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Clearing Hurdles: The Challenges of Implementation of Mental Health Evidence-Based Practices in Under-resourced Schools

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Abstract

Schools have become the main provider of services to children with mental health needs. Although there is substantial literature on barriers to implementation of evidence-based practices (EBPs) in under-resourced school districts, less has been written on how to overcome those barriers. Providing mental health services in the school setting presents a tremendous opportunity to increase access to quality mental health care for underserved youth. This review provides a brief overview of the barriers to successful implementation and sustainment of EBPs in under-resourced public schools and provides recommendations for overcoming them. The discussion is organized around an established conceptual framework adapted for the delivery of services in under-resourced schools that focuses on interdependent factors that exist at the individual-, team, school-, and macro-levels. This manuscript explores some recommendations and strategies for effectively addressing challenges related to implementation of EBPs. Research ideas are offered to bridge the research-to-practice gap that impacts many under-resourced public school districts.

Keywords

Implementation; sustainment; evidence-based practices; mental health services; under-resourced schools

Approximately half of all children with emotional and behavioral disorders receive mental health services (Merikangas et al., 2010); however, this statistic might be an overestimation of service utilization by low-income youth (Kataoka, Zhang, & Wells, 2002; Pumariega, Rogers, & Rothe, 2005). Public schools have become the main provider of mental health services to children and offer one way to increase access for low-income youth (Cummings,

Ponce, & Mays, 2010). A number of efficacious interventions for the prevention and treatment of the most common mental health problems in the school setting have been developed and validated (Kutash, Duchnowski, & Lynn, 2006); however, few of these evidenced-based practices (EBPs) have been adopted or successfully implemented in schools. This is consistent with evidence from various disciplines which suggests that EBPs often are not adopted, implemented and maintained in community settings in the way they were designed to be (Dingfelder & Mandell, 2011; Glasgow, Vogt, & Boles, 1999), in large part, because they were not developed to be implemented within the constraints of under-resourced community settings. Thus, the purpose of this paper is to provide a brief overview of unique barriers to implementation in under-resourced school settings (i.e., schools located in poor school districts), a particular school context, and offer recommendations as to how to successfully implement and sustain EBPs. While the extant literature on barriers tends to be more specific to urban schools, the proposed solutions and research recommendations apply to any under-resourced school, including those in rural and suburban settings.

Implementation of EBPs in poor school district settings poses a unique set of challenges. Under-resourced schools often utilize mental health teams comprising both school district and community mental health agency employees (Markle, Splett, Maras, & Weston, 2014). The use of multiple providers from different organizational contexts may lead to a fragmented system of care where goals may not be in alignment, and it is unclear who is responsible for presenting problems that traverse both academic and behavioral domains. With the fiscal challenges that poorer school districts face each year, staff is often extremely limited and competing priorities may exacerbate available staff shortage for implementation in these settings (Caskey & Kuperberg, 2014). Support staff and other personnel often are not trained mental health providers, but given staff limitations, they may be responsible for implementation and may not see that as their role or priority (Benjamin, Taylor, Goodin, & Creed, 2014).

To provide recommendations on how to best implement EBPs in under-resourced schools, we turn to the heuristic contextual framework offered by Domitrovich and colleagues (2008; see Figure 1). This framework suggests that implementation of EBPs in schools is influenced by a broad array of interdependent factors at the macro-, school-, and individual-levels. At the macro-level, community factors influence the quality of implementation within schools. At the school-level, the school as an organization influences implementation of EBPs (e.g., organizational functioning, policies within the building, resources available to support implementation, and school climate). At the individual-level, individuals deliver the interventions that impact quality of intervention implementation in schools (e.g., demographics and attitudes; Domitrovich et al., 2008). We propose that in under-resourced school contexts, or in any schools that utilize a model where behavioral health providers are contracted to provide services in the school setting, there should be a fourth level, a school mental health team level (Markle et al., 2014). Factors related to school mental health teams might include staff allocation, expertise and turnover, the particular needs and priorities of team members, and overall functioning of the team system. Ineffective implementation of EBPs may be explained, in part, by lack of institutional support for high quality services, inadequate support for clinicians, high staff turnover, inadequate fit between the intervention and context, and poor fidelity to EBPs (Flaspohler, Meehan, Maras, & Keller, 2012).

We organize the paper around the Domitrovich and colleagues (2008) implementation framework adapted for the delivery of services in under-resourced schools. This paper does not focus on the middle layers (e.g., support system, intervention, standardization), but rather on the outer layers of the framework (i.e., macro-, school-, team-, and individual-levels) because the outer layers are more likely to vary by setting. There are a number of individual and organizational level variables that have been found to impact the organization of mental health services that we think are key to successful implementation and sustainment of EBPs in under-resourced school settings (Aarons, Hurlburt, & Horwitz, 2011; Glisson, 2007; Wandersman et al., 2008). We argue that implementers must focus their attention on a unique set of barriers to implementation and sustainment of EBPs in the high-stress, under-resourced, school setting and offer suggestions for overcoming these barriers. We review barriers to implementation and sustainment and provide recommendations for improving implementation and sustainment for the outer layers of the model. The unique contributions of the manuscript include a discussion of factors related to the work of school-based mental health teams and proposed solutions for dealing with specific implementation and sustainment barriers.

Barriers and recommendations for EBP implementation in schools

Barriers and facilitators in successful implementation exist at multiple levels, with diverse priorities and goals (Domitrovich et al., 2008), which may be in conflict with one another. Considering this reality from the outset may afford stakeholders the opportunity to anticipate challenges and maximize resources.

Individual Staff-Level Factors

Domitrovich and colleagues (2008) discuss several individual-level factors that may impact quality of intervention implementation in schools. These include professional characteristics, psychological characteristics, and perceptions of and attitudes toward the intervention.

Barriers to implementation and sustainment—Professional characteristics include training, experience, and attitudes toward interventions (Domitrovich et al., 2008). Other additional personal attributes of individuals that may present barriers to implementation, include personality, competence, intelligence, and experience. For example, knowledge can be quite variable in EBP implementations, particularly in under-resourced schools where a variety of personnel (e.g., social workers, teachers, support staff) may be asked to implement EBPs. Those with little or no mental health background may lack foundational therapeutic competencies as well as knowledge about specific disorders and their presentation. More experienced mental health providers may be ready to begin EBP training immediately, though they may lack motivation to make changes to their existing practice.

Psychological factors, such as anxiety or anger about implementation (or alternatively, enthusiasm and confidence), professional stress and burnout, and self-efficacy also have been highlighted by Domitrovich et al. (2008) as important individual-level considerations. Providers may perceive EBPs as threatening their autonomy and challenging their own clinical judgment (Garland, Bickman, & Chorpita, 2010).

Individual-level factors also may include perceptions of and attitudes toward a particular intervention or toward EBPs in general (Domitrovich et al., 2008). Providers may be concerned that EBPs may require them to be too instructional or structured in therapy sessions and that this may be detrimental to rapport and responsiveness to client needs, despite evidence to the contrary (Garland et al., 2010). Attitudes can impact the decision whether to adopt and implement EBPs (Aarons, 2004, 2005) as well as adherence and skill when implementing (Beidas et al., 2012).

Recommendations

Support system for clinicians: A significant challenge for community mental health agencies and schools in under-resourced settings is how to create infrastructure to support the development of clinicians and coaches who can then oversee the delivery of EBPs by individuals with less mental health training, such as teachers and paraprofessionals. Barriers related to therapeutic competencies, mental health knowledge, and psychological factors can be addressed by establishing an effective system of internal supervision, in cases where the school district or mental health agency has internal capacity or external consultation, when internal capacity does not exist (Herschell, Kolko, Baumann, & Davis, 2010). Train-the-trainer models have been successfully used to train supervisors in community mental health agencies. For example, in the Managing and Adapting Practice system (Southam-Gerow et al., 2014), the use of a train-the-trainer approach resulted in acceptable clinician competency scores and strong treatment effects sizes compared to a train-as-usual approach. A similar approach could be applied in school settings. For example, consultants with expertise in EBPs train clinical supervisors from community mental health agencies on the use of modular approaches for individual psychotherapy (Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011) and group-based EBPs for children at heightened risk for mental health disorders (Eiraldi et al., 2014). The clinical supervisors then train and supervise clinicians that provide direct services in schools.

Consultation and coaching: There is a substantial body of evidence supporting the effectiveness of consultation and coaching for supporting teachers and other school professionals in the implementation of EBPs in under-resourced schools. For example, in the Bridging Mental Health and Education in Urban Schools (Cappella et al., 2012) program, mental health clinicians provided consultation and coaching to teachers on classroom behavior management and effective teaching strategies, which resulted in better student-teacher relationships, student academic self-concept and lower peer victimization. A two-phase (universal and tailored) coaching model has been successfully used by Becker and colleagues (Becker, Darney, Domitrovich, Keperling, & Ialongo, 2013) for the implementation of Promoting Alternative Thinking Strategies curriculum (Greenberg & Kusche, 2006) and the PAX Good Behavior Game (Embry, Staatemeier, Richardson, Lauger, & Mitich, 2003) for the prevention of off-task, aggressive and disruptive behaviors and promotion of positive classroom climate (Becker, Bradshaw, Domitrovich, & Ialongo, 2013). Similarly, Reinke and colleagues (Reinke, Stormont, Webster-Stratton, Newcomer, & Herman, 2012; Stormont & Reinke, 2012) and Pianta and colleagues (Pianta, Mashburn, Downer, Hamre, & Justice, 2008) have used consultation and targeted feedback for the implementation of EBPs to improve teacher-student interactions and children's externalizing

behavior in predominantly low-income urban schools. These studies have shown that schools can make use of their own resources (i.e., mental health teams; Atkins, Hoagwood, Kutash, & Seidman, 2010) to provide consultation and coaching to teachers and other school professionals who are involved in the delivery of prevention and treatment EBPs.

Changing beliefs and attitudes toward implementation of EBPs: It can be helpful to assess providers' beliefs about EBPs early on during planning for implementation. It also is helpful to engage more experienced providers, as they can be important collaborators with EBP implementers working in a new setting, given their institutional knowledge. Some individual-level barriers may be addressed by correcting misperceptions about EBPs early on during the implementation process (Garland et al., 2010). For example, positive attitudes are related to attaining a more refined definition of what an EBP is following training (Lim, Nakamura, Higa-McMillan, Shimabukuro, & Slavin, 2012). However, positive attitudes are not sufficient to produce behavior change. Interventions can be developed to target more proximal factors to clinicians' behavior, such as therapists' behavioral intentions to employ EBPs (Webb & Sheeran, 2006). The theory of planned behavior (Ajzen, 1991), which posits that an individual's behavior is determined by his/her intentions to perform a given behavior, has been applied in the context of implementation of EBPs in autism support classrooms. Specifically, intentions were found to differ across EBP strategies (e.g., visual schedules versus positive reinforcement) and were also found to be predictive of actual implementation (Fishman, Beidas, Reisinger, & Mandell, in review). Taking this step further, changing intentions could be the target of implementation strategies. For example, this has been the focus of a continuing education study in psychiatry (Casper, 2007). An intervention based on the theory of planned behavior was associated with changes in behavioral intentions toward the use of a particular intervention, and a subsequent increase in the use of the intervention (Casper, 2007). This approach can certainly be applied with school-based clinicians. For example, a workshop could be developed to change attitudes toward EBPs and reinforce clinicians' behavioral intentions to use EBPs before they are actually trained in the implementation of the EBP. This is the approach taken in a recently published study of the implementation of a supportive beliefs intervention to facilitate implementation of a universal prevention system (Cook, Lyon, Kubergovic, Wright, & Zhang, 2015).

Providers also can be trained to be "evidence consumers," so that they can learn to identify relevant research, evaluate it, and use it to instruct their clinical care methods (Beidas, Ditty, Downey, & Edmunds, 2014). Attending to potential individual-level barriers early in the planning process and throughout implementation may be key in addressing barriers. Establishing collaborative partnerships early on can maximize the likelihood of success (Chambers & Azrin, 2013; Southam-Gerow, Hourigan, & Allin, 2009).

Sustaining individual effort: Han and Weiss (2005) found that sustainment is only possible when teachers are intrinsically committed to continuing to implement the programs after expert support is no longer or minimally available. More specifically, teachers commit to the sustainment of programs when they experience success in implementing them (i.e., when they achieve high fidelity), have administrative support from the school or school district, and have the necessary expertise to adapt the program to changing circumstances (Han &

Weiss, 2005). Once a program is established, it is important to maintain high fidelity of implementation and to ensure that teachers and clinicians have the necessary expertise to conduct adaptations so as to preserve fit to context (Han & Weiss, 2005). The train-the-trainer literature suggests that precautions must be taken to avoid “water-down” of intervention effects over time when a community clinician who has been trained in mental health EBPs then goes on to train other clinicians (Herschell et al., 2010). Periodic booster training sessions could be provided by the training team as a cost-effective sustainment strategy for agencies and schools in under-resourced settings (Herschell et al., 2010).

Team-Level Factors

School-based mental health prevention and intervention services are increasingly coordinated and delivered by interdisciplinary teams (referred to as mental health teams from this point on). Services often involve multiple components delivered through the actions of multiple individuals within mental health teams as well as organizations (Fixsen, Blase, Naoom, & Wallace, 2009). Mental health teams in under-resourced schools may face barriers related to staff allocation, expertise level, and turnover that affect implementation and sustainment of EBPs.

Barriers to implementation and sustainment—Not having enough time for team-related activities is the biggest barrier to the formation of any school-based team (Mellin & Weist, 2011; Robinson, 2002). Staff turnover is much higher among teaching and non-teaching professionals in under-resourced school districts (Mellin & Weist, 2011). Mental health agencies that provide services in schools increasingly rely on fee-for-service staff in order to control cost (Beidas et al., in review), which may increase turnover. The consequence of this is that every year it is necessary to train a new group of team members.

The allocation of professionals with mental health training within teams varies. In poorer school districts, mental health teams often are staffed by school district and/or community mental health agency employees (Markle et al., 2014). Because of teacher shortages and accountability systems, such as Race to the Top (U.S. Department of Education, 2009), which exerts pressure on poor districts to improve academic performance, under-resourced schools are often forced to assign teaching duties to non-teaching staff, such as school counselors and social workers (Fiscella & Kitzman, 2009). This has the unintended consequence of reducing availability of mental health services in schools that desperately need them. Team members employed by community mental health agencies may have different training backgrounds, theoretical orientation, supervision requirements and sense of mission than those employed by the school district, which may lead to a fragmented system of care (Locke et al., 2015).

Recommendations

Staff allocation: The challenge for school districts is to be able to attract and retain well-prepared, experienced professionals. Teams should establish role clarity for all staff by holding regular meetings, reviewing responsibilities, and setting intervention implementation schedules. Well delineated roles for team members may facilitate training, supervision, and quality improvement efforts (Baker, Salas, King, Battles, & Barach, 2005).

Involvement of school and agency administrators in staff allocation is the key because the essential role of administrators is to provide time, resources, feedback, and support to interdisciplinary teams (Markle et al., 2014)..

Staff turnover: One potential solution for staff turnover is to train someone at the administrative level who is less likely to leave (e.g., assistant principal, special education liaison). However, challenges in the school setting include the need to find someone who fills the clinical “supervisor” role. Promoting cohesion and strong bonds between team members would increase commitment to fulfilling team goals and lead to a more effective team, which also should contribute to increased satisfaction among team members and reduce turnover (Markle et al., 2014). Additionally, identification of factors that predict turnover can lead to interventions that reduce turnover based on these mutable factors. Funders also may consider providing financial incentives to mental health agencies for retaining staff that are well trained in the use of EBPs.

Needs and priorities: The needs and priorities of team members may vary depending on whether these individuals are employed by the school district or by community mental health agencies contracted by the district. For example, when mental health teams are employed by the district, providers may need support in the form of advocating to their superiors, who likely do not have a mental health background, in order to obtain training and resources. When mental health teams are employed by a community agency, they may be confused about roles and responsibilities if the priorities of the school district and the community mental health agency are not aligned. Targeted interventions could be implemented to improve cohesion and teamwork. For example, team members from the district and mental health agencies can be brought together to discuss needs and competing priorities; find ways for the group to accommodate and support the team members; delineate roles for each team member; and develop an effective system to communicate and share information.

Team functioning: Teamwork has been shown to affect clinical performance (Schmutz & Manser, 2013). A growing body of research on teams and team training has been successfully applied to medical teams (e.g., (King et al., 2008). This literature has yet to be extended to mental health teams in schools, despite the commonalities. For example, like medical teams school-based mental health teams are required to coordinate care activities and often are composed of individuals from different training backgrounds functioning in a variety of roles, which may or may not be well defined. While each member of the team may be responsible for carrying out independent tasks, they share the common goal of improving child outcomes. Given this, team training interventions that have demonstrated efficacy in health care settings (e.g., TeamSTEPPS; Agency for Healthcare Research and Quality; 2007), may prove useful in improving important teamwork constructs such as communication, leadership, support, and role clarity in school mental health teams.

Quality improvement collaboratives (QICs), also referred to as learning collaboratives, can be useful for improving quality of care and advancing the use of EBPs among teams (see Nadeem, Olin, Hill, Hoagwood, & Horwitz, 2013). QICs may include a range of components such as in-person learning sessions, multidisciplinary team meetings, and plan-

do-study-act cycles. The literature has yet to definitively identify the active ingredients of QICs (e.g., Gustafson et al., 2013) or to determine their efficacy (Nadeem et al., 2013); however they represent an area of interest for researchers.

School-Level Factors

School-level barriers have been identified as important challenges to both the implementation and sustainment of EBPs in under-resourced schools and include funding and pragmatic issues regarding intervention-setting fit (Forman, Olin, Hoagwood, Crowe, & Saka, 2009; Glisson, 2007).

Barriers to implementation and sustainment—Many school systems face significant reductions in public funds (Forman et al., 2009; Thaker et al., 2008) that significantly impact the ability to dedicate upfront resources for intervention materials, space, staff training and professional development. Structural and practical issues may be important to consider as well. For instance, shorter school class periods may hinder mental health teams attempts to follow an intervention manual that was initially developed for 60-minute outpatient sessions (e.g., Beidas et al., 2012).

Barriers to sustainment may arise in the (a) development of principal and other administrator support; (b) alignment of the intervention with school philosophy, goals, policies, and programs; (c) visibility of program outcomes to key stakeholders; and (d) development of support systems for implementers (Forman et al., 2009).

Recommendations

Lack of resources: Cappella and colleagues (2008) developed an ecological model for school teams to address contextual factors in under-resourced urban schools. Core features include universal programming, the utilization of indigenous resources and strategies for supporting teaching technologies. In this model, learning goals within the context of implementation of EBPs also can be conceptualized as mental health goals. In this way, efforts toward improving the capacity of urban schools to promote learning also could contribute to addressing the mental health needs of students (Cappella, Frazier, Atkins, Schoenwald, & Glisson, 2008). The work of Capella and colleagues suggests that despite lack of human and financial resources, under-resourced schools can successfully implement EBPs and improve academic and mental health outcomes (Cappella et al., 2012; Cappella, Jackson, Bilal, Hamre, & Soulé, 2011). School districts that have not had the benefit of grant funding for establishing a sustainable in-school service delivery system, such as the system developed by Capella and colleagues, may consider contracting with mental health agencies or university-based programs with expertise in building such capacity. Multicomponent interventions may offer an advantage over those developed for a narrow problem or population. Cost-effective EBPs may be easier to implement and sustain compared to expensive programs that require ongoing supervision (Rones & Hoagwood, 2000).

Intervention fit: Interventions that can be easily broken down into shorter sessions may be better candidates for adaptation than more rigid interventions. Interventions developed for use with groups may be preferable when funding is limited as they allow more students to be

served by a single provider at one time. Individual intervention protocols that are skill-based may be more easily adapted to group format. Didactic skills can be presented in group format and then individual sessions can be conducted to tailor the intervention to each child. The provision of high-quality training and consultation strategies to ensure fidelity to the intervention, while affording opportunities for flexibility to improve fit, is key (Kendall & Beidas, 2007). Alignment of the intervention with school philosophy, goals, policies, and programs when possible can increase support from administration (Domitrovich et al., 2008).

The fit of the intervention in schools may be affected by several organizational factors such as readiness for change, culture, and climate. This issue has rarely been studied in under-resourced schools, in part, because measuring these constructs is challenging. Typically, organizational constructs require aggregating a number of raters in one setting, which is difficult in classrooms where there is only one teacher and in schools with only one leader (i.e. principal). One way to work around this challenge is to utilize mental health teams within schools to collectively capture the organizational context. Results of a recent study suggest that modular psychotherapy, as opposed to traditional manualized treatment protocols, might be a better fit for the school context Lyon, Ludwig, Romano, Koltracht, Vander Stoep, & McCauley (2014).

Sustaining improvement in school and classroom climate: Working with students who have been affected by chronic poverty and neighborhood violence and who might present high rates of problem behaviors calls for the deployment of comprehensive multilevel interventions (i.e., primary, secondary, and tertiary prevention levels; Warren et al., 2003). A number of comprehensive school-wide prevention approaches have been found to have a positive effect on improving school climate and addressing behavioral, emotional and academic problems in under-resourced schools. One such approach is school-wide positive behavioral interventions and supports (SWPBIS; Sugai & Horner, 2009). SWPBIS is compatible with the continuum of mental health supports and the use of EBPs for the most common behavioral health disorders (Putnam, McCart, Griggs, & Hoon Choi, 2009). SWPBIS is in many ways ideal for under-resourced schools because of its emphasis on developing internal capacity for implementation, which controls cost; data-driven decision-making, which contributes to high fidelity; and involvement of the whole school staff, which promotes sustainability (Sugai & Horner, 2009). Team use of data for decision-making and capacity building has been found to independently predict sustainment of SWPBIS (McIntosh et al., 2013). SWPBIS requires sustained, year-to-year training and support for implementers but models for creating sustainable internal capacity in the urban school context have been implemented and can be replicated (Eiraldi et al., 2014).

Macro-Level Factors

The broadest level of the framework includes factors that have the potential to influence the quality of EBP implementation and sustainment within the schools (Domitrovich et al., 2008). These factors include characteristics of the service or intervention, characteristics of the families using the service, and cost.

Barriers to implementation and sustainment—Schools in under-resourced school districts may be the focus of multiple new initiatives that often become fragmented and work at cross-purposes (Ahram, Stembridge, Fergus, & Noguera, 2011). This can affect implementation and sustainment of academic and non-academic best practices and contribute to negative attitudes toward the implementation of new initiatives, such as those related to the implementation of mental health EBPs (Aarons, 2004). This can be especially challenging when competing systems-level stakeholders are present, which may create a climate that is not conducive to long-term initiatives.

For example, as previously discussed, in one common school-based mental health approach schools contract with community behavioral health agencies to provide mental health teams to deliver services in the school setting (i.e., co-location; Weist, 1997). This is the approach implemented in most large US cities and in poor rural and suburban school districts. In the co-location approach, it is important to consider that agency leadership may vary in their support of EBP and their level of support often influences the resources and support available to mental health teams being asked to participate in EBP implementation. Community agencies may differ with school administrators on methodology of care, and negotiating these differences can be challenging.

Other important barriers in the under-resourced schools include service fragmentation (Guevara et al., 2005; National Association of State Mental Health Program Directors Research Institute, 2009), problems with care coordination (Cammack, Brandt, Slade, Lever, & Stephan, 2014), confidentiality rules and regulations (Weist et al., 2012), lack of parent participation in interventions and high dropout rates, which hinder treatment gains and add further economic burden to agencies that provide services (Gross et al., 2011). Another important factor is the preservation of fit over time between the program and context. Adaptation becomes increasingly necessary because natural changes occurring in the school context erode fit between the treatment and the context (Han & Weiss, 2005). An example might be the changing racial/ethnic, language and socio-economic makeup of families in a school district over time. Changing demographics can affect the ability of a program to be culturally sensitive because of increasing language barriers or changes in family attitude toward certain treatment approaches.

Recommendations

Multisystem collaboration: Partnering with administration in both schools and agencies early on is recommended (Chambers, 2013). Engaging key stakeholders in the collaborative planning of the implementation can ensure that the appropriate resources, incentives, and supports are in place to promote success from the outset. Similarly, buy-in from the larger system, which may include key personnel from the school district and community behavioral health network can be crucial in legitimizing the multisystem collaboration (Bryson, Crosby, & Stone, 2006) and creating a culture that supports EBPs and facilitates their use. Larger systems changes, such as restructuring progress notes, can send a message to mental health teams about the system's commitment to EBP use. Financial pressures can be a barrier to participation in EBP training. Systems that are able to compensate clinicians for time spent participating in training and consultation may be more likely to be successful

than those that ask mental health teams to participate in EBP training efforts on their own time or in addition to their usual responsibilities (Benjamin, Taylor, Goodin, & Creed, 2014). Enhanced compensation rates for mental health teams delivering EBPs, especially those managed by publicly funded systems (Kang-Yi, Locke, Hadley, Mandell, in review), also may be considered. However, given the limited resources that exist in many school districts, future research is needed to examine the relative benefit of financial incentives and subsidies.

Fragmentation: The solutions to the fragmented service delivery system in under-resourced schools would likely include policy changes that further promote integration of services in the community with those in school settings and to reimburse providers for care coordination as advocated in the Community Systems of Care model (Stroul & Manteuffel, 2007). Schools should have more autonomy to be able to incentivize retention of experienced teachers who are committed to the implementation of EBPs and staff who have mental health training (Han & Weiss, 2005).

Parent engagement: Low levels of parent participation and early drop out in community treatment settings do not need to be endemic. In fact, researchers have successfully used a variety of strategies to engage (Gross, Breitenstein, Eisbach, Hoppe, & Harrison, 2014) and motivate (Nock & Kazdin, 2005) families early in the treatment process. Effective engagement strategies with low-income families include a) acknowledging parents' values and their expertise about their children, b) acknowledging that they want to be good parents, c) reinforcing parents for their efforts to change, and d) giving them options for achieving intervention goals (Gross et al., 2014). Motivation strategies include eliciting self-motivating change statements and identifying, developing and executing plans for dealing with barriers to treatment adherence and continued participation in treatment sessions (Nock & Kazdin, 2005).

Fit with context: Natural changes occurring in the community or in service settings over time call for EBPs to be adapted so that fit with context can be preserved (Backer, 2001). However, great care must be taken to avoid making modifications that could render the treatments less effective (Backer, 2001; Lee, Altschul, & Mowbray, 2008). The process of making program adaptations requires knowledge of the program's core components (Lee et al., 2008). As such, the sustainment of mental health interventions requires program-specific training to help mental health teams make appropriate program adaptations.

In summary, sustainment of EBPs in school settings requires a concerted effort by policy makers, school and mental health administrators and individual providers to maintain high quality services that are accessible to the children who need them. Linking under-resourced schools with mental health agencies or community-based programs that have expertise in creating internal capacity for high quality services seems to be a promising way to bring EBPs to under-resourced schools.

Conclusion

The implementation of EBPs in the under-resourced schools has been relatively unstudied. Given the existence of effective treatments for mental health concerns common to underserved youth, it is important to continue to explore strategies for disseminating and implementing EBPs in under-resourced school settings. There are at least three areas where research can move the field forward. First, research is needed to assess effectiveness of interventions to change clinicians' attitudes toward the use of EBPs. For example, it will be important to determine whether providing clinicians with workshops to strengthen their behavioral intentions to use EBPs (Casper, 2007; Cook et al., 2015; Webb & Sheeran, 2006) is sufficient to increase their involvement in these types of treatments, or whether there are other factors that moderate clinicians' ability to use EBPs. For example, in the presence of strong behavioral intentions to use EBPs, would clinicians be more or less likely to use EBPs depending on type of administrative service arrangement (e.g., co-location or managed by school staff), payment structure (e.g., fee for service or salaried), role clarity within the team (e.g., clearly defined or diffused), or service environment (e.g., well organized or disorganized)?

The second area concerns the work of interdisciplinary teams. There is a good amount of literature on factors that affect the effectiveness of interdisciplinary teams in pediatric populations but not in school populations, and especially, not in under-resourced school districts. Research is needed to explore barriers to and facilitators of effective team collaboration such as the needs and priorities of the team and individual team members and factors that could facilitate effective team collaboration. A conceptual model of interdisciplinary collaboration in schools (Mellin, 2009) and a tool to measure team collaboration (Mellin et al., 2010) can facilitate this work.

The third area pertains to finding cost-effective strategies for creating sustainable internal capacity in mental health agencies to support direct service providers (Cammack et al., 2014). Since the majority of clinicians and supervisors in community mental health agencies that provide services in schools have not received adequate training on EBPs and paying external consultants is not financially feasible for many agencies, efforts must be focused on preparing their own supervisors to become effective supervisors of EBPs. Since it is well established that initial training workshops are not enough to prepare practitioners to implement EBPs with fidelity (Herschell et al., 2010), finding the right combination of training and consultation to prepare effective supervisors is important.

While numerous challenges exist in implementing EBPs in under-resourced schools, the setting offers a tremendous opportunity to increase access to quality mental health care for underserved youth. We view the use of a guiding theoretical framework as central to quality dissemination and implementation of EBPs in the low-resource school context. We think that the contextual framework developed by Domitrovich and colleagues (2008) can be helpful for highlighting the array of interdependent factors at the macro-, school-, team-, and individual-levels that are especially important to consider in the under-resourced school context. Barriers and facilitators to successful implementation exist within and across these levels, and it is important for researchers working in under-resourced school settings to

prepare for and adapt to these as they arise. The set of specific recommendations for addressing each of the main barriers may be helpful to those working to bring effective services and practices to a large group of under-served children and youth. As we continue to learn more about strategies for effectively implementing EBPs beyond research settings and promoting sustainment of EBPs in communities and schools, it will be important for researchers to specifically examine how applicable this knowledge is to under-resourced schools and to develop collaborative partnerships with school and community personnel to promote quality research in this important area.

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Figure 1.

Adapted reproduction of the outer layers of the Domitrovich and colleagues (2008) framework that highlights the interrelated relationship between individual-, team-, school-, and macro-level factors in intervention implementation in schools.