Stakeholders' Perceptions of Universal Mental Health Screening in Schools: A Systematic Review of the Literature

Pasha Matthias

St. David’s School of Nursing, Texas State University

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Dr. Theresa Garcia

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Abstract

Introduction: The school environment is an opportune place to identify if students have mental health needs, and Universal Mental Health Screening tools screen students who may possibly have mental health and/or social-emotional concerns. The purpose was to summarize the perceptions of stakeholders regarding the use of Universal Mental Health Screening in schools, so we can understand why it is not widely used. ***Method:*** All studies focused on the perception of the use of universal mental health studies in schools. Each study was selected based on the results of the Rapid Critical Appraisal Questions for Descriptive Studies. The final screening of primary studies resulted in sample size of six. ***Results:*** Themes of the studies were that Universal Mental Health Screenings of children and adolescents is beneficial, useful, and an easy way to screen students while in school. Another theme throughout the studies was the importance of screening students with a Universal Mental Health Screening tool. There are also several barriers to implementation of the use of Universal Mental Health Screening. ***Discussion:*** Findings showed that stakeholders believe the use of Universal Mental Health Screening is beneficial, but there are barriers to the use of Universal Mental Health Screening that need to be addressed for it to be implemented successfully. Evidence supports that stakeholders overall feel Universal Mental Health Screening is a valuable method of identifying students who may have mental health issues.

Keywords: children, adolescent, school, universal mental health screening, attitude, perception

Stakeholders' Perception of Universal Mental Health Screening in Schools: A Systematic Review of Literature

Up to 1 in 5 children in the United States (US) ages 3 to 17 have a mental, emotional, developmental, or behavioral disorder (Bitsko et al., 2022) and as those children increase in age, mental health (MH) disorders become comorbid with other health issues, and complexity increases (McGorry & Mei, 2018). There are 36.7% of US primary and secondary school students that report sadness and hopelessness and 18.8% of students seriously consider attempting suicide (Bitsko et al., 2022). The school environment is an opportune place to identify if students have MH needs and Universal Mental Health Screening (UMHS) in schools can help identify those students. UMHS in schools consists of the use of a rating scale or other diagnostic instruments that reflect characteristics of the student population to screen students who may possibly have MH and or social-emotional concerns. UMHS in schools is not being utilized (Burns & Rapee, 2022) for children ages 3–17, and our youth are not being identified and cared for as needed. To understand why UMHS is not being utilized, it is important to know what stakeholders think about the utilization of UMHS in schools. Currently, there is not an abundance of research that investigates how beneficial the use of UMHS in schools is, however, there is research that describes how people feel about the use of UMHS in schools. This systematic review is necessary to summarize the perceptions of stakeholders regarding the use of UMHS in schools, so we can further understand why UMHS is not widely used.

Background and Significance

MH encompasses a range of mental, emotional, social, and behavioral functioning and occurs along a continuum from good to poor (Bitsko et al., 2022). Many school-age children with or displaying characteristics of a MH disorder do not independently seek help, often go

undiagnosed or undetected, and fail to receive treatment or intervention leaving them susceptible to and at risk for poor school and life outcomes (Wood et al., 2021). UMHS in schools is an initiative-taking approach to identify students who may benefit from prevention or early intervention services (Moore et al., 2022). Despite known benefits, few schools are engaging in screening efforts (Burns & Rapee, 2021a; Moore et al., 2022; Waite & Atkinson). Presently, few states monitor the mental health outcomes of students (Eklund et al., 2021), and most states have not established social-emotional learning standards (Eklund et al., 2021). Without the increased adoption and implementation of preventative, proactive practices, such as the conducting of UMHS in schools, significant improvements in the identification and subsequent intervention or treatment of children and adolescents demonstrating MH concerns may remain unrealized (Wood & McDaniel, 2020).

UMHS is used to identify MH concerns, but it does not necessarily mean that a concern will be found in every child or adolescent who is screened (Jellinek, 2013) and it is important to state that some mental health conditions are not preventable (Prevention and mental health, 2021). Not every MH concern is caught by UMHS and not all MH conditions are preventable, there are several consequences to not identifying and treating children and adolescents demonstrating MH concerns. Researchers state that lack of adequate treatment to address MH needs can have serious implications for children, including greater difficulty in academic performance and increased vulnerability to various negative school outcomes (Swick & Powers, 2018). Children and adolescents with MH disorders account for 70% of those incarcerated in juvenile detention centers and up to 20% of those who do not finish grade school (Hjorth et al., 2016; National Alliance on Mental Health, 2022). Other complications of not identifying and treating children and adolescents demonstrating MH concerns include the worsening of disorders

such as anxiety, depression, attention-deficit/hyperactivity disorder, autism spectrum disorder, disruptive behavior disorder, or Tourette syndrome (CDC, 2022). The most prevalent disorders diagnosed among U.S. children and adolescents aged 3–17 years old between 2013 and 2019 were attention-deficit/hyperactivity disorder and anxiety, each affecting approximately one in 11 (9.4%–9.8%) children, age 12–17 years old. And one fifth (20.9%) experienced a major depressive episode, 36.7% reported persistently feeling sad or hopeless, and 18.8% had seriously considered attempting suicide (Bitsko et al., 2022). Ducharme (2018) stated that teenage suicide rates are at all-time highs and Chedekel (2017) adds that pediatric emergency units have observed spikes in psychiatric cases.

When paired with early intervention and treatment, implementation of UMHS holds the potential to combat an ever-increasing school-aged mental health crisis currently being observed throughout the country (Wood et al., 2021). Presently, few states monitor the mental health outcomes of students (Eklund et al., 2021), and most states have not established social-emotional learning standards (Eklund et al., 2021).

Review of the Literature

Several studies have examined the perspectives of multiple stakeholders affected by this issue, such as adolescent students, principals, parents, teachers, school psychologists and counselors. Adolescents' attitudes towards help-seeking revealed a perceived need of self-sufficiency and autonomy which were recognized as a relevant barrier in twelve studies, as well as fears of confidentiality breaches (Aguirre Velasco et al., 2020). Wood et al. (2021) conducted a study and most principals, on average, reported no or slight knowledge about UMHS, but moderate or extreme levels of interest in their school beginning to conduct UMHS. Various barriers that deter school psychologists and counsellors from screening include lack of

resourcing to implement screening, lack of knowledge about the mechanics of how to conduct a screening program, and concern about how to manage the anticipated increased workload generated by following up identified students (Burns & Rapee, 2021a). Several studies describe barriers to implementing UMHS in schools such as issues with parental consent, school budgeting, confidentiality, no knowledge of UMHS, and the mechanics of implementing such screening (Aguirre Velasco et al., 2020; Burns & Rapee, 2021a; Wood et al., 2021).

For the stakeholders, there remained some uncertainties regarding the proper implementation of UMHS in schools. "*Who do we screen? Do we need parental consent? How often do we screen? What should we screen for?"* (Burns & Rapee, 2021b). There is also a possibility for conflicted findings. Some students may not answer honestly, either stating things are positive when they are not, or some students may state there are things negative happening, when there may be no such thing (Burns & Rapee, 2021b). No other systematic reviews of the literature were found addressing these important perceptions. This review aims to highlight the barriers faced by schools, to better identify solutions and support further research testing the outcomes of implementation of UMHS in schools.

Purpose and Clinical Question

The national prevalence of children in the US with a MH disorder who did not receive needed treatment or counseling from a MH professional was 49.4% (Whitney & Peterson, 2019). Although UMHS in schools is an option, it is rarely used in US schools (Wood & McDaniel, 2020). The purpose of this systematic review was to explore and synthesize recent research that examined the perceptions of principals, parents, students, and other related stakeholders regarding the use of UMHS in schools. The research question that guided this systematic review was:

What are the perceptions of pertinent-stakeholders regarding the use of universal mental health screening in schools for children aged 3-17?

Conceptual Framework

This systematic review of the literature was guided by Neuman Systems Model created by Betty Neuman. The Neuman Systems Model provides the nurse with a comprehensive assessment in terms of caregiving and explains how the primary, secondary and tertiary prevention interventions can be used in problem-solving (Bademli & Duman, 2017). Primary prevention occurs before the patient reacts to a stressor and it includes health promotion and maintaining wellness (Bademli & Duman, 2017). Consistent with prevention approach to child and adolescent MH, universal screening that assesses the presence of risk and protective factors and the presence of MH difficulties can be used to identify not only students who require treatment, but also those who would benefit from early intervention or targeted preventative services (Siceloff et al., 2017). This project is to identify perceptions and understand how people feel about UMHS in schools, the focus can then shift to how we can implement UMHS in schools and focus on health prevention interventions. Children and adolescents are at a disadvantage and that is unfortunate and needs to be changed. School-based UMHS provides vital information about the emotional and behavioral health of students and school-level functioning (Siceloff et al., 2017).

Methods

Project Design

The design of this study was a Systematic Review of the Literature. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used (Moher et al., 2009).

Search Strategy

There was a total of six electronic databases that were searched. Primary sources included: BioMed, CINAHL, CrossRef, PubMed, MDPI, and Wiley online library. Search terms and their synonyms appropriate for each database were: children, adolescent, school, universal mental health screening, attitude, and perception. In addition to those databases and terms used, ancestry searching was used as well. Ancestry searching refers to the systematic review of citations from studies included in the review and from review articles (Conn et al., 2003). Inclusion criteria included primary research articles published between years 2018–2022, in English, peer-reviewed, addressing perception or attitudes regarding mental health screening in schools. The quality appraisal tool used to appraise the quality of the studies used in this systematic review of literature was the Rapid Critical Appraisal Questions for Descriptive Studies (Melnyk & Fineout-Overholt, 2015). See Appendix A. The maximum score was eleven, and the cutoff score was nine, which was intentionally low because of the limited amount of research that was available and to be more inclusive.

Selection Process

There was only one person conducting the searches and screening the articles. Zotero was used as a reference management tool. Articles were selected first by the titles of the article and then saved to Zotero. Once saved to Zotero, a report was generated from all the articles. That report generated by Zotero would include the title of the article, what type of article it was, the date it was published, the authors, an abstract, the library catalog it belonged to and tags or search terms. Articles that were appropriate were then refiled within Zotero, along with a new report being completed, and then printed. After being printed, these articles were then read and

given a full review to identify if they aligned with the systematic review of literature subject matter.

A flow diagram was created, Figure 1. That diagram (Figure 1) was then used to screen articles from the initial number of articles, down to the final sample of articles used.

As stated, the quality appraisal tool that was used was the Rapid Critical Appraisal Questions for Descriptive Studies (Melnyk & Fineout-Overholt, 2015). The Rapid Critical Appraisal Questions for Descriptive Studies consisted of nine questions that addressed if the studies were valid. After those questions are answered, the tool then addressed the reliability of the studies with four additional questions. The tool also addressed the applicability of the studies in two questions. The final portion of the tool addressed if the researcher would use the study results in their practice to make a difference in patient outcomes, and ask how and why, or why not (Melnyk & Fineout-Overholt, 2015). Each study used within this systematic review of the literature was selected based on the results of the Rapid Critical Appraisal Questions for Descriptive Studies.

Synthesis Method

An evidence synthesis table was created (Table 1) and used to extract pertinent information from the eight articles used. The type of information that was extracted from the table were purpose of the study, sample, setting and any major statistical values reported in the results. After extracting the data, the information was then reviewed, highlighting similar themes, and creating notes that supported how all these studies were relevant to the research question.

Results

Search Results

The initial search resulted in 3,084 citations. The first screening of titles and abstracts according to the inclusion criteria resulted in a total of 48 studies. A secondary screening of the full text of each study resulted in 12 studies in the sample. Ultimately, the final screening of primary studies resulted in 6 studies in the sample because 6 studies turned out not to be primary studies (See the flow diagram in Figure 1.).

Characteristics of Study

The purposes ranged from parents, teachers, counselors, and youths' perception of UMHS (Burns & Rapee, 2021a) (Moore et al., 2020) (Soneson et al., 2018) (Woodrow et al., 2022); teachers' perception of obstacles that come with mental health screening (Maclean & Law, 2022); and principals' perception of implementation and obstacles that come with mental health screening (Wood & McDaniel, 2020). All of the studies focused on the perception of the use of UMHS in schools (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Moore et al., 2020) (Soneson et al., 2018) (Wood & McDaniel, 2020) (Woodrow et al., 2022). Participants in one study consisted of students (Woodrow et al., 2022); two studies consisted of teachers as stakeholders, (Maclean & Law, 2022) (Moore et al., 2020); two studies consisted of parents as stakeholders (Moore et al., 2020) (Soneson et al., 2018); one study consisted of counselors as stakeholders (Burns & Rapee, 2021a); in one study stakeholders were principals (Wood & McDaniel, 2020). Most (66.6%) of the studies were conducted in Scotland, Australia, and United Kingdom, with the remainder of the studies conducted in the United States. As seen in Table 1, there were several designs of the studies described. There was one study in the sample that used a cross-sectional design (Soneson et al., 2018); three studies in the sample used survey design (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Wood & McDaniel, 2020); one study used a semi-structured interview design (Woodrow et al., 2022); one study used a clinical observation

design (Moore et al., 2020). The sample consisted of four self-reporting online measurement tools (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Soneson et al., 2018) (Wood & McDaniel, 2020), one NVivo-12 data management system (Woodrow et al., 2022); one BASC-3 BESS; Pediatric Symptom Checklist–17 (Moore et al., 2020).

Across the six studies, sample sizes ranged from 51 (Woodrow et al., 2022) to 340 (Moore et al., 2020), for a total of 1,233 participants overall. There were two studies (Maclean & Law, 2022) (Woodrow et al., 2022) that reported racial/ethnic backgrounds of study participants; four studies reported gender (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Soneson et al., 2018) (Woodrow et al., 2022).

The sample consisted of three studies that did not identify a framework (Burns & Rapee, 2021a) (Soneson et al., 2018) (Wood & McDaniel, 2020); one study used multi-tiered intervention frameworks (Moore et al., 2020); one study used Curriculum for Excellence framework (Maclean & Law, 2022); and one study used realist evaluation framework (Woodrow et al., 2022).

Synthesis Across Studies

After the review was completed on the studies, all studies were focused on the perception of the use of UMHS. Parents, teachers, counselors, and youth were among the stakeholders whose opinions were collected. Three themes were identified while conducting this review. Obstacles and barriers were also identified throughout the review process.

Theme 1: *UMHS is a beneficial, useful, and easy way to screen students while in school.* Findings across studies provide strong evidence that UMHS is seen as a positive tool. The use of UMHS tool is beneficial to not only the students, but to the stakeholders as well. Parents, principals, counselors, and pediatricians all want to see their students healthy, and that includes

their mental health. Being able to identify students who may need an intervention is important to students' overall health. Five of eight studies found that UMHS was a useful method in school-based screenings (Burns & Rapee, 2021a) (Moore et al., 2020) (Soneson et al., 2018) (Wood & McDaniel, 2020) (Woodrow et al., 2022).

Theme 2: *It is important to screen students with a UMHS tool* (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Moore et al., 2020) (Soneson et al., 2018) (Wood & McDaniel, 2020) (Woodrow et al., 2022). The use of UMHS tools is efficient and easy to implement once those who need to use it have been properly trained to do so. Once implemented, UMHS tools can identify students who may need a follow up for mental health issues; this is what makes the use of the UMHS tool so beneficial to students' overall health.

Theme 3: *Different barriers to implementation of the use of UMHS*. A few barriers among the study's findings were issues conducting or understanding the use of UMHS (Maclean & Law, 2022) (Moore et al., 2020) (Woodrow et al., 2022); two of the six studies showed concern with funding and budgeting UMHS in schools (Burns & Rapee, 2021a) (Wood & McDaniel, 2020). Frequency of screening and how often it should be done (Burns & Rapee, 2021a). Three of six studies found that there is a lack of proper training and knowledge of mental health detection and screening (Burns & Rapee, 2021a) (Maclean & Law, 2022) (Soneson et al., 2018). Three studies recognized there is more need for research and how screenings can be implemented better (Maclean & Law, 2022) (Moore et al., 2020) (Woodrow et al., 2022). An example of how screening can be implemented better would be planning of who will be conducting UMHS, when screening will take place, and what to do if a student needs additional evaluation.

Neuman's System Model brings focus to primary, secondary, and tertiary nursing in regard to caregiving and explains how problem solving, prevention and interventions can be done (Bademli & Duman, 2017). The use of UMHS is considered primary prevention. Screening students can help prevent stressors from having a poor effect on students and address students who may need further intervention. The perception of the stakeholders is also a part of the Neuman's System Model because the interaction between the students and their environment can be assessed as a part of the nursing process. Principals, counselors, parents, and teachers all have the responsibility to report behaviors that may not be appropriate.

Discussion

The purpose of this systematic review was to explore and synthesize recent research that examined the perceptions of different stakeholders, namely, school principals, parents, students, and other related stakeholders regarding the use of UMHS in schools. Three themes were found across studies to describe the perceptions of these stakeholders. One theme was that UMHS in schools is a beneficial, useful ad easy way to screen students. Another theme was that it is important to screen students with a UMHS tool. And the final theme identified was that there are different barriers to implementation of the use of UMHS. These findings showed that stakeholders believe the use of UMHS is beneficial, but there are barriers to the use of UMHS that need to be addressed for it to be implemented successfully so that children and adolescents get care they deserve. After reviewing all studies conducted, the evidence supports that stakeholders overall feel UMHS is a valuable method of identifying students who may have mental health issues. Evidence also supports that stakeholders agree that it is important to screen students for mental health issues. Evidence also identified barriers such as difficulty stakeholders had conducting or understanding the use of UMHS, funding and budget for the use of UMHS,

the frequency and how often it should be done, and lack of knowledge regarding MH and screening. Neuman's System Model has helped me interpret these results by identifying nursing prevention interventions, such as screening. When paired with early intervention and treatment, implementation of UMHS holds the potential to combat an ever-increasing school-aged mental health crisis currently being observed throughout the country (Wood et al., 2021). However, it appears that the lack of implementation is largely due to lack of mental health knowledge the stakeholders have. Presently, few states monitor the mental health outcomes of students (Eklund et al., 2021), and most states have not established social-emotional learning standards (Eklund et al., 2019).

These findings are supported by previous work. Anderson et al., (2018) conducted a review that focused on effectiveness and cost effectiveness of school-based identification of children and young people at risk of, or currently experiencing mental health difficulties. They concluded that the evidence base was limited and found more studies needed to be conducted to establish accuracy (Anderson et al, 2018). Wissow et al., (2013) conducted a review that focused on possible explanations related to the process of UMHS in pediatric primary care, focusing on how parents and youth are engaged and how providers evaluate and use screening results. They concluded that little research has addressed the process of engaging patients in mental health screening in pediatric primary care or how clinicians can best use screening results (Wissow et al., 2013).

Recommendations from Findings

One recommendation from the findings of this review that could improve APRN practice would be to use collaboration skills to help prepare and lead the community. Collaboration with the community also lets providers recognize gaps in health care and how they can be corrected.

Another recommendation would be to speak to your Board of Education about the importance of more funding for UMHS in schools and explain that the benefits outweigh the risk, and it can reduce the additional cost of future medical expenses for students who don't have early identification of mental health issues. Lastly, another recommendation from the findings of this review that can improve APRN practice would be to continue educating others. Constantly teaching and providing research or findings with the community can assist with early intervention and prevention.

Limitations

Despite many strengths in this review, it was limited and may not be easily applied to the US because only two of the studies were conducted in the US. Another limitation is that very few schools have implemented UMHS, so most of the respondents expressing their views about UMHS have not had direct experience with UMHS. An additional limitation is that most of these studies were in survey format. Qualitative data may yield richer findings as to the barriers perceived by stakeholders. Another limitation is that there was a small number of studies available and to improve this, more studies are needed.

Conclusions and Implications

Students spend most of their time in school with a wide variety of individuals they interact with per day. The proper UMHS screening tools should be encouraged throughout the school year. Principals, counselors, and teachers should all be competent in mental health and be able to properly use UMHS tools, so it is important to incorporate an in-service into school employee training as necessary. Using a UMHS tool is beneficial to our youth's MH and now it is time to promote and educate others on why we need to bridge the gap and start implementing UMHS across the country.

A few things learned from this review were that stakeholders did not find UMHS difficult once they were educated and understood how to implement it. Students found UMHS to be simple and important. Some have fears that they were not knowledgeable enough, while others found it may not fit into budget. All these perceptions are important and can be addressed with the proper plan of action. That plan of action would include education, promotion of mental health awareness, and an increase in funding.

It is recommended to use a UMHS in schools because it can be beneficial to our youth's mental health and can assist in improving their overall health as they grow up. The use of UMHS in schools has the potential to improve clinical practice because it can promote early identification of mental health issues, and possibly help prevent further mental health issues as these young people grow into adults. There is also potential that early identification may decrease hospitalizations and even deaths related to mental health.

To continue implementing UMHS in schools it is necessary to educate stakeholders on how to screen and how to follow up on UMHS the proper way. One way to continue educating our stakeholders is to do in-service trainings each school semester. The in-service can address the importance of screening students and what to do once they feel there may be an issue.

Principals, counselors, and teachers have the opportunity to educate our youth and they can incorporate mental health into their curriculum. They could also use school sporting events, pep rallies, and school clubs to promote help seeking behaviors, and decrease discomfort in doing so. Posters, websites, and educational pamphlets can be used to promote mental health and awareness.

For those stakeholders who may be suffering from financial or budgetary issues they would need to lobby for more funding from state and private entities such as their school board

and city council. They could also reach out to the local congressmen and explain the importance of UMHS and why more funding is needed to make sure they can properly train staff and implement having screenings done in schools.

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Table 1

Evidence Synthesis Table

Author	Purpose	Frame- work	Design	Sample/ Setting	Methods	Findings	Quality Appraisal/ Limitations	Conclusions/ Application
Burns & Rapee, 2022	To investigate the experiences of school psychologists regarding the prevalence of and barriers to mental health screening	Not Indicated	Surveys	169 psychologists; mean age= 45.6 years; female, 83%; 43.5% part-time in schools, 50% full-time in schools, 6.5% unemployed. Australia	Survey online asked about demographic information of participants, whether participants had run a school-based mental health screening program during the preceding calendar year, a series of questions to elicit information about the specific screening practices used in their school, and perceptions of barriers to UMHS in schools.	Screening is not very prevalent, just 14.8% of school psychologists employed by schools that have had screening in past 12 months, only half of those schools conducted screening more than twice; focus of screening is toward students self-reporting rather than teacher or parent reports; school psychologists feel under-resourced to deal with the referrals, time, and cost of screening.	QA: 9/11; participants not representative of the population; Overrepresentation of independent schools' psychologists; validity issue due to retrospectivity of the research. Setting in Australia and not US	School psychologists worry about having adequate funding and resources for mental health screening; psychologists have concerns about being able to follow-up those who were screened; psychologists claim deficiency of screening abilities.
Maclean & Law, 2022	To identify and examine any obstacles that Scottish teachers may	Curriculum for Excellence framework	Survey	179 teachers in Scottish primary schools, women (98.9%), Scotland	Online survey; The survey examined mental health concerns	44.7% of teachers felt they had enough knowledge to mental health needs of their students; 90% feel the	QA: 9/11; participant misinterpreting the	Teachers have an essential role in identifying mental health problems in students and

Author	Purpose	Frame- work	Design	Sample/ Setting	Methods	Findings	Quality Appraisal/ Limitations	Conclusions/ Application
	have in fulfilling their responsibility to assist the psychological state of their students.				observed in the classroom; barriers to support; perceived personal knowledge; and training	need to intervene in mental issues in the classroom; teachers identified lack of prevention programs, parent support programs, early screening, and staff training as reasons why mental health needs go unrecognized	questions; closed-ended nature of the questions, participants u nable to elaborate more on the basis of their response. Setting in Scotland and not US	initiating referrals, however, many teachers may not understand the importance of their role and have a lack of training and skills necessary for handling these tasks.
Moore et al., 2022	To investigate the opinions of parents and teachers about acceptability and appropriatene ss of UMHS.	Multitiered intervention frameworks	Questionn aire	40 instructors, 95% female, 60% White, 27.5% Latinx; 300 parents, 73% female, 61% Latinx, 12% White; 50.6% completed measures in Spanish. California, US	Questionnaire containing items related to acceptability, appropriatenes s, and usability of UMHS. URP-A was given to teachers to assess the usability of the UMHS. The BASC-3 BESS was the actual UMHS measure.	Both teachers and parents in agreement on how important it is to screen children for mental health issues; less agreeable in their willingness to complete the UMHS surveys. The BASC-3 BESS has been utilized with positive results.	QA: 9/11; small sample size.	Teachers said the BASC-3 BESS was a useful assessment, and parents and teachers both agreed that UMHS was acceptable and suitable. However, future research with larger, more representative samples is needed to understand how attitudes toward UMHS may vary between preschool and elementary school teachers and parents.
Soneson et al., 2018	To investigate parents' attitudes of the legitimacy of MHD	Not defined	Cross-sectional survey	Four schools; 290 parents; mean age of 37.5; 200 female, 47 male, 1 transgender, 1	Email questionnaire containing 13 items relating to acceptability;	97% of parents agreed to the importance of MHD screening in schools; 82% believed that screening would	QA: 9/11. Appraisal: adding valuable	Parents generally supported the early identification of MHD in schools; most parents believed that

Author	Purpose	Frame- work	Design	Sample/ Setting	Methods	Findings	Quality Appraisal/ Limitations	Conclusions/ Application
	assessment in primary schools on a school-wide level.			prefer not to say (some parents have multiple students; 92.1% white; 3.2% other white; 1.6% black. UK	three open-text boxes for comments on harms, benefits, and screening in general; and four questions that captured demographic information.	be helpful; 13% believed that MHD screening could be harmful.	information to MHD subject; limitation: lack of existing measurement tool; incentivizing participation likely to lead to duplication. Primary school only; lack of variability in gender and ethnicity in sample; setting in UK and not US	screening would be helpful; some parents believed that MHD screening could be harmful due to inaccurate information, stigma of MHD, and lack of follow-up care.
Wood & McDaniel, 2020	To determine the percentage of schools conducting UMHS and that affect implementation in schools.	Not indicated	Online survey	245 Indiana school principals; most elementary in rural areas; most with less than 5 years of experience. US	Quantitative online survey consisting of 22 yes/no questions to determine if schools conducted UMHS and what barriers exist in conducting UMHS.	1.2% of schools conduct UMHS; budget is a major concern since most schools do not have access to mental health screeners; 75% of principals interested in UMHS; 75% of principals possess minimal to no knowledge on UMHS	QA: 9/11; only Indiana included and only principals employed by the state of Indiana; inaccuracy due to self-reporting	School is the best avenue for screening; needs assessment critical; principals are interested in mental health screening but have no knowledge or training on the subject; budgetary allocations needed to provide schools with access to mental health screeners.

Author	Purpose	Frame- work	Design	Sample/ Setting	Methods	Findings	Quality Appraisal/ Limitations	Conclusions/ Application
Woodrow et al., 2022	Examining the viewpoints and experiences of youth participants in the DHC initiative	Realist evaluation framework	Qualitative Semi-structured interviews	47 participants were White-British. 51 youths (aged 13-14) participated in DHC, 62.74% female, 92.15% white, 11.76% Asian. UK	Online video conference interviews; Thematic analysis used to evaluate data; Transcripts coded using NVivo-12 data management system; questions asked about understanding of DHC, experience completing DHC, perceptions of DHC usefulness, support seeking, school nursing, suggested improvements	DHC perceived mental health check-in tool; Online DHC delivery perceived comfortable; DHC reporting regardless of setting (home or school) Themes: DHC was perceived as acceptable, easy tool to discuss mental health and wellbeing.	QA: 9/11; small sample size (only two schools); limitations in sampling approach; setting in UK and not US	Need for research on online school-based screening programs; DHC seen as a practical and advantageous method for determining health needs and helping young people.

Abbreviations: BASC-3 BESS: Behavior Assessment System for Children–Third Edition: Behavioral Emotional Screening System; DHC: digital health contact; MHD: mental health difficulties; UMHS= universal mental health screening; URP-A= Usage Rating Profile Assessment.

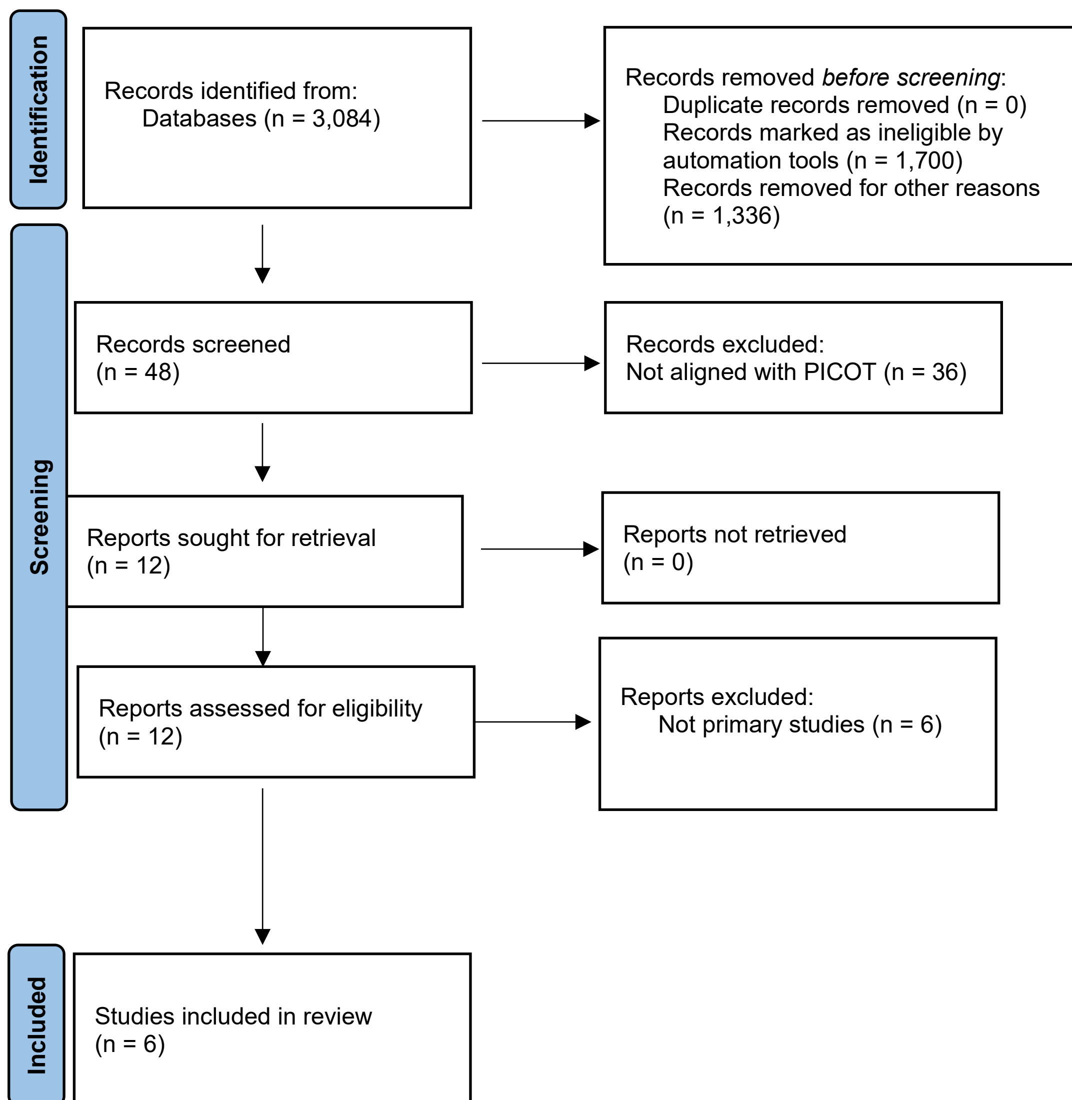
Figure 1. Identification of Studies via Databases and Registers
Identification
Records identified from:
Databases (n = 3,084)
Records removed *before screening*:
Duplicate records removed (n = 0)
Records marked as ineligible by automation tools (n = 1,700)
Records removed for other reasons (n = 1,336)
Screening
Records screened
(n = 48)
Records excluded:
Not aligned with PICOT (n = 36)
Reports sought for retrieval
(n = 12)
Reports not retrieved
(n = 0)
Reports assessed for eligibility
(n = 12)
Reports excluded:
Not primary studies (n = 6)
Included
Studies included in review
(n = 6)

Appendix A

Appendix B6: Rapid Critical Appraisal Questions for Descriptive Studies

VALIDITY

Are the results of the study valid?

☐	• Were study/survey methods appropriate for the question?	Yes	No	Unknown
☐	• Was sampling methods appropriate for the research question?	Yes	No	Unknown
☐	• Were sample size implications on study results discussed?	Yes	No	Unknown
☐	• Were variables studied appropriate for the	Yes	No	Unknown
	○ Dependent variables are: ○ Independent (outcome) variables are:			
☐	• Were outcomes appropriate for the	Yes	No	Unknown
☐	• Were valid and reliable instruments used to	Yes	No	Unknown
☐	• Were the chosen measures appropriate for	Yes	No	Unknown
☐	• Were outcomes clearly described?	Yes	No	Unknown
☐	Did investigators and/or funding agencies declare freedom from conflict of interest?	Yes	No	Unknown

RELIABILITY

2. What are the results?

- What were the main results of the study?
  - Was there statistical significance? Explain
  - Was there clinical significance? Explain
- Were safety concerns, including adverse events and risk/benefit described? Yes No Unknown

APPLICABILITY

3. Will the results help me in caring for my patients?

• Are the results applicable to my patient	Yes	No	Unknown
• Will my patients' and families' values and beliefs be supported by the knowledge	Yes	No	Unknown

Would you use the study results in your practice to make a difference in patient outcomes?

- If yes, how?
- If yes, why?
- If no, why not?