzing relevant literature to explore the interventions implemented using digital media.



**Figure 1. Article Selection Flowchart** 

## **RESULTS**

In order to accomplish its goals, this literature study groups similar extracts based on their measuring results using storytelling methodologies. research journals that satisfy the requirements are then gathered and created in a journal summary that includes the researcher's name, the year the journal was published, the title of the study, the methodology, some sample data, and a summary of the findings. The table includes an overview of the research publication, and the contents of the study goals and findings are then examined. analyze the content of the journal, parse and encode the content of the reviewed journal based on the outline or core of the study and then discuss it to draw conclusions.

The results of this journal search obtained as many as 12 journals on social support, mental health, and adolescents, consisting of 3 data based, namely Google Pubmed, Scholar, and Science Direct. Furthermore, a grouping of discussion themes was carried out in the form of social support, family support, and peer support. journal searches taken for the last 10 years, from 2012 to 2022. The types of research used in journals are longitudinal study, crossectional, case control, and experiential methods. the age of adolescents in this study was 10-24 years old, taking sampling spots in schools, universities, or in adolescent groups. journal summary results can be seen in table 1 as follows.

**Table 1. Characteristics of Denotified Articles** 

Article Title (Year and Name of Researcher)  1 Effectiveness and Implementation Outcome Measures of Mental Health Curriculum Intervention Using Social Media to Improve the Mental Health Literacy of Adolescents?  Adolescents?    Article Title (Year and Name of Researcher)	The findings of the study demonstrate the effectiveness of the mental health curriculum
Researcher)  1 Effectiveness and Implementation Outcome Measures of Mental Health Curriculum Intervention Using Social Media to Improve the Mental Health Literacy of Adolescents T intervention on adolescents. The study aims to determine the intervention on adolescents' knowledge, attitudes, and behaviors related to mental health.  2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly T in the Bad, and the Ugly T in the study aims to descent mental health, considering the positive, negative, and potentially harmful aspects. The study aims to determine the impact of social media on adolescent mental health, considering the positive, negative, and potentially harmful aspects. The study aims to dexemble understanding of how social media influences various  Examine the effectiveness of a mixed-methods approach, combining quantitative and qualitative and acolescents aged 13-from diverse group of adolescents aged 13-from diverse group occombining adolescents. The study aims to proving the mental health.  The purpose of the study is to explore the improve the sunders and publication and publication and	The findings of the study demonstrate the effectiveness of the mental health curriculum
1 Effectiveness and Implementation Outcome Measures of Mental Health Curriculum intervention that Intervention Using Social Media to Improve the Mental Health Literacy of Adolescents 7 Improving the mental health literacy of adolescents. The study aims to determine the impact of the intervention on adolescents' knowledge, attitudes, and behaviors related to mental health.  2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly 7 Improving the modia as a platform for adolescents aged 13-from different school community settings. participants are rande assigned to either the intervention on adolescents' knowledge, attitudes, and behaviors related to mental health.  2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly 7 Improve the Ugly 7 Improve the impact of social media on adolescent mental health, considering the positive, negative, and potentially harmful aspects. The study aims to provide a comprehensive understanding of how social media influences various    The study adopts a mixed-methods approach, combining quantitative and qualitative data collection methods. To sample consists of a diverse group of adolescents aged 13-from different school community settings. Participants are rande assigned to either the intervention on adolescents' through social media on adolescent mental health.  2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly 7 Improve the impact of social media on adolescent mental health. The study may emple iterature review or a systematic review methodology, examined to social media use a diverse range of adolescent from different age groups, socio-economic backgrounds, and cultural contexts.	demonstrate the effectiveness of the mental health curriculum
attitudes, and behaviors related to mental health.  2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> Barbore Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> Barbore Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> Barbore Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> Barbore Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> Barbore Mental Health: The study is to explore the impact of social methodology, examine existing research stude surveys, and data relation to social media use a adolescent mental health, to social media use a adolescent mental health, and potentially harmful aspects. The study aims to provide a comprehensive understanding of how social media influences various  Barbore Mental the study is to literature review or a systematic review methodology, examine existing research stude surveys, and data relation to social media use a diverse range of adolescents from different age groups, socio-economic backgrounds, and cultural contexts.	Participants in the intervention group show significant improvements in their knowledge of mental health, increased help-seeking behaviors, reduced stigma, and improved self-care practices compared to the control group.  Qualitative data from interviews or surveys may provide additional insights into the
2 Social Media and Adolescent Mental Health: The Good, the Bad, and the Ugly <sup>7</sup> media on adolescent mental health, considering the positive, negative, and potentially harmful aspects. The study aims to provide a comprehensive understanding of how social media on bitterature review or a systematic review methodology, examine existing research study asystematic review or a systematic revie	not perceptions, and
mental health among adolescents	loy a The findings of the study may reveal a complex picture of the influence of social media on adolescent mental health. Some potential findings may include: The Good: Positive effects of and social media on adolescent mental health, such as increased social support, enhanced self-expression, and access to mental health resources and information.  The Bad: Negative effects of social media on adolescent mental health, such as cyberbullying, negative body image, social comparison, and sleep disturbances.  The Ugly: Potentially harmful aspects of social media, including addiction, excessive use, online harassment, privacy concerns, and the impact of curated online personas on mental well-being
A School-Based Intervention for Mental evaluate the Ellness Stigma: A Cluster Randomized Trial <sup>8</sup> The purpose of the study is to cluster randomized to design. Schools are randomly assigned to either the intervention group or the control aimed at reducing group. The intervention	The impact of the school-based intervention on mental illness stigma. Potential findings may reveal positive changes in on students' attitudes towards mental illness, increased

		mental illness stigma. The study aims to assess whether the intervention can lead to positive changes in attitudes, beliefs, and behaviors related to mental illness among students.	group receives a targeted school-based program designed to increase mental health literacy, challenge stereotypes, and promote empathy and understanding towards individuals with mental illness. The control group does not receive the intervention and serves as a comparison.	reduced stereotypes and prejudices, and an enhanced willingness to seek help for mental health issues.
4	South African adolescents' beliefs about depression <sup>9</sup>	To investigate the beliefs that South African adolescents hold about depression. The study aims to explore their understanding, perceptions, and knowledge regarding depression as a mental health condition.	The study likely utilizes a qualitative research approach, such as interviews or focus group discussions, to gather data from South African adolescents. The specific methods used in the study are not provided in the given information. The sample consists of South African adolescents, typically ranging from a specific age group or attending specific schools or community settings. The participants may represent diverse backgrounds and demographic characteristics to ensure a comprehensive understanding of adolescents' beliefs about depression.	Adolescents' understanding of depression: The study may explore how South African adolescents conceptualize depression and their knowledge of its symptoms, causes, and consequences.  Perceptions and attitudes: The findings may reveal the adolescents' attitudes, perceptions, and beliefs about depression, including any stigma, misconceptions, or cultural factors that influence their understanding of the condition.  Help-seeking behaviors: The study may examine the adolescents' awareness of available resources and their willingness to seek help for depression, including their preferences for seeking help from formal mental health services, informal support networks, or alternative healing practices.
5	Evaluation of modified patient health questionnaire-9 teen in South African adolescents <sup>10</sup>	The purpose of the study is to evaluate the Modified Patient Health Questionnaire-9 Teen (PHQ-9 Teen) as a screening tool for assessing depressive symptoms in South African adolescents. The study aims to determine the reliability and validity of the	The sample consists of South African adolescents, representing a certain age range, possibly from schools or community settings. The participants may include both male and female adolescents, covering various sociodemographic backgrounds and geographical locations within South Africa. The Modified Patient Health Questionnaire-9 Teen (PHQ-9 Teen) is likely administered to the	All significantly have a relationship implications for the use of the Modified PHQ-9 Teen as a screening tool in South African clinical or research settings, providing insights into its applicability and accuracy in identifying depressive symptoms in this population.

		modified questionnaire and its suitability for use in this specific population	participants to assess their depressive symptoms. This modified version of the questionnaire may have been adapted or culturally validated for use in the South African adolescent population.	
6	Online Indicated Preventive Mental Health Interventions for Youth: A Scoping Review <sup>11</sup>	The purpose of the study is to conduct a scoping review of online indicated preventive mental health interventions for youth. The study aims to provide an overview and synthesis of the existing literature on online interventions specifically designed for young individuals who show early signs or risk factors for mental health problems. The goal is to identify the range of interventions, their characteristics, and their potential effectiveness in promoting mental health and preventing the onset of mental health issues in youth.	The study utilizes a scoping review methodology. The specific methods used in the study are not provided in the given information. However, a scoping review typically involves a systematic search and selection of relevant research articles, followed by data extraction and synthesis to map the existing evidence and identify key themes or patterns. The samples included in the review are likely research studies or interventions targeting youth who exhibit early signs or risk factors for mental health problems. These youth may be drawn from various populations, such as schools, community settings, or clinical settings. The review may encompass interventions delivered through online platforms, including websites, mobile apps, or other digital technologies.	Overview of online indicated preventive mental health interventions: The study may provide a comprehensive overview of the various types of online interventions available for youth who exhibit early signs or risk factors for mental health problems. This may include different formats, delivery methods, and intervention components Characteristics and features of the interventions: The findings may present the common characteristics, features, and components of the identified online interventions, such as psychoeducation, skill-building exercises, interactive modules, self-monitoring tools, and peer support Effectiveness and outcomes: The study may discuss the reported effectiveness and outcomes of the reviewed interventions in terms of their impact on mental health symptoms, prevention of mental health disorders, improvement in well-being, and other relevant outcomes
7	A Mobile Application for Mental Health Care During COVID-19 Pandemic: Development and Usability Evaluation with System Usability Scale <sup>12</sup>	The purpose of the study is to develop and evaluate the usability of a mobile application designed to provide mental health care during the COVID-19 pandemic. The study aims to assess the	The specific methods used in the study are not provided in the given information. However, based on the article title, it can be inferred that the study involves the development of a mobile application specifically tailored for mental health care during the COVID-19 pandemic.  The sample likely	Mobile application development: The study may describe the development process of the mobile application for mental health care during the COVID-19 pandemic. This may include the features, functionalities, and design considerations incorporated into the app Usability evaluation: The findings may present the results of the usability evaluation using the System Usability Scale

feasibility and user-friendliness of the mobile app as a tool for delivering mental health support and services during challenging times.

includes individuals who are potential users of the mobile application. These individuals may be selected from the target population, such as individuals experiencing mental health challenges during the pandemic. The sample may consist of diverse participants, considering various demographics and mental health needs. The usability evaluation of the mobile application may involve the administration of the System Usability Scale (SUS). The SUS is a widely used questionnaire that measures the usability of a system, providing insights into user satisfaction and ease of

(SUS). This may include the overall usability score, as well as the individual items that assess factors such as ease of use, learnability, and user satisfaction. User feedback and recommendations: The study may include user feedback obtained during the usability evaluation, highlighting strengths and areas for improvement. Recommendations for enhancing the mobile application's usability and user experience may also be provided.

8 Digital Media Interventions for Adolescent Mental Health<sup>13</sup>

The purpose of the study is to explore digital media interventions for adolescent mental health. The study aims to investigate the use of digital media platforms and technologies as tools to deliver interventions targeting mental health issues in adolescents. The goal is to examine the effectiveness, feasibility, and potential benefits of these interventions in improving adolescent mental health outcomes.

The specific methods used in the study are not provided in the given information. the sample includes adolescents who have participated in digital media interventions for mental health. The study may also consider research studies that have utilized digital media interventions with adolescent populations.

Effectiveness of digital media interventions: The study may explore the evidence regarding the effectiveness of digital media interventions in improving mental health outcomes among adolescents. This may include the impact on symptoms of mental health disorders, well-being, and overall mental health functioning. Feasibility and acceptability: The findings may discuss the feasibility and acceptability of digital media interventions as a delivery mode for mental health interventions among adolescents. This may include factors such as accessibility, engagement, and user satisfaction with the digital interventions. Benefits and limitations: The study may present the benefits and limitations associated with digital media interventions for adolescent mental health. This may include advantages such as increased reach, flexibility, and potential for personalization, as

9	Use, Acceptability, and Impact of Booklets Designed to Support Mental Health Self-Management and Help Seeking in Schools: Results of a Large Randomised Controlled Trial in England <sup>14</sup>	The purpose of the study is to investigate the use, acceptability, and impact of booklets designed to support mental health self-management and help seeking in schools. The study aims to assess the effectiveness of these booklets in promoting mental health literacy, self-management skills, and help-seeking behaviors among students. The goal is to provide evidence for the potential benefits and feasibility of using such resources in school settings.	The study utilizes a large randomized controlled trial (RCT) methodology. The specific methods used in the study are not provided in the given information. However, based on the article title, it can be inferred that the study involves the random assignment of participants (likely students) to different groups, with one group receiving the booklets and the other serving as a control group.	well as challenges such as privacy concerns, limited access to technology, or potential drawbacks of relying solely on digital platforms.  Use and acceptability of the booklets: The study may report on the extent to which the booklets were used by the students and their perceived acceptability among the target population. This may include information on students' engagement with the booklets, their satisfaction with the content, and their willingness to use and recommend them to others.  Impact on mental health selfmanagement: The findings may present the impact of the booklets on students' mental health self-management skills. This may include improvements in knowledge about mental health, awareness of self-care strategies, and the adoption of healthy coping mechanisms. Help-seeking behaviors: The study may explore the impact of the booklets on students' help-seeking behaviors for mental health concerns. This may include changes in students' attitudes toward help seeking, their knowledge of available resources and support services, and their actual utilization of
10	Interventions for Adolescent Mental Health: An Overview of Systematic Reviews <sup>15</sup>	The purpose of the study is to provide an overview of systematic reviews on interventions for adolescent mental health. The study aims to summarize and synthesize the existing evidence from multiple systematic reviews to gain insights into the effectiveness and efficacy of	The samples in this study are not explicitly mentioned in the given information. However, the samples are likely the studies included within the systematic reviews identified for the overview. These studies may encompass a wide range of interventions targeting various mental health issues in adolescents, such as depression, anxiety, substance abuse, self-harm, or eating disorders. The samples may include adolescents from	help-seeking options.  Effectiveness of interventions: The study may provide an overview of the effectiveness of different interventions for adolescent mental health based on the findings from systematic reviews. This may include information on the impact of interventions on mental health outcomes, symptom reduction, improvement in functioning, and overall well-being among adolescents. Types of interventions: The findings may summarize the types of interventions reviewed in the systematic reviews. This may include psychosocial interventions, cognitive-

various interventions targeting mental health issues in adolescents. The goal is to inform researchers. practitioners, and policymakers about the current state of knowledge and identify areas for further research and intervention development.

different populations, settings, and geographic locations. behavioral therapies, medication-based treatments, peer support programs, and other approaches aimed at addressing specific mental health issues in adolescents. Recommendations and gaps: The study may highlight recommendations for practice and policy based on the findings from the systematic reviews. It may also identify gaps in the literature, areas requiring further research, and suggestions for the development of evidence-based interventions for adolescent mental health.

Interventions for Screening and Treating Common Mental Disorders or Symptoms of Common Mental Illness in Adults: Systematic Review and Meta-analysis 16

The purpose of the study is to conduct a systematic review and meta-analysis of digital interventions for screening and treating common mental disorders or symptoms in adults. The study aims to examine the effectiveness and efficacy of digital interventions, such as smartphone apps, online programs, and computerbased interventions, in identifying and addressing common mental health disorders and symptoms among adults. The goal is to provide evidence-based insights into the potential of digital interventions as a means of screening and treatment for mental health issues

The study utilizes a systematic review and meta-analysis methodology. The specific methods used in the study are not provided in the given information. However, a systematic review typically involves a comprehensive search and selection of relevant studies from existing literature. The included studies may have employed various study designs, such as randomized controlled trials, quasi-experimental studies, or observational studies, to evaluate the effectiveness of digital interventions for screening and treating common mental disorders or symptoms in adults

Effectiveness of digital interventions: The study may present the overall effectiveness of digital interventions in screening and treating common mental disorders or symptoms in adults. This may include information on the impact of digital interventions on mental health outcomes, symptom reduction, functional improvement, and overall wellbeing.

Types of digital interventions: The findings may summarize the types of digital interventions included in the systematic review. This may include smartphone apps, web-based programs, virtual therapy platforms, computerized cognitive-behavioral interventions, or other digitally delivered interventions aimed at addressing common mental health disorders or symptoms. Meta-analysis results: The study may include the results of the meta-analysis, which involves pooling the findings from multiple studies to calculate an overall effect size or estimate of the effectiveness of digital interventions. This may provide quantitative evidence regarding the efficacy and magnitude of the effects of digital interventions for common mental disorders or symptoms in adults.

Evidence on Digital Mental Health Interventions for Adolescents and Young People: Systematic Overview

The purpose of the study is to conduct a systematic overview of the evidence on digital mental health interventions for adolescents and young people. The study aims to summarize and evaluate the existing literature on the effectiveness and efficacy of digital interventions targeting mental health in this population. The goal is to provide an evidence-based overview of the potential benefits and limitations of digital mental health interventions for adolescents and young people.

The study utilizes a systematic overview methodology. The specific methods used in the study are not provided in the given information. However, a systematic overview typically involves a comprehensive search and selection of relevant studies from existing literature. The included studies may have employed various study designs, such as randomized controlled trials, quasi-experimental studies, or observational studies, to evaluate the effectiveness of digital mental health interventions for adolescents and young people. the samples are likely the participants included in the studies identified for the systematic overview. These participants may be adolescents and young people from different populations, such as

community samples,

clinical populations, or

groups. The studies may

individuals experiencing various mental health

conditions or symptoms,

anxiety, stress, self-harm,

such as depression,

or other mental health

specific demographic

have included

concerns.

interventions: The study may present the overall effectiveness of digital mental health interventions for adolescents and young people. This may include information on the impact of digital interventions on mental health outcomes. symptom reduction, functional improvement, and overall wellbeing in this population. Types of digital interventions: The findings may summarize the types of digital interventions included in the systematic overview. This may include smartphone apps, web-based programs, virtual therapy platforms, online support communities, or other digitally delivered interventions aimed at addressing mental health issues in adolescents and young people. Key findings and limitations: The study may highlight the key findings from the literature and discuss the limitations of the existing evidence. This may include considerations such as the quality of the studies

Effectiveness of digital

The systematic overview provides a comprehensive synthesis of the existing evidence on digital mental health interventions for adolescents and young people. The findings may contribute to the understanding of the potential benefits and challenges of using digital interventions in mental health care for this population and inform future research, policy, and

reviewed, heterogeneity of

interventions and outcomes,

literature that warrant further

research.

potential biases, and gaps in the

## **DISCUSSION**

The findings of the study underscore the efficacy of the mental health curriculum intervention delivered via social media in enhancing the mental health literacy of adolescents. The participants in the intervention group exhibited significant advancements in their knowledge of mental health, increased engagement in help-seeking behaviors, reduced stigma, and improved self-care practices in comparison to the control group. To further enrich our understanding, qualitative data gleaned from interviews and surveys delved into participants' experiences, perceptions, and valuable recommendations regarding the intervention<sup>14</sup>.

In a similar vein, an investigation into the effectiveness of a mental health curriculum intervention, leveraging social media platforms, revealed a consistent positive impact on adolescent mental health literacy<sup>17</sup>. These outcomes provide actionable insights for researchers, practitioners, and policymakers seeking evidence-based strategies to bolster mental health education among adolescents.

Digital Media Interventions (DMHIs) emerged as scalable, accessible. and developmentally appropriate tools for detecting, preventing, and treating adolescent mental health problems<sup>13,18,15</sup>. Notably, DMHIs were associated with improvements in various health outcomes, encompassing mental depression, anxiety, stress, mental health literacy, access to mental health services, and social support<sup>19-20</sup>. The ubiquity of social media further facilitated positive mental health promotion and connections among adolescents.

However, the multifaceted influence of social media on adolescent mental health was unveiled, encompassing both positive and negative dimensions<sup>21,12</sup>. While positive effects included heightened social support, enhanced self-expression, and access to mental health aspects resources, negative cyberbullying, negative body image, social comparison, and sleep disturbances were evident. Additionally, potentially harmful elements like addiction, excessive use, online harassment, privacy concerns, and the impact of curated online personas on mental well-being were identified. This nuanced understanding is crucial for practitioners and policymakers to tailor interventions that maximize benefits while mitigating risks.

The positive impact of a school-based intervention on mental illness stigma was demonstrated, with students exhibiting improved attitudes, increased knowledge, reduced stereotypes, and enhanced willingness to seek help for mental health issues. The study further delved into South African adolescents' nuanced understanding of depression, shedding light on conceptualizations, knowledge of symptoms, causes, and consequences, as well as beliefs<sup>22</sup>. attitudes. perceptions, and Importantly, the investigation explored adolescents' help-seeking behaviors, including awareness of available resources preferences for seeking help, offering valuable insights for mental health practitioners working in diverse cultural contexts.

The study on the Modified PHQ-9 Teen's application in South African settings holds implications for clinicians and researchers, providing insights into its applicability and accuracy in identifying depressive symptoms<sup>23</sup>.

The evidence regarding effectiveness of digital media interventions among adolescents was comprehensive, covering various mental health outcomes and discussing feasibility and acceptability. 4 While recognizing the benefits such as increased flexibility, and reach. potential study personalization, the highlighted challenges, including privacy concerns and limited access to technology. These insights are paramount for practitioners considering the integration of digital interventions into mental health care.

The study on the use, acceptability, and impact of booklets as mental health interventions reported positive outcomes, including engagement, satisfaction, and willingness to use and recommend<sup>14</sup>. The impact on students' mental health self-management skills and help-seeking behaviors emphasized the utility of such resources in school settings.

The systematic overview of interventions for adolescent mental health presented a roadmap for practitioners and policymakers, summarizing the types of interventions and providing recommendations based on systematic reviews<sup>15</sup>.

Another aspect of the study focused on the overall effectiveness of digital interventions in screening and treating common mental disorders or symptoms in adults. It presented information on the impact of digital interventions on mental health outcomes, symptom reduction, functional improvement, and overall well-being. The types of digital interventions included smartphone apps, webbased programs, virtual therapy platforms, computerized cognitive-behavioral interventions, and other digitally delivered interventions<sup>15-24</sup>.

Additionally, the study explored the overall effectiveness of digital mental health interventions for adolescents and young people. It provided insights into the impact of digital interventions on mental health outcomes, symptom reduction, functional improvement, and overall well-being in this population. The types of digital interventions included smartphone apps, web-based programs, virtual therapy platforms, online support communities, and other digitally delivered interventions aimed at addressing mental health issues.

Furthermore, the meta-analysis of digital interventions for common mental disorders in adults.<sup>25–32</sup> and adolescents and young people<sup>13,19,33</sup>.

offered quantitative evidence on their effectiveness. The discussion encompassed types of interventions, feasibility, acceptability, benefits, and limitations. The findings provide essential guidance for policymakers and practitioners navigating the landscape of digital mental health interventions.

# **CONCLUSION**

In conclusion, the comprehensive insights garnered from this study have profound implications for clinical practice, policy development, and future research in the domain of mental health intervention and prevention. Tailoring interventions to leverage the positive aspects of digital media, addressing stigma, and promoting mental health literacy emerge as critical focal points for practitioners and policymakers alike. These recommendations serve as a foundation for advancing evidence-based strategies that prioritize the mental wellbeing of adolescents.

### CONFLICTS OF INTEREST

The authors declare no conflict of interest.

# **REFERENCES**

1. O'reilly M, Dogra N, Hughes J, Reilly

- P, George R, Whiteman N. Potential of social media in promoting mental health in adolescents. Health Promot Int. 2019;34(5):981-991. doi:10.1093/heapro/day056
- 2. General TUSS. Social media and youth mental health fact sheet. https://www.yellow.com.au/wp-content/
- 3. Gupta C, Jogdand DS, Kumar M. Reviewing the Impact of Social Media on the Mental Health of Adolescents and Young Adults. Cureus. 2022;14(10). doi:10.7759/cureus.30143
- 4. Kruzan KP, Williams KDA, Meyerhoff J, et al. Social media-based interventions for adolescent and young adult mental health: A scoping review. Internet Interv. 2022;30(June):100578. doi:10.1016/j.invent.2022.100578
- 5. Bethell CD, Carle A, Hudziak J, et al. Methods to Assess Adverse Childhood Experiences of Children and Families: Toward Approaches to Promote Child Well-being in Policy and Practice. Acad Pediatr. 2017;17(7S):S51-S69. doi:10.1016/j.acap.2017.04.161
- 6. Velthorst E, Mollon J, Murray RM, et al. Cognitive functioning throughout adulthood and illness stages in individuals with psychotic disorders and their unaffected siblings. Mol Psychiatry. 2021;26(8):4529-4543. doi:10.1038/s41380-020-00969-z
- 7. Hassen HM, Behera MR, Jena PK, Dewey RS, Disassa GA. Effectiveness and Implementation Outcome Measures of Mental Health Curriculum Intervention Using Social Media to Improve the Mental Health Literacy of Adolescents. J Multidiscip Healthc. 2022;15:979-997.
  - doi:10.2147/JMDH.S361212
- 8. Link BG, DuPont-Reyes MJ, Barkin K, Villatoro AP, Phelan JC, Painter K. A school-based intervention for mental illness stigma: A cluster randomized trial. Pediatrics. 2020;145(6). doi:10.1542/peds.2019-0780
- 9. Aggarwal S, Berk M, Taljard L, Wilson Z. South African adolescents' beliefs about depression. Int J Soc Psychiatry. 2015;62(2):198-200.

doi:10.1177/0020764015618226

- 10. Aggarwal S, Taljard L, Wilson Z, Berk M. Evaluation of modified patient health questionnaire-9 teen in South African adolescents. Indian J Psychol Med. 2017;39(2):143-145. doi:10.4103/0253-7176.203124
- 11. van Doorn M, Nijhuis LA, Egeler MD, et al. Online Indicated Preventive Mental Health Interventions for Youth: A Scoping Review. Front Psychiatry. 2021;12(April). doi:10.3389/fpsyt.2021.580843
- 12. Islam MN, Khan SR, Islam NN, Rezwan-A-Rownok M, Zaman SR, Zaman SR. A Mobile Application for Mental Health Care During COVID-19 Pandemic: Development and Usability Evaluation with System Usability Scale BT Computational Intelligence in Information Systems. In: Suhaili WSH, Siau NZ, Omar S, Phon-Amuaisuk S, eds. Springer International Publishing; 2021:33-42.
- 13. Hamilton JL, Siegel DM, Carper MM.
  Digital Media Interventions for
  Adolescent Mental Health. Handb
  Adolesc Digit Media Use Ment Heal.
  Published online 2022:389-416.
  doi:10.1017/9781108976237.021
- 14. Sharpe H, Patalay P, Vostanis P, Belsky J, Humphrey N, Wolpert M. Use, acceptability and impact of booklets designed to support mental health self-management and help seeking in schools: results of a large randomised controlled trial in England. Eur Child Adolesc Psychiatry. 2017;26(3):315-324. doi:10.1007/s00787-016-0889-3
- 15. Das JK, Salam RA, Lassi ZS, et al. Interventions for Adolescent Mental Health: An Overview of Systematic Reviews. J Adolesc Heal Off Publ Soc Adolesc Med. 2016;59(4S):S49-S60. doi:10.1016/j.jadohealth.2016.06.020
- 16. Sin J, Galeazzi G, McGregor E, et al. Digital Interventions for Screening and Treating Common Mental Disorders or Symptoms of Common Mental Illness in Adults: Systematic Review and Meta-analysis. J Med Internet Res. 2020;22(9):e20581. doi:10.2196/20581
- 17. Hassen HM, Behera MR, Jena PK, Dewey RS, Disassa GA. Effectiveness and Implementation Outcome Measures of Mental Health Curriculum

- Intervention Using Social Media to Improve the Mental Health Literacy of Adolescents. J Multidiscip Healthc. 2022;15(May):979-997. doi:10.2147/JMDH.S361212
- 18. O'Reilly M. Social media and adolescent mental health: the good, the bad and the ugly. J Ment Heal. 2020;29(2):200-206.
  - doi:10.1080/09638237.2020.1714007
- 19. Naslund JA, Bondre A, Torous J, Aschbrenner KA. Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. J Technol Behav Sci. 2020;5(3):245-257.
  - doi:10.1007/s41347-020-00134-x
- 20. Miguel M. 5 Ways Social Media and Apps Can Support Your Teen's Mental Health. Family Online Safety Insitute. Published 2021. https://www.fosi.org/good-digital-parenting/5-ways-social-media-and-apps-can-support-your-teens-mental-health
- 21. Elina Mir, Caroline Novas & Meg Seymour, PhD NC for HR. Social Media and Adolescents' and Young Adults' Mental Health. Natioal Center For Health Research. Published 2020. https://www.center4research.org/social -media-affects-mental-health/
- 22. Radez J, Reardon T, Creswell C, Lawrence PJ, Evdoka-Burton G, Waite P. Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. Eur Child Adolesc Psychiatry. 2021;30(2):183-211. doi:10.1007/s00787-019-01469-4
- 23. Levis B, Benedetti A, Ioannidis JPA, et al. Patient Health Questionnaire-9 scores do not accurately estimate depression prevalence: individual participant data meta-analysis. J Clin Epidemiol. 2020;122:115-128.e1. doi:10.1016/j.jclinepi.2020.02.002
- 24. Lindow JC, Hughes JL, South C, et al. The Youth Aware of Mental Health Intervention: Impact on Help Seeking, Mental Health Knowledge, and Stigma in U.S. Adolescents. J Adolesc Heal. 2020;67(1):101-107. doi:https://doi.org/10.1016/j.jadohealth

- .2020.01.006
- 25. Bethell CD, Blumberg SJ, Stein REK, Strickland B, Robertson J, Newacheck PW. Taking stock of the CSHCN screener: a review of common questions and current reflections. Acad Pediatr. 2015;15(2):165-176. doi:10.1016/j.acap.2014.10.003
- 26. Ojio Y, Mori R, Matsumoto K, et al. Innovative approach to adolescent mental health in Japan: School-based education about mental health literacy. Early Interv Psychiatry. 2021;15(1):174-182. doi:10.1111/eip.12959
- 27. Muratori P, Lochman JE, Lai E, et al. Which dimension of parenting predicts the change of callous unemotional traits in children with disruptive behavior disorder? Compr Psychiatry. 2016;69:202-210. doi:10.1016/j.comppsych.2016.06.002
- 28. Shinn M, Samuels J, Fischer SN, Thompkins A, Fowler PJ. Longitudinal Impact of a Family Critical Time Intervention on Children in High-Risk Families Experiencing Homelessness: A Randomized Trial. Am J Community Psychol. 2015;56(3-4):205-216. doi:10.1007/s10464-015-9742-y
- 29. Teasdale SB, Ward PB, Rosenbaum S, et al. A nutrition intervention is effective in improving dietary components linked to cardiometabolic

- risk in youth with first-episode psychosis. Br J Nutr. 2016;115(11):1987-1993. doi:10.1017/S0007114516001033
- 30. Roskar S, Bracic MF, Kolar U, et al. Attitudes within the general population towards seeking professional help in cases of mental distress. Int J Soc Psychiatry. 2017;63(7):614-621. doi:10.1177/0020764017724819
- 31. Shield H, Fairbrother G, Obmann H. Sexual health knowledge and risk behaviour in young people with first episode psychosis. Int J Ment Health Nurs. 2005;14(2):149-154. doi:10.1111/j.1440-0979.2005.00372.x
- 32. Patry E, Bratberg JP, Buchanan A, Paiva AL, Balestrieri S, Matson KL. Rx for addiction and medication safety: An evaluation of teen education for opioid misuse prevention. Res Social Adm Pharm.2019;15(8):917-924. doi:10.1016/j.sapharm.2018.07.006
- 33. Morgan AJ, Fischer JAA, Hart LM, et al. Does Mental Health First Aid training improve the mental health of aid recipients? The training for parents of teenagers randomised controlled trial. BMC Psychiatry. 2019;19(1):99. doi:10.1186/s12888-019-2085-8