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Abstract

Through a university-community collaborative partnership, the perceived needs of evidence-based practices (EBP) among school social workers (SSW) in a large school district in central Florida was assessed. A survey (response rate = 83.6%) found that although 70% of SSW claim to use EBP in their everyday practice, 40% do not know where to find them, which may partially explain why 78% of respondents claim to spend 1 to 4 hours every week looking for adequate EBP. From this needs assessment, the translational model was used to address these perceived needs. A systematic review of the literature found forty Tier 2 EBP, most of which (23%) target substance use, abuse, and dependence. After discussion with academic and community partners, the stakeholders designed, discussed, and implemented a searchable, online, password-protected, interface of these Tier 2 EBP, named *e*BIT (**e**vidence-**B**ased **I**ntervention **T**oolkit). Lessons learned, future directions, and implications of this "one-stop shop" for behavioral health are discussed.

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Keywords

school; social work; evidence-based practices; dissemination research; implementation research

Introduction

Evidence-based practices (EBP) are those procedures that can be adopted for use by individual practitioners, founded on the best available science.[1,2] They represent the pathways by which the results of research on interventions, programs, and practices are applied and translated into real world practice settings. Several professional communities, such as school social workers (SSW), have long embraced these practices. Within the context of the clients' values and expectations, use of mental health EBP integrate SSW expertise with the best available evidence,[3] resulting in a marked improvement of three key areas of social work professional practice: the services offered by SSW, the care of clients, and the targeted outcomes.[4] Despite positive attitudes toward EBP, less than half of the social workers report their consistent use.[5] Some barriers reported could potentially explain this inconsistency, and these include lack of time (84%), perceived lack of relevant information (36%), and lack of technology knowledge (22%), such as search engines and software.[5]

Social workers operating with EBP must integrate the relevant scientific information with personal expertise and informed personal judgment to both ethically and effectively service clients within their values and expectations.[4,6] It has been deemed that SSW using EBP must adopt a lifelong learning process of searching for the best available evidence.[7] As with many innovations, diffusion of mental health EBP for SSW has been uneven and slow and requires enhanced use strategies.[7-10] To date, however, the continuous generation of EBP for SSW requires dissemination and implementation strategies to effectively reach the SSW professional community.[6] Implementation is an ongoing process that helps practitioners become increasingly skillful, consistent, and committed in their use of an innovation.[2] One challenge for EBP is how to organize and disseminate new information from research findings into manageable, user-friendly summaries.[11] Translational science can bridge the gap between knowledge generation, dissemination, and implementation through an integrative model.[12]

This paper describes how a collaborative partnership between Hillsborough County Public Schools (HCPS) and the Institute for Translational Research in Adolescent Behavioral Health (ITRABH) at the University of South Florida assessed the perceived needs of SSW and used the translational model to improve these perceived needs through *e***BIT**—an **e**vidence-**B**ased **I**ntervention **T**oolkit. Lessons learned, future directions, and implications of *e*BIT for behavioral health are also discussed.

Methods

Stakeholders

ITRABH—This Institute at the University of South Florida hast the mission to develop, cultivate, and disseminate an innovative model of research education that addresses best practices for translational research in the field of adolescent behavioral health, as it relates to substance abuse and co-occurring disorders.

HCPS - School Social Work Services—In the state of Florida, Hillsborough County is the third most populous county.[13] This county has the eighth largest school district in the United States, the third largest in Florida, and is one of the largest employers in the Tampa Bay area. Its 206 841 students (40% white, 29% Hispanic, 21% black, 3% Asian) are currently served through 250 schools, 15 162 teachers, and 25 170 staff with a graduation rate of 82.2%. Currently, HCPS has a staff of 155 full-time school social workers serving students in schools, exceptional student centers, alternative programs, and other host educational settings.

Scholars—Scholars at the ITRABH come from a diversity of backgrounds, including both academic and clinical or research practice settings. Scholars receive training in translational research methods and are paired with a community agency partner to design, develop, and implement a translational research project using a research to practice framework ultimately benefiting mission and goals of the community partner.

Project development

Phase 1 (June, 2013)—The first phase involved workgroup meetings between ITRABH scholars, community partner stakeholders, and USF academic mentors. The community partner stakeholders included the supervisor of SSW and two members of the SSW Steering Committee. Together, this team developed a collaborative partnership and met for two months to develop a concrete project within the allotted timeframe. With the objective of translating research into practice by linking existing literature on EBP for SSW interventions, the team agreed to address one of the key issues faced by SSW. These issues were identified through an informal survey conducted by the HCPS SSW Services Steering Committee. Based on the multi-tiered intervention model—where Tier 2 includes supplemental, moderate-intensity, evidence-based interventions for 5% to 15% of the student population[14]—the SSW Steering Committee and the ITRABH scholars identified a need for a toolbox of Tier 2 interventions to drive intervention decisions in the school setting. In this phase, special emphasis was placed on sustainability of the EBP database. This element was critical to establish from the very beginning in order to ensure that future database sustainability would become the lens through which all project efforts were viewed.

Phase 2 (July, 2013)—This phase consisted of the needs assessment of SSW. As part of a larger study by one of the authors (CR, unpublished), the ITRABH scholars designed and administered a survey to SSW serving HCPS. This voluntary survey assessed four specific areas of effective practice, including use of evidence-based practices. Exploratory factor analyses and reliability analyses conducted on the researcher-developed survey

indicate that the EBP subscale was a valid and reliable tool (CR, unpublished). For the purpose of a needs assessment, the 5-item, Likert-like scale responses were analyzed as descriptive statistics, with overall comparison of results the χ^2 test for independence with Yates correction and 2 degrees of freedom.

Phase 3 (September, 2013)—Institute scholars worked with HCPS Information Services, supervisor and SSW advisors to create an online database of Tier 2 interventions identified as evidence-based through an extensive literature review. The search was initially performed on PubMed, PsychINFO, CINAHL, and The Web of Science with a standardized search procedure. The abstracts of the interventions were identified and the three authors (HLC, TR, CR) reviewed those publications relevant to the search (i.e., Tier 2 interventions between 2000 and 2004 that addressed any of the issues in the proposed categories) and extracted data, including intervention setting, age group, grades, training materials, and effect sizes. A matrix was designed and populated with the literature search results, with standardized search features based on the needs assessment. *The School Services Sourcebook*[15] was used to develop the master problem list and formed the basis for the matrix that served as the back-end for the electronic version of the toolkit. This book was chosen because every SSW in the HCPS owns a copy and can easily relate to the problem classification system from the book chapters.

Phase 4 (November, 2014)—At this point, the SSW Steering Committee expressed concern on two issues. First, they demonstrated the desirability of a search capability, since the electronic bulletin board system in use at the time did not allow searches on past discussions by SSW, nor were these discussions classified in an archival or categorical manner. Second, although the easy access to interventions was an idea the SSW Steering Committee was very enthusiastic about, the lack of immediate availability of materials would was perceived as a barrier to access the EBP. The stakeholders agreed that these two issues would be solved in the finalized products, first by including a search capability within several items of the intervention, following The National Registry of Evidence-based Programs and Practices (NREPP) model (www.nrepp.sahmsa.gov); and second, those intervention materials that were publicly available will be included, as well as those purchased by HCPS, once there was copyright clearance by HCPS administration. The search capacity covers the EBP name, grade level, age groups, gender, race/ethnicity, geographic location, and delivery setting where the EBP was piloted. The stakeholders also included a 5-star rating system and an open space for feedback and comments by the SSW community, where they can share their questions, experiences, adaptations, and needs for the interventions, building further evidence to support use and implementation (in the case of EBP already purchased or publicly available) or to support future purchases (in the case of proprietary EBP).

The Steering Committee also shared with the stakeholders the need for a "catchy" brand for the electronic toolkit, and that acronyms were highly accepted among SSW. With this in mind, the stakeholders agreed on **e**vidence-**B**ased **I**ntervention **T**oolkit (*e*BIT), where the acronym spelling strongly suggested a modern, electronic component (*e*, as in e-mail; BIT,

as in bits and bytes). These elements were also included in a relatively simple logo for the project (Figure 1).

Phase 5 (January, 2014)—The stakeholders then met with the Department of Information Technology (IT) staff at HCPS to discuss the interface of the completed database and its piloting. The vision of *e*BIT was shared: a searchable electronic repository for evidence-based, Tier 2, school social work interventions. To be most useful, *e*BIT would be password protected and will ideally contain the informational pieces of EBP as well as the actual intervention materials (e.g., manuals, handouts, pre- and post-tests, etc.) when copyright clearance was obtained after administrative reviews. Throughout this phase, sustainability continued to play a prominent role. The IT Department staff recognized that *e*BIT had the potential for integration with other electronic systems utilized across the school district. In an unexpected actualization of commitment to the project, the IT Department supervisor assigned an existing employee half time to work on the *e*BIT interface. All the interface work was a coordinated effort between this part-time employee and the ITRABH scholars. After a period of development and internal testing, it was alpha-tested by the stakeholders. At the time of this writing, beta-testing is underway, along with the finalization of training manual and the process manual for the implementation and evaluation phases. In the near future, trainings will be conducted in order to introduce users to the new online system. These trainings are expected to be brief, since the interface is designed to be intuitive and builds upon models previously known by the SSW at HCPS. The process manual is being written by the Institute scholars as a handbook for *e*BIT. The manual outlines every aspect of *e*BIT from conceptualization and development to specific policies and procedures for updating content, managing user feedback, and adding new interventions as new research becomes available.

Results

Needs assessment

As of August 2013, HCPS had 128 site-based SSW, 107 of which returned the needs assessment surveys for a response rate of 83.6%.

Forty-nine percent of respondents use online intervention databases, Intervention Central, or the HCPS District Mental Health Toolbox less than twice per month. Of the four EBP identified and sanctioned by the HCPS in the past 10 years, namely, *Why Try* (whytry.org), *Motivational Interviewing* (motivationalinterviewing.org), *Project ACHIEVE* (projectachieve.info), and *Skillstreaming* (skillstreaming.com), 18% of respondents are not familiar with these EBP. Survey analysis further indicate that more than three fourths (78%) of respondents spend 1 to 4 hours every week looking for EBP (Figure 1), almost 40% do not know where to find appropriate EBP (Figure 3), although 70% claim to use EPB in their everyday practice (Figure 3).

Literature review

A total of 40 Tier 2 EBP were identified through the systematic literature review. The distribution according to the classification system proposed is shown in Table 1. It should be

noted that most of the interventions observed target mental health, specifically substance use, abuse, and dependence (23%), suicidal ideation (17%), oppositional defiant disorder (12%), and conduct disorder (10%). There is a paucity of interventions targeting specific problems, such as anxiety, obsessive-compulsive, eating, and attention deficit hyperactivity disorders (1 EBP for each). The lack of EPB targeting teen parents should also be noted.

Key elements for interface development and implementation

The initial vision of *e*BIT included a searchable electronic repository for evidence-based, Tier 2, school social work interventions. A key element for developing the searchable interface was the IT Department staff sharing *e*BIT's vision. Administrative reviews provided copyright clearance for the EBP intervention materials, which were linked and shared as important part of the search results generated by *e*BIT. Another key element was the possibility of future expansion during the implementation and sustainability phases of *e*BIT. Expansions could include Tier 3 EBP, or interventions beyond mental health, all of which should follow the steps specified in the process manual. Last, the brief training manual was another key element to introduce users to the new online, password-protected system.

Discussion

This project demonstrates how translational science can be used to bring research into practice through university-community partnerships. These type of partnerships involve real-life experiences for building evidence-based organizational cultures within the human services.[3] Electronic mechanisms following the NREPP model for SSW practice—especially those involving mental health promotion and treatment for adolescents—have been proven effective in implementing and disseminating EBP.[7,15,16]

From the needs assessment, it is evident that SSW do not currently have knowledge of or ready access to EBP, as it has been demonstrated in other studies.[5-7,9] Familiarity with interventions adopted by HCPS and rates of access to existing materials and databases were low among SSW. These results warranted a "one-stop shop" for Tier 2 interventions, potentially successful in bridging the gap between SSW research and practice. Efforts to resolve this research-practice schism have the best outcomes when researchers and practitioners form mutual collaboration partnerships to formulate valuable research questions, implement research projects, and critically examine the clients' outcomes.[10]

Social workers have had a hard time keeping up with the exponentially growing number of EBP.[6] "Three areas of significant research activity with immediate implications for social work practice [have been] identified: chemical dependency, mental health, and adolescent problem behavior,"[6(p. 240)] all of which are included in *e*BIT and constitute more than half of all the interventions identified through the literature review. Understanding the SSW needs, assessing the current organizational structure and capacity for innovation, and facilitating an open multi-directional dialogue between the SSW, stakeholders, ITRABH scholars, and HCPS IT Department staff enabled the successful development and implementation of *e*BIT. This work is significant as *e*BIT represents the first web-based, searchable database designed specifically to place EBP at the fingertips of SSW.

Traditional intervention research in the form of efficacy and effectiveness studies needs to be supplemented and complemented with implementation research, the products of which aim to enhance the actual, responsible, and reliable use and application of EBP.[8] Through partnerships like the ITRABH-HCPS, several of the barriers to implementation research can be easily overcome, such as practitioners' lack of preparation in research, lack of awareness of the relevant literature, attitudes toward research and empirically based treatment manuals, practitioners' difficulties in critical thinking, and the carryover of lay modes of thinking into professional practice.[8]

Projects dealing with implementation research, like *e*BIT, are not free of limitations:[2] scaling up, balancing integrity and local adaptation of EBP, challenges of measuring implementation quality, and addressing program sustainability must be taken into account. Limitations aside, the ease and consistent quality of *e*BIT, along with its interactive nature, are key features that could have a deep impact in the research-practice gap identified in the SSW. As the first web-based searchable database of EBP for SSW, *e*BIT has the potential to serve as a model project for a district-wide initiative to put EBP readily in the hands of the practitioners who most need them. Given that sustainability was a critical underpinning of the project, HCPS IT Department staff has an eye open for integration with other electronic systems for the purpose of improving access to information, which will enable improvements of services provided to students. This model proved useful in this setting and can be explored for other groups of professionals who use EBP, like school psychologists, school language pathologists/speech therapists, and teachers.

Implications for Behavioral Health

The implications of the results of this project relate directly to three primary areas relevant to behavioral health: 1) the application of research to practice; 2) increasing awareness and access to research-based interventions; and 3) specifically enabling SSW direct access to EBP relevant to daily work with students.

Through a collaborative partnership facilitated by the ITRABH at USF, translational research methods were utilized to first identify problem areas and needs of SSW, identify best practice approaches to meeting the needs through implementation research, and develop a sustainable solution. As it was discovered, SSW are often burdened with high caseloads, juggle multiple demands on their time, and tend to utilize EBPs either previously adopted or provided to them during initial training phases. Positive attitudes expressed by SSW are evidenced by the initiative to search for and at times personally purchase EBP in their free time. This project demonstrated that existing resources within an organization could be capitalized upon in order to serve a district-wide need for more informed awareness of the availability of EBP and more practically, increased and unfettered access to these EBP. Collaborative implementation research efforts like this have been demonstrated make knowledge more familiar in organizations and among practitioners.[10] Increased attention to implementing EBP for the behavioral health issues will enable school social workers to deliver EBP and, thus, provide more effective first-line prevention and/or early intervention programs and identify and refer children and adolescents who need more intensive services to local mental health clinics or providers.[1] Through this collaborative translational process,

the HCPS district is now equipped with a functional, adaptable and practical vehicle through which evidence can travel more efficiently to the individuals responsible for applying EBPs to serve students. This project has demonstrated that pairing scholars, academic mentors and community partners together with the joint goal of improving the translation of research to practice can be successful and yield products that are both immediately accessible and useful as well as sustainable.

Future efforts should address evaluation of the project impact and outcome attainment over time—including comparisons of *e*BIT with pre-implementation status, assessment of progress during and maintenance of change after implementation, and other comparisons of interest. Constant monitoring and recursive evaluation and revision of treatment should lessen practitioner concern that EBPs may be insensitive to clients and their needs.[8]

Acknowledgments

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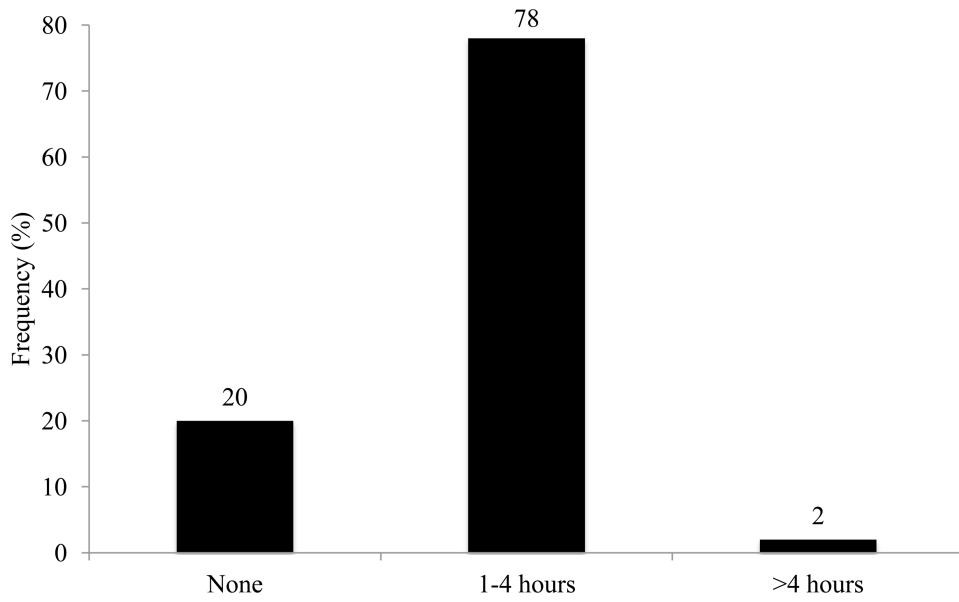
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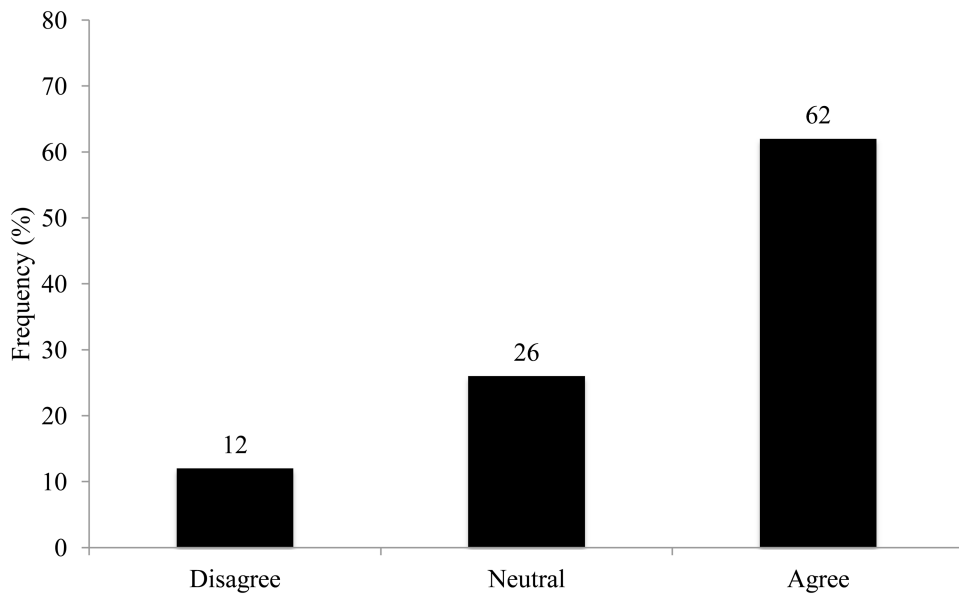Author Manuscript

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Figure 1.
*e*BIT logo.

Figure 2.
Average weekly time spent looking for online interventions (n = 107)*

*$P < .001$ for the χ^2 test for independence with Yates correction and 2 degrees of freedom ($\chi^2 = 98.9$).

Figure 3.
I know where to find evidence-based interventions (n = 107)*

*$P < .001$ for the χ^2 test for independence with Yates correction and 2 degrees of freedom ($\chi^2 = 40.2$).
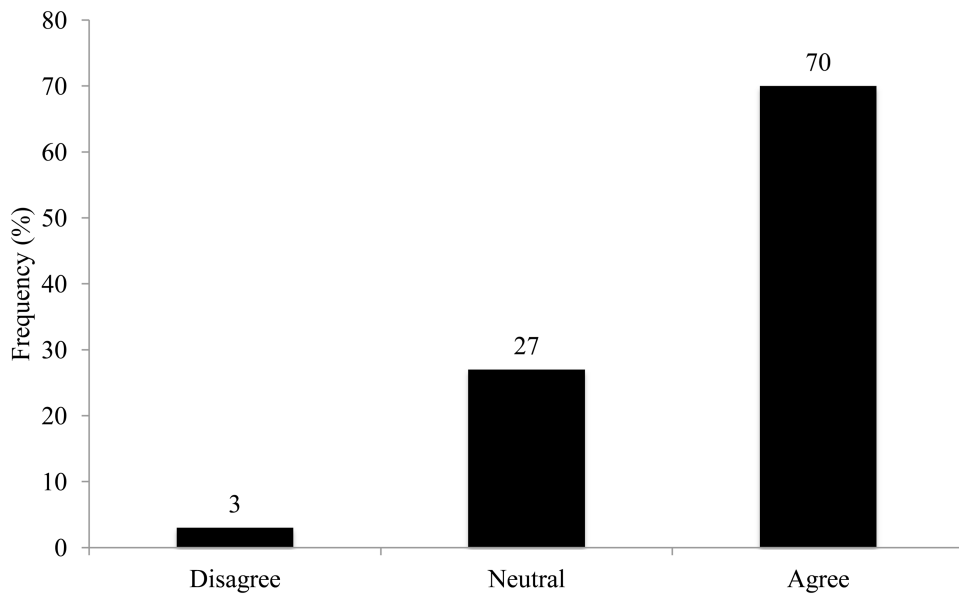
Figure 4.
I use evidence-based interventions in my everyday practice (n = 107)*

*$P < .001$ for the χ^2 test for independence with Yates correction and 2 degrees of freedom ($\chi^2 = 72.4$).

Table 1

Results of evidence-based practices found through the literature review.

Evidence-based Practice Categories[a]	Interventions Included	
	n	%[b]
Substance use, abuse, and dependence	12	23
Suicidal ideation	9	17
Oppositional defiant disorder	6	12
Conduct disorder	5	10
School engagement, attendance, and drop out prevention	3	6
Pregnancy prevention	3	6
Depression	2	4
Self-harming	2	4
Autism spectrum disorder	2	4
Social skills	2	4
Anxiety disorder	1	2
Obsessive-compulsive disorder	1	2
Eating disorders	1	2
Attention deficit hyperactivity disorder	1	2
Teen parents	0	-
Overall mental health promotion (nonstandard category)	2	4
Total[c]	**52**	**100**

[a]Based on *The School Services Sourcebook*.[11]

[b]Total does not add up to 100% due to rounding.

[c]The total number of evidence-based practices is more than the actual number of interventions (N = 40) because certain interventions targeted more than one category.