Populations at Special Risk: Children and Children's Mental Health Services

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Abstract

Population-based mental health services for children are systematically designed to address the collective mental health needs of all children in a community or geographic region. Population-based service models emerged into prominence given evidence that traditional referral-based services were, at best, serving only half of communities' children with significant mental health needs. Well-designed population-based mental health services promote children's psychological wellness as well as prevent and treat mental disorders within the community's children, given evidence that psychological wellness and psychopathology are related but distinct dimensions of mental health. Effective population-based mental health services require data-based planning and continuous evaluation to ensure that the unique mental health needs of a community are being addressed.

Key points

- Population-based mental health services for children follow intentional, data-informed service plans that leverage existing resources with the goal that all children in a community receive mental health services that they need earlier and with more impact.
- The strongest population-based mental health services are predicated on data-based portraits gathered to describe children's mental health needs in the immediate community, and to monitor the changing face of the community's mental health needs in response to provided services.
- Data-based planning for population-based mental health services can include existing community data (e.g., records of school behavior or youth crime or vandalism); epidemiological survey protocols in which all children are deliberately screened for evidence of mental health or psychopathology; or developmental risk data that assessing community rates for chronic stressors that place children at risk for limited personal and social success.
- Mental health data might be aggregated across all children in a community, aggregated across subgroups of children (e.g., by age, gender, or risk factors), or used to identify specific children at high risk. Patterns and trends in those data can suggest particular sources of risk, describe the nature of mental health interventions that are required, or make the case for additional interventions from within or outside the community
- Data-based plans for population based mental health services will describe a continuum of mental health services that address the universal mental health needs of children with community-wide services, address the needs of children at high functional risk for diminished mental health with specialized mental health services, and incorporate indicated services for children whose dysfunction is pronounced or whose life dissatisfaction and poor quality relationships are overwhelming.
- Population-based service models are proposed as alternatives to traditional referral-based models because traditional services have been unable to meet the substantial needs of one in five children and adolescents in communities who already demonstrate diagnosable mental disorders, unable to intervene in the early stages of mental disorders when symptoms are less severe, and unprepared to serve younger children when pathology is first evident but not yet fully developed.

- The shift to population-based mental health services cannot be made around the edges of traditional services. Transitioning to a population-based model will require considerable time up front in order to plan, deliver, and evaluate the community-wide interventions. Population-based planning typically requires a reallocation of resources from previous services to new services and will necessarily incorporate strategies and cooperation from multiple community agencies and providers.
- Resource mapping can be used as a coordinating framework to match the mental health needs that can be provided by multiple child-serving agencies with the services that are most required for children in the community.
- Evaluation of population-based service models is used to continually update information about the mental health needs of children in the community, so that the program of services remains responsive to the needs of children; and to monitor the impact of the population-based services on children's mental health.

Introduction

Population-based mental health services for children are services that have been intentionally designed to meet the collective mental health needs of all children and adolescents of a defined community (Doll and Cummings, 2008; Purtle et al., 2020). Services begin with carefully collected information about the mental health status of all of the community's children. From this assessment, a plan is constructed that describes the mental health services that are needed in the community, who will provide these services, and who will receive them. When there are competing needs for services, decisions to provide some services and not others are based on the relative urgency of children's needs and the anticipated outcomes of the services. Once the plan is constructed, mental health services are implemented and include individual, group, or population-based services, as well as services that are both preventive and remedial, depending on the nature and extent of the mental health needs present in the community. The impact of the services and the changing face of the community's mental health needs are monitored in an ongoing fashion, so that the mental health services plan can be refined to best meet the community's collective needs. This Assess → Plan → Intervene → Evaluate cycle defines the essential purpose of population-based models of mental health services to ensure that decisions made about a community's child mental health services are intentional and informed by data and, to the maximum extent possible, existing resources are stretched to meet the community's collective child mental health needs.

Relevant evidence for population-based mental health services for children

In the United States, population-based mental health services are viewed as a necessary alternative to traditional referral-based services for children, particularly in the aftermath of the COVID-19 pandemic (Evans and Bufka, 2020). In referral-based services, individual children are identified as likely candidates for mental health services by one or more adults and are referred for a comprehensive socioemotional assessment to identify the nature and extent of their mental health needs. Individual service plans are then developed and specify the services that can and should be provided to the child, and the treatment goals that should guide the services. When needs are defined using this referral-based model, multiple epidemiological studies have described a profound discrepancy between the need for and availability of mental health services for children and adolescents in the United States. Although one in five children and adolescents experience a mental disorder in a given year, fewer than half of these children are actually receiving mental health counseling or therapy (Bitsko et al., 2022; Zablotsky and Terlizzi, 2020). A third of the remaining children are receiving treatment via medication only without receiving therapy or counseling. Substantial numbers of children experiencing a mental disorder are receiving no mental health services at all. These disparities between the need for and availability of children's mental health services are especially pronounced for children and adolescents with marginalized and intersecting identities (e.g., gender identity, ethnicity, disability, socio-economic distress; National Academies of Sciences et al., 2019).

Referral-based models are also criticized because these restrict mental health services to children who already demonstrate diagnosable mental disorders, a practice that delays intervention until symptoms are pronounced and severe, even though mental health services have greater impact when delivered in the earlier stages of a disorder (Kessler et al., 2005). Similarly, referral-based models concentrate mental health services on older children whose pathology has more fully developed, but numerous studies have shown that mental health services have more impact when they are delivered at younger ages. Ultimately, referral-based services focus a community's mental health resources on reducing pathology, but there is increasing evidence that the promotion of psychological wellness is just as important as the treatment of pathology, and that mental health service systems must attend simultaneously to pathology and wellness (Suldo and Doll, 2021).

The ultimate intent of the population-based mental health service model is to leverage existing resources so that more children receive mental health services earlier and with more impact (Doll and Cummings, 2008; Hess et al., 2012; Lazarus et al., 2022). Population-based services can be integrated most readily into schools and other organizations that already serve all children in a community (e.g., churches, athletics, recreation centers, juvenile justice, and social services) and that share responsibility for children's mental health. In many cases, these population-based interventions are nonclinical services (i.e., excluding psychotherapy or psychoactive medication), but they nevertheless improve mental health outcomes by minimizing general emotional distress and

promoting psychological wellbeing (Purtle et al., 2020). Preliminary analyses of archival data suggest that community-wide protective factors (e.g., social cohesion, youth safety, and collective efficacy) are essential determinants of youth mental health as assessed by the Youth Risk Behavior Survey (Longhi et al., 2021). In the U.S., the serious shortage of child mental health services has prompted multiple agencies and providers outside of traditional mental and behavioral health disciplines to share responsibility for children's mental health. Indeed, over the past two decades, schools have been the primary providers of mental health services to children in the United States (Simon et al., 2015). The number and diversity of nontraditional mental health service providers initially prompted concerns that the various agencies' services would duplicate and compete with one another and that children could be better served by mental health care that was carefully coordinated across systems (Adelman and Taylor, 2010). However, one careful examination failed to find evidence that comprehensive collaboration among community-based and school-based mental health providers results in improved outcomes for children (Mellin et al., 2016).

Limitations to population-based services have also been identified (Evans and Bufka, 2020; Purtle et al., 2020). In practice, the model has only been implemented on a small scale and within agencies that are already population-focused (e.g., schools, military bases, or public health systems.) Transitioning to a population-based model would represent a wholesale reorganization for traditional community mental health systems and may not be practical given current health funding mechanisms that reimburse clinics and mental health practitioners for treatment of identified disorders. Ironically, systems that are best poised to transition into population-based service delivery models in the United States are public agencies (such as schools) that were not traditionally vested with responsibility for children's mental health.

Major methodological advances in population-based children's mental health services

Planning for population-based mental health services for children begins with an understanding of the nature of developmental competence and psychopathology, as derived from the rich developmental research describing children's social, emotional, cognitive, and personal growth (Masten et al., 2021; Luthar and Eisenberg, 2017). Given what is known about children's developmental competence, information is then gathered to describe the mental health needs of all children in a particular community. Based on that data-based portrait, resources with the potential to address these needs are identified. Partnerships that extend throughout the community can create infrastructures that integrate related interventions into comprehensive caretaking systems and that dismantle programmatic silos – narrowly construed interventions that address a single risk factor or disturbance without regard for children's other needs, risks or protective factors. Given the identified mental health needs and resources, a plan is constructed that prioritizes the needs of the community's children and allocates mental health and related resources to interventions that are frequently needed and those that will have high impact on the children's psychological wellness. Table 1 describes four primary purposes that guide these interventions. Periodic reassessment of children's mental health needs allows the community to evaluate progress and update the mental health plan. Interventions that emerge out of this problem-solving cycle do not need to focus solely on children. They can also focus on the families, community groups, or agencies. Indeed, when population-based assessments suggest that large numbers of children are faltering, stronger caretaking systems are needed for children and adolescents in the community (Longhi et al., 2021).

The nature of developmental competence and psychopathology

Throughout most of the twentieth century, the principles and practices of children's mental health services proceeded independently of the research on typical and atypical child development. In the past two decades, two previously distinct disciplines have merged – research on child development has increasingly examined the interventions that are necessary to shift developmental trajectories toward success, while research on children's psychopathology has increasingly recognized the impact of natural caretaking systems on the emergence of mental health. Where the two disciplines intersect, important contributions have been made to the design of children's mental health services, including: (1) examinations of the socioecological predictors of mental health and emotional disturbance in children and adolescents (with implications for the interruption of children's developmental trajectory into psychopathology); and (2) descriptions of developmental differences in the nature and prevalence of psychiatric disorders (with implications for necessary shifts in the nature of mental health services at different age points).

One of the most impressive findings has been the degree to which children's developmental competence and mental health is predicated on characteristics of the caretaking communities and families rather than the children themselves (Masten et al., 2021; Longhi et al., 2021; Luthar and Eisenberg, 2017). In particular, children's exposure to poverty, family violence, parental mental illness, or community violence significantly increases their chances of developing debilitating mental illnesses. Consequently,

Table 1 Four purposes of population-based models for children's mental health.

1. Treating social, emotional, or behavioral disorders of children
2. Providing protective supports to ameliorate the risk for children who are vulnerable to develop disorders in the future
3. Promoting psychological wellness and developmental competence
4. Promoting effective community caretaking practices that are necessary for healthy psychological development of children

reducing the prevalence of these deleterious factors in children's communities has the potential to significantly reduce the need for children's mental health services; community-wide efforts to address demographic threats to children's well-being must be incorporated into any population-based mental health service plan. Conversely, many protective factors that allow children to flourish despite adversity are also characteristics of their communities and families: Close bonds with alternative adults, friendships with peers, connections with prosocial organizations, and effective schools. The implication for a community's mental health program is that some services that ameliorate children's risk for psychopathology may lie outside the traditional boundaries of mental health services.

Mental health service plans must also be informed by the relatively recent information about the prevalence of mental illness in children and adolescents (Bitsko et al., 2022; Zablotsky and Terlizzi, 2020). In the United States, diagnostic criteria for children's mental disorders were first available with the release of the DSM-III-R (American Psychiatric Association, 1987). Immediately thereafter, epidemiological studies conducted in the United States and Canada demonstrated that between 16% and 22% of children met the criteria for one or more mental disorder (Doll and Lyon, 1998). These prevalence rates shocked the mental health professions since, at a similar point in time, Knitzer (1982) estimated that only 5% of children and youth were receiving mental health services. Notably, the U. S. Surgeon General's landmark report (U. S. Department of Health and Human Services, 1999) argued that even though 22% of children met the diagnostic criteria for a mental illness, only 11% were fundamentally impaired, and only 5% were impaired enough to require treatment. One year later, the report of the Surgeon General's Conference on Children's Mental Health (U. S. Department of Health and Human Services, 2000) asserted that only 10% of children and adolescents had a mental illness severe enough to cause impairment.

Since that time, the U. S. Centers for Disease Control has conducted ongoing surveillance of the prevalence of children's mental disorders in the United States (Bitsko et al., 2022). Contemporary prevalence statistics are updated regularly, and now acknowledge that 1 in 5 children and adolescents are experiencing a mental disorder requiring mental health services each year. Clinical interviews of adolescents and their parents conducted through the National Comorbidity Survey Adolescent Supplement (Merikangas et al., 2010) established that the average age of onset for most disorders is in the first two decades of life. Results of the National Comorbidity Survey Replication (Kessler et al., 2005) revealed that efforts to secure treatment lagged 6–8 years after the onset of significant symptoms, such that disorders that began in childhood were often are not treated until early adulthood. Current estimates are that 10% of children and adolescents received treatment or counseling from a mental health professional in the previous year (Zablotsky and Terlizzi, 2020). Together, these results document a profound discrepancy between the need for and availability of mental health services for children in the United States.

Population-based mental health service plans incorporate innovative strategies and cooperation from multiple agencies and providers in order to bridge this gap. To some extent, community plans can be informed by existing research which has predicted of the nature and prevalence of mental health needs that are likely to exist for any single community. Nevertheless, the size of the gap and the specific array of service needs can shift and change depending on a community's unique circumstances. For example, community needs might change given major drops in adult employment, concentrations of poverty, geographic isolation that limits access to community support programs, or location adjacent to abusable substances or drug transportation routes. Demographic factors can alter the prevalence of disorders while differing sociocultural contexts can shift diagnostic practices in a specific community. Thus any population-based mental health service plan must reflect community-based assessments of mental health needs and the plan must be continually updated in response to changes in the community. Moreover, decisions about which mental health services are most needed by a community cannot be made by prevalence figures alone. Communities must also balance the severity and impact of any disorder, the likely impact of intervention services, and the need for wellness-promoting as well as disorder treatment services.

While mental health services are necessary for all children and adolescents, those with marginalized and intersecting identities (e.g., LGBTQ+, race, disability, socio-economic status, etc.) are particularly vulnerable populations (National Academies of Sciences, 2019). Due to additional stressors placed on many communities, such as racism, homophobia, and discrimination, these children are at a greater risk of experiencing mental illness. In addition to increased mental health concerns, these populations also face a significant disparity in mental health services received (Louie and Wheaton, 2018; Russell and Fish, 2016). Despite a notable rise in reported mental illness for children with marginalized identities, the rate of treatment has not increased to meet this demand (Agency for Healthcare and Research Quality, 2022). Because early intervention can significantly mitigate symptoms of mental illness and support children's well-being, this gap in services is concerning.

As one very recent example of community shifts in mental health needs, the COVID-19 pandemic has had very significant impact on the prevalence of mental disorders and psychological well-being among children and adolescents in the United States (De France et al., 2021; Evans and Bufka, 2020; Magson et al., 2021). Since the start of the global pandemic, children have been faced with unprecedented stressors, such as quarantine and isolation, school closures, illness, death of loved ones, disruption in social activities, and frequent changes to routine. Not surprisingly, an increasing number of studies have documented the detrimental effects of the COVID-19 pandemic on the mental health of children and highlighted the necessity of population and school-based services for supporting student mental health. This trend is evident internationally. Children and adolescents in Israel surveyed prior to the pandemic and again after an eight-week lockdown period due to COVID-19, reported significantly greater levels of anxiety, depression, panic symptoms, and general distress than before the lockdown (Shoshani and Kor, 2022). Longitudinal studies in Australia, China, and the United States have similarly indicated a significant increase in depression symptoms (Magson et al., 2021; Shujuan et al., 2021; De France et al., 2021). Many of these youth also reported a notable decrease in subjective well-being, endorsing fewer positive emotions, a lack of peer support, and/or lower overall life satisfaction (Magson et al., 2021; Shoshani and Kor, 2022).

Despite the declining mental health observed in many children and adolescents during COVID-19, certain populations have been disproportionately impacted. Students with neurodevelopmental disorders, such as Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorder, have reported particularly high levels stress, loneliness, and conflict during periods of lockdown (Raw et al., 2021; Summers et al., 2021). This is not surprising, as restrictions related to the pandemic have limited access to the emotional and behavioral supports, structure, and routine that many children with neurodevelopmental disorders rely on. Individuals from racially and ethnically marginalized groups have also experienced significant mental health concerns related to the COVID-19 pandemic. Physical and mental health problems due to COVID-19 and the co-occurring events of police brutality and systemic racism in the United States, have led to a reported increase in racial trauma and safety concerns among Black students, families, and communities (Horsford et al., 2021). For Chinese American families, racial discrimination linked to COVID-19 has been associated with lower well-being and an increase in internalizing and externalizing problems (Cheah et al., 2020).

A necessary consideration regarding the declining mental health and well-being of children and adolescents throughout the COVID-19 pandemic is the impact of school closures. In the United States, approximately 70–80% of school-age children who receive mental health services receive these supports directly from their school (Simon et al., 2015). Due to lockdowns and school closures, students have not had regular access to the mental health services that are typically provided in a school-based environment. This is concerning, given that all children are at risk of the negative mental health outcomes associated with COVID-19, not just children who experienced significant mental health concerns prior to the pandemic (Shoshani and Kor, 2022). These statistics reiterate the crucial role that schools play in providing population-based services to children and adolescents.

State-of-the-art in assessing the collective mental health status of children in the community

The strongest population-based mental health services are predicated on data-based portraits gathered to describe children's mental health needs in the immediate community. Data can include existing community data such as records of school behavior or youth crime or vandalism, particularly when monitoring systems have been put in place to collect these data meticulously and accurately. Alternatively, using epidemiological survey protocols, children can be deliberately screened for evidence of mental health or psychopathology (Hess et al., 2012; Eklund et al., 2021). In smaller communities, every child might be screened, but larger communities could use systematic sampling strategies to derive reliable estimates of the nature and extent of mental health needs. Epidemiological research has established standards for selecting community samples, screening for all instances of a disorder, confirming diagnoses against professional standards, identifying variables related to instances of the disorder, and using data to identify predictive and causal relations underlying useful intervention strategies. Many epidemiological studies use multistage procedures in which the entire child population of a community is first screened to identify any evidence of a disorder. Measures used in this initial screening stage must minimize the number of false-negative identifications so that all children with legitimate need for services will be identified. In subsequent stages, more time-intensive surveys or interviews are administered to children or their families selected in the first stage and yield more comprehensive descriptions of their needs and strengths. Within research protocols, strict adherence to sound epidemiological methods are possible with sufficient funding. In practice, a pragmatic alternative is to carefully train key informants such as parents, teachers, or childcare workers in the primary symptoms of high-frequency disorders, and use these informants as a Stage 1 screening resource to refer children into a second time-intensive stage of screening (Walker et al., 2014).

Other assessments could be predicated on the developmental risk research, assessing the chronic stressors that place children at risk for limited personal and social success (Hess et al., 2012; Masten et al., 2021; Werner, 2013). Community demographic data describing poverty, educational attainment, employment, rates of divorce, incidence of child abuse, or family health can be analyzed to provide useful estimates of the numbers of children growing up with three or more of these risk factors. Risk-based assessments can instead be based on functional risk or evidence of early symptoms that may not satisfy the full diagnostic criteria for the disorder. Records of school discipline or suspension, truancy, status offenses, or youth vandalism can be used as evidence of emerging behavioral disorders that could impair children's life success. Early identification using functional risk data makes it possible to address adjustment problems when they are first evidenced and, in some cases, to waylay eventual disorders. Many of the same developmental studies that described demographic risk factors also identified protective factors that predict future life success in vulnerable children and that could become the mechanisms underlying preventive interventions. Consequently, population-based assessment could also describe assets in a community's children such as school success and achievement levels, and youth participation in community service activities and mentoring organizations.

Pragmatic assessment strategies that are used for population-wide assessment may be very different from traditional diagnostic assessment measures (Doll et al., 2021). Population-wide assessments must be brief to administer and efficient to code and analyze, so that the task of creating the data-based portrait of children's mental health needs does not overtax the community resources. The strategies must have strong reliability and validity, so that they are highly accurate in describing the mental health of a community's children. Resources to identify strong measures for population-based assessments can be found in Table 2. Data might be aggregated across all children in a community, aggregated across subgroups of children (e.g., by age, gender, or risk factors), or used to identify specific children at high risk. Patterns and trends in those data can suggest particular sources of risk, describe the nature of mental health interventions that are required, or make the case for additional interventions from within or outside the community. Effective community assessments will identify children who would have slipped through the cracks in traditional referral-based services, identify the children earlier than would otherwise be the case, and guide the planned development of services to match children's needs. Thus, population-based assessments allow communities to be proactive rather than reactive in responding to children' mental health needs.

Table 2 Finding effective population-based assessment measures.

- Check the website of the Collaborative for Academic, Social, and Emotional Learning for an assessment guide and planning and implementation assessments. https://casel.org/state-resource-center/assessment-tools/
- The SAMSHA guide for mental health screening includes a set of assessment tools that can be used in K-12 schools to screen for mental disorders: Mental Health Screening Tools for Grades K-12 https://safesupportivelearning.ed.gov/sites/default/files/10-MntlHlthScrnTlsGrK-12-508.pdf
- The website of the World Health Organization describes the Global School-Based Student Health Survey [Mental Health Module] that measures behavioral risk factors of adolescents, and has been adopted by over 40 countries around the world https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/global-school-based-student-health-survey

Planning the community's mental health services to children

The purpose of the population-based service plan is to create a match between the mental health needs that have been identified in the community assessment and the services that are provided to children in the community. Resource mapping has been proposed as a coordinating framework for matching resources to the needs (Adelman and Taylor, 2015). Resource mapping begins by creating a comprehensive list of the community's existing mental health programs and the mental health service providers who staff these programs, including how they spend their time, when and where they provide services to children, and the populations of children that they serve. In many instances, a resource map will also incorporate services that have not traditionally been thought of as mental health services at all. In particular, the importance of protective factors in the family and community demonstrate that they share responsibility for children's mental health and positive socioemotional development. The next step compares the community's existing mental health services to current mental health needs of the children. A technical aid packet to guide the development of resource maps can be found at Adelman and Taylor (2015). Gaps exist when mental health needs are identified and no community services exist to meet those needs; duplication is identified when multiple services simultaneously and repeatedly address the same need. Once the needed services are identified, mental health and community service provider roles will be reframed to be highly responsive to those needs. Mental health needs that are demonstrated by large numbers of enrolled children (e.g., anxiety symptoms) may indicate that community-wide services would be appropriate. Alternatively, very significant needs may justify the provision of high-intensity mental health services even if these would only be provided to a very few children. In some cases, mental health service planning will document the need for new kinds of services that have not previously been provided. In other cases, community staff may decide that there are ecological factors that facilitate problems that could be addressed preventively. An important component of this reframing process may be modifying existing policies to allow new ways for services to be combined and professionals to interact. In almost every case, the resulting plan will describe a continuum of mental health services extending from individual interventions for children with special needs, much like traditional clinical interventions, to community-wide interventions that address prevalent problems and promote developmental competence.

Population-based mental health intervention

A continuum of mental health services is needed by most communities. Earliest diagrams of this continuum featured a triangle that resembled the 1980s' triad of primary, secondary and tertiary prevention of mental illness (Doll et al., 2021; Suldo and Doll, 2021). When this tiered framework is reimagined to incorporate the promotion of psychological well-being as well as reduction of mental illness, the diagram is better described as a two dimensional grid. One dimension represents the presence or absence of symptoms of mental disorders while the second dimension represents the presence of absence of well-being (happiness, life satisfaction, social and self-regulatory competence.) Communities' continuum of services must address the universal mental health needs of children with community-wide services to promote psychological wellness and to prevent disturbance. Developmental resilience research offers important insights into the kinds of services that promote wellness. Specifically, children are resilient in the face of adversity when they have access to close peer friendships, high self-efficacy, high levels of engagement in productive activities, access to warm relationships and guidance from adults, or access to responsive community agencies (Masten et al., 2021). Additional examples of interventions that promote wellness can be found on the website of the Collaborative for Academic, Social, and Emotional Learning.

Specialized mental health services will also need to be provided to identified children who are at high functional risk (i.e., early evidence of adjustment disturbances) or demographic risk (i.e., evidence of poverty, family violence, or other characteristics that predict poor outcomes). These services are more concentrated and more intense than universal services, address needs that are not broadly held by all children in a community, and have the purpose of strengthening competence as well as ameliorating risk. Because these interventions interrupt developmental risk trajectories, they have necessarily been interwoven with prevention services. The essential characteristics of effective prevention programs have been identified by Nation et al. (2003): They are a comprehensive integration of multiple interventions that are implemented across school, home, and community; they use varied and interactive teaching methods that actively engage children in developing specific skills; their dosage is matched to the problem severity with interventions that are more intense and of longer duration for more severe problems; they are theory-driven and evidence-based; and they promote strong, positive relationships between parents and children, teachers and children, and children and peers. Numerous examples of preventive interventions can be found on the websites described in Table 3.

Table 3 Online resources identifying evidence based interventions for children and adolescents.

1. Collaborative for Academic Social and Emotional Learning's (CASEL) Program Guide
2. https://casel.org/guide/
3. Blueprints of the University of Colorado Boulder's Institute for Behavioral Sciences
4. https://www.blueprintsprograms.org/program-search/
5. Substance Abuse and Mental Health Services Administration's (SAMHSA) Evidence Based Practices Resource Center
6. https://www.samhsa.gov/ebp-resource-center
7. Institute for Education Sciences' What Works Clearinghouse
8. https://ies.ed.gov/ncee/wwc/
9. Office of Juvenile Justice and Delinquency Prevention Model Guide
10. https://www.ojjdp.gov/mpg

In every community, a few children will require indicated services, necessary for children whose dysfunction is pronounced or whose life dissatisfaction and poor quality relationships are overwhelming. These should be implementations of manualized interventions that have been subjected to rigorous research to demonstrate their effectiveness. Rigorous standards for evidence-based interventions with children assert that evidence-based interventions have been subjected to at least two well-designed group studies or a series of well-conducted single-subject studies (Doll and Yoon, 2010). Participants in the studies should have been randomly assigned to different intervention groups and comparisons should be made between groups of participants provided with no intervention, competing interventions, and with the intervention of interest. Finally, results should demonstrate that improvements are due to the intervention, represent an improvement over no intervention at all, and are at least as strong as those produced by competing interventions. Online resources to identify evidence-based interventions are described in Table 3.

Evaluation of population-based services

Evaluation serves two important purposes within population-based service models: (1) To continually update information about the mental health needs of children in the community, so that the program of services remains responsive to the needs of children; and (2) to monitor the impact of the population-based services on children's mental health. Ideally, mental health service providers hope that the program will strengthen psychological wellness and diminish psychopathology among children in the community. Answering these questions is quite challenging. First, although it is possible to aggregate individual evaluation information across multiple children, time and cost constraints make it impossible to conduct comprehensive individual evaluations of all children participating in mental health services. Consequently, service providers must identify and target key indicators of children's wellness from the beginning, weaving evaluation into the implementation of the program of services. Second, community level effects may be confounded with important psychosocial events that occur during the period of an evaluation. For example, the loss of a major employer in a small rural community can unexpectedly double or triple the parental unemployment rate, and the resulting family stress could be reflected in higher rates of childhood disturbance. Consequently, the evaluation plan must include qualitative records of important community events that serve as the context for services. Third, trends in children's psychological wellness or psychopathology are likely to stretch across several years, well beyond the timeframe of a typical project year. Consequently, planning for and decisions about population-based mental health services must proactively monitor community indicators of mental health and psychological wellness across projects.

The most useful evaluation will be a formative evaluation that feeds continuous improvement information back to the program leaders, even while it is being implemented. The most effective evaluation is systematic with methodologically rigorous designs and not an anecdotal case study. Key considerations in evaluation are described in Table 4 and include not only the degree to which the population-based mental health services were effective, but also the degree to which they were compatible

Table 4 Key questions to answer in an evaluation of population-based mental health services.

1. Were the services effective in reducing the frequency or severity of children's psychiatric disorders?
2. Were the services effective in increasing children's psychological wellness and developmental competence?
3. What were the unintended positive or negative consequences of the services?
4. What factors increased or decreased the services' effectiveness?
5. Were the population-based mental health services implemented with fidelity?
6. Were the population-based mental health services acceptable to children? To families? To mental health service providers?
7. How can the evaluation data be used for refining and enhancing the community's mental health services for children?

Adapted from Nastasi BK and Hitchcock J (2008) Evaluating quality and effectiveness of population-based services. In: Doll B and Cummings J (eds.) *Transforming School Mental Health Services: Population-Based Approaches to Promoting the Competency and Wellness of Children*. pp. 245–276. Thousand Oaks, CA: Corwin Press.

with the needs and values of the community (Nastasi and Hitchcock, 2008). Particularly within population-based models, service providers and program planners will need to be diligent in monitoring the shared impact of services and decisions across all children in the community.

Conclusion

Population-based models for children's mental health services are logical responses to the widespread dissatisfaction with traditional referral-based models for service delivery. Based on a public health perspective of mental health, they operationalize key principles of mental health intervention that have been demonstrated in empirical research on developmental competence and childhood psychopathology. They are extensions of the familiar Assess → Plan → Intervene → Evaluate cycle that has been so useful for individually planned mental health services. However, the extension of this cycle to population-based decision making presents some special challenges. First, many of the community-wide assessment and intervention services do not fit neatly into existing service-funding options such as public or private health insurance. Second, important components of the community's mental health services plan might rely on nontraditional providers of mental health services, such as youth mentorship programs, churches, or neighborhood community centers. Third, designing and implementing a population-based mental health program relies on collaboration across multiple community agencies – public and private – and it can be difficult for these agencies to communicate clearly and efficiently. Fourth, a shift from a traditional mental health model to population-based services will almost always be made in the face of diminishing or at best flat child mental health resources. As a result, population-based planning typically requires a reallocation of resources from previous services to new services and may create what may be seen as winners and losers within the community. Clearly, a shift to population-based mental health services cannot be made around the edges of traditional services. The strategies require considerable time up front in order to plan, deliver, and evaluate the community-wide interventions. At a minimum, this will require that communities thoughtfully and carefully plan for the nature and amount of mental health services that they will provide to children.

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Relevant websites

https://casel.org/guide/—Collaborative for Academic Social and Emotional Learning's (CASEL) Program Guide.
https://www.blueprintsprograms.org/program-search/—Blueprints of the University of Colorado Boulder's Institute for Behavioral Sciences.
https://www.samhsa.gov/ebp-resource-center—Substance Abuse and Mental Health Services Administration's (SAMHSA) Evidence Based Practices Resource Center.
https://ies.ed.gov/ncee/wwc/—Institute for Education Sciences' What Works Clearinghouse.
https://www.ojjdp.gov/mpg—Office of Juvenile Justice and Delinquency Prevention Model Guide.