Mental Health Literacy of Parents: A Pathway to Treatment for Youth with Mental Health

Disorders

Tracy A. Sloat

Edson College of Nursing and Health Innovation, Arizona State University

Author Note

The author has no conflicts of interest to disclose.

Correspondence concerning this article should be addressed to Tracy Sloat, Edson

College of Nursing and Health Innovation, Arizona State University, 502 N. 3rd St, Phoenix,

Arizona, 85004. Email: tsloat@asu.edu

Abstract

Introduction: Poor knowledge and negative perceptions regarding mental health disorders are barriers to parents seeking mental health care for their child. Mental health literacy comprises both the knowledge and ability to recognize mental health disorders, combat stigma, and obtain treatment. Research demonstrates increased mental health literacy increases parental help-seeking behaviors. *Aim*: To increase mental health literacy of parents in Maricopa County through increased access to evidence-based education and support. *Methods*: A local mental health organization utilized the Model for Improvement (MFI) Plan Do Study Act (PDSA) quality improvement framework to increase the number of parents attending an evidence-based, six-session educational class and bi-monthly support group. Interventions included 1) outreach and recruitment via social media and community partners, and 2) convening one six-week educational class and four support group sessions. *Results*: Parental awareness and attitudes toward mental health disorders were measured at Class One (*N*=11, *M* = 30.9, *SD* 5.15) and Class Six (*N*=5, *M* = 40.2, *SD* 1.64) and analyzed utilizing the Mann-Whitney U Test; results demonstrate improved awareness and attitudes (*U* =50, *p* = .001). Eleven parents attended a support group session; 91% (10) reported they learned new information about how to support their child; 82% (9) reported they improved their ability to access and advocate for mental health services. *Conclusions*: Findings suggest that participating in this organization's educational classes and support groups increases mental health literacy. Barriers that prevent more parents from participating should be explored.

Keywords: parents, mental illness, mental health literacy, stigma

Mental Health Literacy of Parents: A Pathway to Treatment for Youth with Mental Health

Disorders

Accessing mental health services is a process that requires the identification of mental health symptoms, knowledge of the types of mental health care available, and the ability and resources to utilize them when indicated. The knowledge, skills, and ability of a parent in accessing and navigating mental healthcare is termed mental health literacy. Educational and support programs that increase parental mental health literacy increase help-seeking behaviors. Unfortunately, many parents are unaware of the availability of these types of programs. This project seeks to increase the awareness and availability of educational resources to parents of youth in Maricopa County who are exhibiting mental health challenges.

Background and Significance

Problem Statement

Parents, the primary gatekeepers for children and adolescents in need of mental health care, are often unaware of the seriousness of early mental health warning signs. The incidence of mental health symptoms in children is increasing and is associated with lifelong mental health disorders (Diaz-Caneja et al., 2018; Doering et al., 2019; John et al., 2015). Mental health disorders diagnosed in later childhood or adolescents can often be traced back to precursor behaviors in early childhood, often highlighting missed opportunities to provide interventions that build protective factors against exacerbation of symptoms (Wakshclag et al., 2019). Negative parental attitudes towards mental illness can impede the identification of mental health symptoms in children and a significant barrier to parents seeking help is not knowing where or how to obtain services (Salloum et al., 2016; Villatoro et al., 2018).

Purpose and Rationale

Mental health literacy is a conceptual framework defined as "knowledge and beliefs about mental disorders which aid their recognition, management, or prevention" and was originally coined and explored by Jorm et al. (1997). Parents with mental health literacy have the skills needed to identify the mental health needs of their child and the ability to navigate the mental health system in search of treatment. Collective efforts that focus on identifying emotional challenges in childhood and adolescence and on skill-building and coping strategies for dysregulated behavior start to normalize the conversation with parents regarding mental health. This is especially true as young children transition through developmental stages that require parents to have a specialized understanding of typical verses atypical emotional regulation and the related behaviors.

While specific diagnoses are often not ascribed to young children, symptoms of emotional dysregulation or aggressive behaviors can be addressed in early childhood through a transdiagnostic approach with universal applications, such as a broad focus on building positive parenting skills and promoting peer relationships (Forbes et al., 2019). In middle childhood, the transdiagnostic approach targets interventions that address internalizing and externalizing behaviors; in adolescents it continues to narrow down and begins to treat specific pathologies as they become differentiated (Forbes et al., 2019). As children grow older, mental health symptoms become more identifiable as the related behaviors increasingly contrast with same aged peers.

Parents are tasked with overcoming not only their own lack of knowledge regarding psychopathology and how to access mental health care, but they must also overcome any fears or negative associations the child may have with acknowledging a mental health condition. Stigma is often associated with the fear of receiving discrimination related to a mental health condition. Youth perception of public stigma leads to increased secrecy and avoidance of mental health

treatment (Kaushik et al., 2016). Stigma has a negative effect on help-seeking behavior for individuals with mental health disorders; certain subgroups are disproportionately affected, such as ethnic minorities and young people (Clement et al., 2015). Poor mental health literacy, fear of stigma and embarrassment, and preference for self-reliance are barriers for adolescents and young adults in seeking mental health treatment (Gulliver et al., 2010).

Combating mental health stigma through purposeful public health campaigns has shown some effect in reducing discrimination within the community (Henderson et al., 2013). The American Academy of Pediatrics (AAP) urges primary care providers to develop the skills needed to diagnose and manage mental health challenges early in their presentation (American Academy of Pediatrics, 2020.). The AAP provides tools for providers to build skills such as motivational interviewing, how to address social emotional problems in children birth to five, and how to identify and treat mental health conditions such as depression, disruptive behavior and aggression, inattention and impulsivity, substance use, self-harm, and suicide. These targeted strategies normalize the conversation with parents regarding the mental health of their child. This is an important step in building parental mental health literacy, which provides the skills, knowledge, and ability for parents to seek appropriate mental health care for their child.

Normalizing the conversation and building mental health literacy skills of parents within Maricopa County has become a strategic goal of a local mental health non-profit organization that provides education and support to individuals and families living with mental health conditions. To accomplish this goal, the organization implemented a quality improvement process to increase targeted outreach to parents of youth with mental health conditions, engage them in support groups and educational classes, and assess the impact of these programs on their mental health literacy.

Epidemiological Data to Support Significance

According to the National Institute of Mental Health (2019), 49.5% of adolescents aged

13-18 years old experience at least one mental disorder. Of those, 22% were considered to have a

severe impairment based on DSM-IV criteria. Fifty percent of all lifetime mental illnesses begin

by age 14 and 75% by age 24, yet less than half of the youth experiencing mental illness symptoms

receive treatment (Olfson et al., 2015). Suicide is the second leading cause of death of youth and

young adults, aged 10-24 years old (Centers for Disease Control and Prevention, 2020). Youth

experiencing depression are twice as likely to drop out of high school than their peers (Dupere et

al., 2018). Seventy percent of youth involved in the juvenile justice system have a diagnosed

mental illness (Skowyra & Cocozza, 2007).

Internal Evidence to Support Project

Children under 18 years of age make up 23%, or approximately 1 million, of the 4.4

million people living in Maricopa County (U.S. Census Bureau, n.d.). This translates to nearly

500,000 children within Maricopa County that experience a mental health challenge and 110,000

of which can be classified as serious. A local mental health non-profit organization identified

that two of their existing evidence-based programs, a monthly parent support group and a six-

week educational class, do not reach a significant number of affected parents within Maricopa

County.

Support Groups

In October 2019, the organization started a monthly support group targeting parents of

youth with mental health challenges. The purpose of the support group was to provide parents an

opportunity to connect with other parents who experienced similar challenges. The support

groups were convened in a central location, free of cost, and led by a trained volunteer facilitator

with lived experience as a parent of a youth with mental health challenges. An average of four parents attended the support group each month between October 2019 and February 2020 before the groups were paused related to the COVID-19 lock down. Examples of common themes discussed by parents each month: the difficulty of finding a psychiatric provider, the challenge of knowing which kind of therapy was best for their child, knowing if the therapy was effective, insecurity in their parenting skills, internal family conflict between the parents or with the siblings of the affected child. One parent whose 11 year-old son struggled with suicidal ideation asked other parents "How do I know when it is the right decision to hospitalize my child? How do I find the right hospital and what will happen to my son when he is in there?" Other parents in the group were able to share their personal experiences from when their child was hospitalized. All parents agreed that they often felt like they were 'operating in the dark' as they tried to find treatment for their children, especially when the emotional and behavioral symptoms were severe enough to warrant hospitalization.

Educational Class

In addition to the support group, the organization provided a nationally developed, evidence-based, six-week educational class. The class was taught by trained volunteers who have lived experience as parents of youth with mental health challenges. The following topics were covered: brain development and explanation of different mental health conditions; types of mental health professionals and treatment options; how to navigate the healthcare, educational and justice systems; how to advocate for your child's rights; how to prepare and respond to a crisis such as self-harming or suicide attempts; communication skills; and the importance of self-care. Evaluation feedback from class participants was consistently positive. In 2019, approximately 90 parents expressed interest in the four classes that were held but only 35 parents

attended and completed at least five of the six sessions; an average of 8.75 parents completed each class. Barriers to attending the class were lack of childcare, limited availability of parents' time, and limited availability of class times and locations.

In October 2019, the local organization's national office attempted to increase accessibility of this educational class by releasing the curriculum as an online, self-directed set of six modules. The goal of the online curriculum was for parents to complete the modules independently at a time and location convenient to them. The national organization does not provide any contact or demographic information of the registered participants to the local organization. In the first nine months of the release, 263 individuals in Maricopa County registered to take the course. Of those, only 34% (63) initiated work on the course modules and only 2% (6) completed the entire six modules.

PICOT

This inquiry has led to the clinically relevant PICOT question, "For parents (P) of children with mental health challenges, does increasing parental mental health literacy (I) verses not increasing parental mental health literacy (C) increase parental mental health help-seeking behavior on behalf of their child (O).

Evidence Synthesis

Literature Review and Search Strategy

A comprehensive literature review in search of peer-reviewed publications was completed utilizing three databases: PubMed, PsycINFO, and the Cumulative Index of Nursing and Allied Health Literature (CINAHL). Key words included: parent, mental health literacy, mental illness, mental health condition or disorder, help-seeking behavior, access to mental health care, and utilization of services. Variations of key words were included within the search, such as: mental health literacy or health literacy or education or knowledge; access to care or

early intervention or treatment or services or medication or therapy. Each search was filtered to exclude autism and include only English-language, peer-reviewed research published within the last five years; they were further narrowed down to only include parents of all children, 6-18 years old and for PsycINFO and CINAHL, geography inclusion of the United States. Initial searches in PubMed yielded 67,969 articles and filtered to 214. PsycINFO initially yielded 6,596 articles which filtered to 232, and CINAHL yielded 1,933 articles that filtered to 217. From these lists, after accounting for duplicate articles between databases, abstracts were reviewed to exclude studies that were completed in countries that did not have English as a primary language and that did not have parental mental health literacy as a primary focus or outcome of the study. Ten studies that most closely addressed the relationship between parental mental health literacy and youth receiving mental health treatment were selected.

Critical Appraisal and Synthesis of Evidence

Ten peer-reviewed research studies were reviewed for their findings related to parental mental health literacy; this included four systematic reviews and six descriptive (non-experimental) study designs (see Table A1). The study of parental mental health literacy constructs such as knowledge, attitudes related to stigma, and help-seeking behavior do not lend to rigorous, randomly controlled clinical trials. Rather, most of the research, including the studies within the four systematic reviews, are non-experimental in design, utilizing longitudinal, correlational, or cross-sectional data sets. Limitations of these studies include a consistent lack of validated measurement tools and a wide, inclusive approach to interventions, variables, and outcomes; this inhibits direct comparison of interventions and outcomes across studies.

As referenced in Table A2, descriptive findings related to the relationship between knowledge, stigma, and help-seeking behaviors are clearly documented across the research.

Positive findings demonstrate that increasing parental knowledge and understanding of mental health symptoms and conditions increases parental help-seeking behaviors. Similarly, decreasing stigma, or negative perceptions of mental illness, also increases recognition of mental health symptoms and help-seeking behaviors. A variety of interventions can increase parental knowledge related to mental health, this includes how to identify symptoms of mental health conditions and how to seek treatment on behalf of their child to treat the mental health condition. Findings also demonstrate that a variety of interventions can decrease stigma surrounding mental health.

The greatest intervention related outcomes were for individuals with lower mental health knowledge at the beginning. For example, between parents and social workers, parents had lower mental health knowledge at the beginning of an intervention and then demonstrated the greatest amount of knowledge growth at the end of the intervention. Another study found that while many interventions target mental health professionals and teachers, few target parents. In terms of receiving mental health treatment, several studies identified that severity of symptoms was the main determinate of help-seeking behavior, regardless of perception of parent support. In terms of sustained help-seeking behaviors, several studies identified that further research is needed to adequately measure this outcome.

Evidence suggests that improved mental health literacy does increase parental help-seeking behavior, a critical component to children and youth receiving mental health treatment. Increased knowledge and decreased stigma promote help-seeking behaviors, which are necessary for youth with mental health challenges to receive help. To meet current gaps in community education, additional interventions should target parents, with special efforts to reach minority populations and parents of male children. Educational interventions should highlight how to

identify mental health symptoms and seek the appropriate level of services prior to advanced states of symptom severity. It is promising that a variety of interventions are effective in increasing parental mental health literacy resulting in help-seeking behaviors, allowing for a variety of approaches to be used based on community needs and resources, including educational classes and support groups. This important concept reinforced the aim of the local organization to strengthen their existing programs targeting parents of youth with mental health challenges.

Theoretical Framework

The Mental Health Literacy Conceptual Framework (MHLCF) provides a systematic approach for the recognition, prevention, and management of mental health conditions with an emphasis on the ability of the individual to link knowledge with action (Jorm, 2012). Mental health literacy is comprised of both the knowledge and ability to initiate the required behaviors to obtain and maintain mental health services. Jorm (2000) outlines six components of mental health literacy: 1) the ability to recognize the symptoms of a mental health disorder, 2) understanding the etiology of the disorder as biological as opposed to willful or environmental, 3) understanding of how to provide self-care interventions to manage or treat the disorder, 4) knowing what types of professional help are available, 5) knowing when to seek professional help, and 6) knowing how to seek professional help. This includes understanding mental disorders and the appropriate levels and types of treatments, overcoming the opposing force of stigma against acknowledging and treating a mental disorder, and mobilizing knowledge and resources to seek help (Wei et al., 2015). Large scale interventions towards increasing parental mental health literacy may encompass each of these components while interventions smaller in scale may target one or two components. Research reviewed thus far highlight two components from the MHLCF that significantly impact parental help-seeking behavior on behalf of their

child with mental health symptoms: recognizing the symptoms of a mental health disorder and knowing how to seek professional help. These components are congruent with the organization's goal to promote programing that increases parental mental health knowledge with a strong emphasis in these two areas.

Implementation Framework

The implementation framework for this project is the Model for Improvement (MFI) based on the work of Edward Deming (Institute for Health Care Improvement, n.d). As shown in Appendix B, the MFI is a two phase process that is designed to accelerate improvement towards quality practice within an organization based on methodical and well documented rapid cycles of testing. The first phase of this model has three components: 1) determine the aim of the project, or what specifically needs to be improved; 2) identify key measures that can be documented to monitor progress towards the aim; and 3) select an intervention to implement. Based on the internal data collected in relationship to this project, the organization's executive director determined the aim of the QI project was to improve the visibility of and access to the organization's programs that support parents of youth with mental health challenges. Increasing the number of parents attending educational classes and support groups would increase the number of parents with increased mental health literacy. The key measures needed to determine progress towards this aim were 1) the number of parents who attended either the educational class or the support group and 2) parental self-perceptions of mental health knowledge, attitudes, and self-efficacy.

The intervention is two part. The first intervention was to increase community awareness of the educational classes and support group through targeted marketing and outreach via social media and community partners in the behavioral health community. The second intervention was

to convene the educational classes and support groups, which had been paused in March 2020 related to the COVID-19 shut down.

Phase two of the Model for Improvement framework is to utilize the Plan Do Study Act (PDSA) cycle for intervention implementation (Appendix B). This cycle is designed to test an intervention on a relatively small, controlled scale to closely monitor and measure the related outcomes to quickly ensure resources spent produce the desired result. Close attention to the efficacy of interventions promotes cost-savings and protection of valuable resources such as time, money, and staff; it also ensures that the client or community receives quality care and service. To implement the cycle, a **plan** is created around a specific intervention to be tested based on a desired outcome. The intervention is then implemented (**do**) and the key measure outcomes are **studied**. If outcomes meet the desired criteria, the intervention can continue and be taken to scale (**act**). Conversely, if the results do not meet the required criteria, the intervention can be adapted and retested, or discontinued altogether and a new intervention introduced.

For this project, the plan was created by organization's Programs and Education Committee (PEC), a monthly committee comprised by staff and volunteers to discuss program specific agenda items with a focus on strategies to strengthen program implementation. The PEC designated a subcommittee to implement the marketing and outreach and to ensure the classes and support groups were scheduled and convened. The results of the first intervention cycle were studied as part of this DNP project. The results and recommendations for further action were provided to the executive director.

Methods

This project sought to answer the question: for parents of youth with mental health challenges, does increased marketing and outreach (flyers, posters, social media posts) increase

(1) *engagement* in parent support programs, (2) parental *knowledge* and positive *attitudes* toward mental illness and the resources, and (3) their *confidence (self-efficacy)* in seeking mental health treatment? This was accomplished through the implementation of an evidence-based quality improvement process with the aim to increase awareness and accessibility of two specific programs designed to increase parental mental health literacy. Approval of Arizona State University Institutional Review Board (IRB) was received prior to project implementation. The risk for participating in this project was minimal; exemption status was approved on September 12, 2020.

Setting and Population

The project took place in a local non-profit mental health organization with a mission to improve the lives of individuals and families living with mental illness through education, support, and advocacy. The population included self-identified parents or primary caregivers of youth aged 6-18 years old with a mental health condition who voluntarily registered and attended a parent support group or educational class. The plan was to recruit 25 or more parents/ caregivers for the parent support group and 15 or more parents/caregivers to attend the educational classes.

Project Description and Timeline

Phase one of the quality improvement process was completed June – September 2020. The Program and Education Committee (PEC) met on June 10 and July 8 to discuss the project aim to improve the visibility of and access to the organization's programs that support parents of youth with mental health challenges. A subcommittee of volunteers met on June 13 and August 13 to discuss implementation of the interventions. A challenge the subcommittee faced was the pending transition of the programs to a virtual, internet-based forum. The in-person support

groups and educational classes remained on hiatus since March 2020 related to COVID-19

public meeting restrictions and the organization did not have prior experience utilizing a virtual

forum.

The subcommittee provided outreach to certified class instructors and support group

facilitators to recruit volunteers comfortable with convening an online forum. On August 29, six

volunteers were trained on utilizing the virtual platform and dates for the fall classes and support

groups were confirmed. Digital marketing materials (flyers, posters) were created and included

information about the program, a website address, a QR Scan Code to access the website, and an

email and telephone number to register for the class or support group.

Marketing materials were posted on the organizational Facebook and Instagram pages,

electronic flyers were emailed to community partners, and information regarding the upcoming

support groups and classes was included in multiple email notifications to the organization's

listserv. Materials were also sent to previous attendees of support groups and classes as many

participants have stated 'word-of-mouth' is how they heard of the programs. Examples of

community partners that received the flyers were: school districts, outpatient behavioral health

providers, inpatient behavioral health hospitals that treated youth, private community providers,

and other non-profit organizations that worked with youth.

Parents interested in the programs called or emailed the organization's administrative

office to register for the class, the support group, or both. They were screened to ensure they

were the parent of a youth with a mental health challenge. The address and contact information

of the parents, age of child, and diagnosis, if known, was collected as part of the enrollment

process. A formal diagnosis was not a requirement for attendance. The personal information

gathered per the organization's enrollment process was not provided or utilized as part of this project.

The parent support group met on October 1, October 17, November 5, and November 21 via an internet-based virtual platform. The support groups were let by trained volunteers and implemented with fidelity to the established national program model. The educational class met weekly during October 3 – November 7 via an internet-based virtual platform. The classes were led by trained volunteers and implemented with fidelity to the established national program model.

Instrumentation, Data Collection, and Data Analysis Plan

Data collection for the parent support group was completed utilizing a class roster and an electronic survey. The number of parents attending each support group was documented on an attendance roster. This number was compared against baseline attendance numbers collected in 2019 and early 2020. Attendees were asked to complete a brief survey conducted the last five minutes of each support group. The survey consisted of 11 questions measuring parent satisfaction with the support group and perceived changes in mental health knowledge and self-efficacy after attending the support group (Appendix C). No personal identifying data was collected or connected to the electronic survey. Survey questions were derived from the program's pre-existing evaluation form. While already available to the organization, this form had not been previously utilized during a parent support group.

Data collection for the educational class was completed utilizing a class roster and an electronic pre and post survey. The number of parents attending the class was documented on an attendance roster. This number was compared against the average attendance at the four classes held in 2019. An electronic baseline survey was conducted during Class One and a post survey was conducted at Class Six. The first nine questions on the survey measured parental mental

health knowledge, attitudes, and self-efficacy and were the same on both the pre and post survey

(Appendix D). The post survey included an additional four questions to measure parental

satisfaction with the class. Survey questions were derived from the program's pre-existing

evaluation form. This tool was previously used by the organization after each class, but the data

was not formally analyzed or archived in an accessible format. Descriptive statistics (mean,

standard deviation, percentage) were used to present the data distribution. Due to the small

sample size and different group participant composition involved in pre and post surveys, the

Mann-Whitney U test was used to compare the scores reported across time. Data analysis was

conducted using SPSS Statistics version 27.

Budget and Funding

The organization's annual budget included line item allocations for personnel salaries,

educational class supplies, and support group supplies (Appendix E). No additional funding was

required or received for this project. Costs incurred during this quality improvement project

included approximately thirty-six hours of staff time, twelve hours for the Executive Director

who provided leadership and consultation, and twenty-four hours for the Administrative

Assistant who provided technical support, facilitated the registration process, and prepped the

class materials. Costs also included the printed materials required for the educational class. No

printed materials were required for the support groups. Digital marketing and outreach materials

were created by volunteers at no cost to the organization. Due to the COVID-19 restrictions all

outreach materials were distributed electronically; no costs were incurred to print materials.

<div align="center">**Results**</div>

Support Group

Table 1

Parent Support Group Survey Results, N=11

Knowledge (K), self-efficacy (SE), program satisfaction (PS)	Number of responses (n) %		
	Strongly agreed	Agreed	Neither agree or disagree
Attending this support group gives me practical information to help me support my family members (K)	(5) 45.5%	(5) 45.5%	(1) 9.1%
Attending this support group gives me a better understanding of the resources available in my community (K)	(7) 63.6%	(4) 36.4 %	
I have learned information that is new to me (K)	(4) 36.4 %	(6) 54.5%	(1) 9.1%
Attending this support group has improved my ability to access and advocate for mental health services for my family member (SE)	(4) 36.4 %	(5) 45.5%	(2) 18.2%
Attending this support group provides support from people who are going through similar circumstances (PS)	(8) 72.7%	(3) 27.3%	
Attending this support group leaves me feeling better when I leave than when I arrived (PS)	(7) 63.6%	(4) 36.4 %	
Attending this support group has produced positive changes in my life (PS)	(6) 54.5%	(2) 18.2%	(3) 27.3%
This support group is helpful for me (PS)	(7) 63.6%	(3) 27.3%	(1) 9.1%
The facilitators of this program communicated effectively (PS)	(11) 100%		
I would recommend this program to others (PS)	(8) 72.7%	(2) 18.2%	(1) 9.1%

Four support group sessions were held. In addition to the participants, each session was comprised of two trained volunteer parent peer facilitators and one technology support volunteer to manage the online platform. Participant attendance at each session was as follows: October 1

had 5 participants, October 17 had 1 participant, November 5 had 1 participant, and November 21 had 4 participants. Mean attendance (2.75) was lower than the mean attendance (4) of the in-person support groups prior to COVID-19. Survey results from each session were combined (N=11). If participants attended more than one session, they may be represented multiple times in the results. However, each session was rated individually, so while the participant may be the same, the support group session they rated was different. Answers to each question are summarized in the Table 1.

Participants report improved knowledge and self-efficacy after attending a support group; 100% agreed or strongly agreed that they have a better understanding of community resources and 82% agreed or strongly agreed that they have an improved ability to access and advocate for mental health services on behalf of their child. In terms of satisfaction with the support group, 100% reported that they felt better when they left the group than when they arrived and 91% reported that the support group was helpful and they would recommend the support group to others. Participants also provided the following comments: "It's nice that it is a very small group," "Thank you all!" and "Thank you so much for this!"

Educational Class

The education class met once weekly for six weeks starting October 3 and completing on November 11. The class included two trained peer educators and one technology support volunteer. Eleven participants started the class on October 3 and five participants completed the class on November 3. This is lower than the mean average of attendance (8.75) prior to COVID-19. Six participants did not complete the class because of childcare needs, unmatched expectations, or unknown reasons. Results of the analysis are highlighted in Table 2. The difference in Class One scores ($M = 30.9$, $SD = 5.15$) and Class Six scores ($M = 40.2$, $SD = 1.64$)

demonstrate improved awareness and attitudes. Participants reported higher scores of awareness

and attitudes toward mental disorders after the class. Based on the Mann-Whitney U Test

finding, the post survey score was statistically significantly higher than the pre survey score

(U=50, p=.001).

Table 2

Educational Class Survey Scores: Awareness and Attitudes Toward Mental Disorders

	N	Minimum	Maximum	Mean	Standard deviation
Pre survey	11	21.00	37.00	30.9091	5.14693
Post survey	5	39.00	43.00	40.2000	1.64317

Impact and Sustainability of Project

Parents that attended the educational class and support groups increased their mental

health literacy, including perceived self-efficacy in accessing and advocating for mental health

treatment on behalf of their child. Children of the parents who attended these programs will

benefit from their parents' increased knowledge, improved awareness, and improved attitudes

towards mental illness. In addition to measuring the impact of the programs on mental health

literacy of parents, this quality improvement project focused on how to engage more parents in

the classes and support groups. Sustainability and growth of these programs will be dependent on

the organization's ability to reach and engage more parents. Even with the strategic and focused

marketing and outreach efforts, program attendance was lower than anticipated. During early

project development discussions, prior to the pandemic lockdown, a variety of outreach and

marketing strategies were discussed, including in person outreach at local behavioral health

hospitals and clinics. Once COVID-19 restrictions are lifted, the organization will have an

opportunity to continue with the quality improvement PDSA cycles to explore additional outreach and marketing strategies.

Discussion

The findings of this project suggest that existing evidence-based organizational programming, including educational classes and support groups, increases parental mental health literacy. Previous research demonstrates that increasing the mental health literacy of parents increases the likelihood that they will seek mental health treatment on behalf of their child; children that receive early intervention and treatment for mental health disorders have improved long-term outcomes. Unfortunately, this project was not successful at increasing parental or caregiver attendance in the support groups or educational classes.

The COVID-19 pandemic altered the original design of this project. Organizational resources such as personnel and volunteer hours that were originally designated to help with marketing, outreach, and project implementation were diverted to working on the conversion of all programming to a virtual platform, including the creation of new policies, procedures, and trainings. Once this was completed, the timeline in terms of outreach and recruitment of parents for fall programming had been compressed, resulting in further modifications including simplification of the data that was tracked and analyzed. For example, to evaluate which marketing strategies were the most effective, the original project design included additional registration questions asking parents how they heard about the program; this was unable to be completed with the organizational staffing limitations and compressed timeline. Furthermore, the timeline and scope of this project did not allow for follow-up with parents to evaluate actual behavior change in relation to help-seeking behaviors; this project was limited to the feedback

parents provided immediately after each intervention and so long-term outcomes were not collected or evaluated.

Recommendations for Further Study

It is recommended that the organization continue the quality improvement process to explore, implement, and evaluate additional marketing and outreach strategies that increase parent attendance in support groups and educational classes. It is important for the organization to formally identify and mediate barriers that prevent parents from attending or completing the programs. Additionally, the organization could further evaluate program impact on parental mental health literacy by assessing parental help-seeking behaviors six-months post-intervention.

References

American Academy of Pediatrics. (2020). *Mental Health Initiatives*. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages

Banh, M. K., Chaikind, J., Robertson, H. A., Troxel, M., Achille, J., Egan, C., & Anthony, B. J. (2019). Evaluation of Mental Health First Aid USA using the Mental Health Beliefs and Literacy Scale. *American Journal of Health Promotion*, *33*(2), 237–247. https://doi.org/10.1177/0890117118784234

Centers for Disease Control and Prevention. (2020). *Leading Cause of Deaths Reports, 1981-2018*. https://webappa.cdc.gov/sasweb/ncipc/leadcause.html

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rüsch, N., Brown, J. S. L., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine*, *45*(1), 11–27. https://doi.org/10.1017/S0033291714000129

Díaz-Caneja, C. M., Morón-Nozaleda, M. G., Vicente-Moreno, R. P., Rodríguez-Toscano, E., Pina-Camacho, L., de la Serna, E., Sugranyes, G., Baeza, I., Romero, S., Sánchez-Gistau, V., Castro-Fornieles, J., Moreno, C., & Moreno, D. (2018). Temperament in child and adolescent offspring of patients with schizophrenia and bipolar disorder. *European Child & Adolescent Psychiatry*, *27*(11), 1459–1471. https://doi.org/10.1007/s00787-018-1135-y

Doering, S., Lichtenstein, P., Gillberg, C., Middeldorp, C. M., Bartels, M., Kuja-Halkola, R., & Lundström, S. (2019). Anxiety at age 15 predicts psychiatric diagnoses and suicidal ideation in late adolescence and young adulthood: results from two longitudinal studies. *BMC Psychiatry, 19*(1), 363. doi: 10.1186/s12888-019-2349-3

Dupéré, V., Dion, E., Nault-Brière, F., Archambault, I., Leventhal, T., & Lesage, A. (2018).

Revisiting the link between depression symptoms and high school dropout: Timing of

exposure matters. *Journal of Adolescent Health*, *62*(2), 205–211.

https://doi.org/10.1016/j.jadohealth.2017.09.024

Forbes, M. K., Rapee, R. M., & Krueger, R. F. (2019). Opportunities for the prevention of

mental disorders by reducing general psychopathology in early childhood. *Behaviour

Research and Therapy*, *119*, 103411. https://doi.org/10.1016/j.brat.2019.103411

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to

mental health help-seeking in young people: A systematic review. *BMC Psychiatry*,

10(1), 113. https://doi.org/10.1186/1471-244X-10-113

Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental illness stigma, help seeking,

and public health programs. *American Journal of Public Health*, *103*(5), 777–780.

http://dx.doi.org.ezproxy1.lib.asu.edu/10.2105/AJPH.2012.301056

Hurley, D., Swann, C., Allen, M. S., Ferguson, H. L., & Vella, S. A. (2020). A systematic

review of parent and caregiver mental health literacy. *Community Mental Health

Journal*, *56*(1), 2–21. https://doi.org/10.1007/s10597-019-00454-0

Independent Sector. (2018, April 19). *The value of volunteer time / State and historical data.*

https://independentsector.org/resource/vovt_details/

Institute for Healthcare Improvement. (n.d.). *Plan-Do-Study-Act (PDSA) Worksheet.*

http://www.ihi.org:80/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx

John, A., Marchant, A. L., McGregor, J. I., Tan, J. O. A., Hutchings, H. A., Kovess, V., Choppin,

S., Macleod, J., Dennis, M. S., & Lloyd, K. (2015). Recent trends in the incidence of

anxiety and prescription of anxiolytics and hypnotics in children and young people: An e-

cohort study. *Journal of Affective Disorders*, *183*, 134–141.

https://doi.org/10.1016/j.jad.2015.05.002

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, B. R., & Pollitt, P. (1997). Mental health

literacy: A survey of the public's ability to recognize mental disorders and their beliefs

about the effectiveness of treatment. *The Medical Journal of Australia, 166*(4), 182-186.

Jorm, A. F. (2000). Mental health literacy: Public knowledge and beliefs about mental disorders.

British Journal of Psychiatry, *177*(5), 396–401. https://doi.org/10.1192/bjp.177.5.396

Jorm, A. F. (2012). Mental health literacy: Empowering the community to take action for better

mental health. *American Psychologist*, *67*(3), 231–243.

http://dx.doi.org.ezproxy1.lib.asu.edu/10.1037/a0025957

Kaushik, A., Kostaki, E., & Kyriakopoulos, M. (2016). The stigma of mental illness in children

and adolescents: A systematic review. *Psychiatry Research*, *243*, 469–494.

https://doi.org/10.1016/j.psychres.2016.04.042

LeCloux, M., Maramaldi, P., Thomas, K., & Wharff, E. (2016). Family support and mental

health service use among suicidal adolescents. *Journal of Child & Family Studies*,

25(8), 2597–2606. https://doi.org/10.1007/s10826-016-04 Villatoro, A. P., DuPont-

Maiuolo, M., Deane, F. P., & Ciarrochi, J. (2019). Parental authoritativeness, social support and

help-seeking for mental health problems in adolescents. *Journal of Youth and*

Adolescence, *48*(6), 1056–1067. https://doi.org/10.1007/s10964-019-00994-4

National Institute of Mental Health. (2019). *Prevalence of serious mental illness.*

https://www.nimh.nih.gov/health/statistics/mental-illness.shtml

Olfson, M., Druss, B. G., & Marcus, S. C. (2015). Trends in mental health care among children

and adolescents. *New England Journal of Medicine*, *372*(21), 2029–2038.

https://doi.org/10.1056/NEJMsa1413512

Reardon, T., Harvey, K., Baranowska, M., O'Brien, D., Smith, L., & Creswell, C. (2017). What

do parents perceive are the barriers and facilitators to accessing psychological treatment

for mental health problems in children and adolescents? A systematic review of

qualitative and quantitative studies. *European Child & Adolescent Psychiatry*, *26*(6),

623–647. https://doi.org/10.1007/s00787-016-0930-6

Salloum, A., Johnco, C., Lewin, A. B., McBride, N. M., & Storch, E. A. (2016). Barriers to

access and participation in community mental health treatment for anxious children.

Journal of Affective Disorders, *196*, 54–61. https://doi.org/10.1016/j.jad.2016.02.026

Skowyra, K. R., & Cocozza, J. J. (2007). *Blueprint for change: A comprehensive model for the

identification and treatment of youth with mental health needs in contact with the juvenile

justice system.* National Center for Mental Health and Juvenile Justice.

Torok, M., Calear, A. L., Smart, A., Nicolopoulos, A., & Wong, Q. (2019). Preventing

adolescent suicide: A systematic review of the effectiveness and change mechanisms of

suicide prevention gatekeeping training programs for teachers and parents. *Journal of

Adolescence*, *73*, 100–112. https://doi.org/10.1016/j.adolescence.2019.04.005

U.S. Census Bureau. (n.d.). *QuickFacts: Maricopa County, Arizona*.

https://www.census.gov/quickfacts/fact/table/maricopacountyarizona/PST045218

Villatoro, A. P., DuPont-Reyes, M. J., Phelan, J. C., Painter, K., & Link, B. G. (2018). Parental

recognition of preadolescent mental health problems: Does stigma matter? *Social Science

& Medicine*, *216*, 88–96. https://doi.org/10.1016/j.socscimed.2018.09.040

Wakschlag, L. S., Roberts, M. Y., Flynn, R. M., Smith, J. D., Krogh-Jespersen, S., Kaat, A. J., Gray, L., Walkup, J., Marino, B. S., Norton, E. S., & Davis, M. M. (2019). Future directions for early childhood prevention of mental disorders: A road map to mental health, earlier. *Journal of Clinical Child & Adolescent Psychology*, *48*(3), 539–554. https://doi.org/10.1080/15374416.2018.1561296

Wei, Y., McGrath, P. J., Hayden, J., & Kutcher, S. (2017). Measurement properties of mental health literacy tools measuring help-seeking: A systematic review. *Journal of Mental Health*, *26*(6), 543–555. https://doi.org/10.1080/09638237.2016.1276532

Appendix A

Evaluation and Synthesis Tables

Table A1

Evaluation Table Quantitative Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement/ Instrumentation	Data Analysis	Findings/ Results	Level/Quality of Evidence; application to practice
Bahn et al., (2019). Evaluation of Mental Health First Aid USA Using the Mental Health Beliefs and Literacy Scale **Funding:** SAMHSA and the NCBH **IRB** of Georgetown University Authors declared no conflict of interests.	Unified Theory of Behavior Change (UTB)	**Design:** Comparative Descriptive Design: Survey (pre, post, 6-month follow up) **Purpose:** to assess the impact of Youth MHFA utilizing a relatively new tool (MBLS)	n= 76 (completed all 3 surveys) **Setting:** Online SurveyMonkey platform Sample Demographics: adults who completed either the Adult or Youth MHFA and completed all three surveys in order (pre, post, 6-month follow-up).	**IV-** MHFA Curriculum **DV-** Changes in trainees: **knowledge** (awareness of mental health signs and symptoms); **attitude** (comfort level in talking with someone with a mental health problem); **behavior** (if MHFA information was used to help those in need).	MBLS	Paired sample t test (α = 0.05 and power .8 for necessary SS of 44) Cronbach α values, factor analysis, descriptive statistics, ANOVA with post hoc Bonferroni correction	**DV:** The MLBS identified strong, positive effects of MHFA training in individuals w/o prior MH training Construct consistency: 83% showed Cronbach α ≥ 0.7 , acceptable or better Quality of MHFA Training:	**LOE: III** **Strengths:** Exceeded required sample size, utilized and reinforced an existing measurement tool **Limitations:** Dependent on trainee self-report; limited generalization to the population as whole; No control group **Application to practice:** This curriculum will improve PMHL; **target individuals who do not have**

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment**; MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

							SD 4.53 and 4.7 on scale from 1-5 Pre-to-Post training Changes: P<.000 P<.013 P<.002	**previous MH knowledge**
Clement et al., 2015. What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. **Funding:** NIHR, European Commission **Bias:** None reported. **Country**: UK, Germany	Model of Help-Seeking Behavior (inferred)	**Design:** Systematic Review utilizing modified methodology from EPPI-Centre, PRISMA **Purpose:** Address impact of mental health-related stigma on HS for MHC	N= 144 **Participants =** 90,189 Studies re: association btwn stigma and HS = 56 Studies re: stigma barriers = 44 Qualitative = 51	IV Stigma **DV1 Attitude** (Size and direction of association btwn stigma and HS) **DV2 Behavior** (Stigma as a barrier to HS – extent and process) **DV3** Disproportionately affected pop groups	Cross-sectional survey checklist CASP Thematic analysis with coding frame software Two stage meta-synthesis	Narrative Synthesis Standardized ES for association btwn stigma and HS: Cohen's d, where possible	**DV1** Stigma endorsement median ES -0.05, perceived stigma median ES -0.02 **DV2** Median ES -0.52 **DV3** Median large negative association Asian American - -1.20 and small negative association African American = -0.25	**LOE:** II **Strengths:** Large sample size; standardized methodology **Limitations:** Mixed methodologies **Application to practice:** Target interventions to **reduce stigma**, **focus on minority populations**, and include focus on treatment stigma for individuals with MHC

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment**; MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

Hurley et al., 2020. A systematic review of parent and caregiver mental health literacy. **Funding:** Movember Initiative; The Australian MH Initiative **Bias:** No conflict of interest declared. **Country:** Australia, UK	MHL Framework	**Design:** Systematic review PRISMA-P Guidelines **Purpose:** Review and evaluate available research on PMHL	N = 21 Studies Quantitative =13 Qualitative = 7 Mixed Methods = 1 **n**=9019 PT	**IV** MHL **DV1 Knowledge/** understanding **DV2 attitudes/** beliefs **DV3 help-seeking** categories **DV4** mental health literacy interventions	MMAT	Narrative Synthesis	**DV1** Degree/nature of K/U **DV2** Stigma, role of parent, attitudes to help-seeking, fear and worry **DV3** Sources of support, strategies, influencing factors **DV4** PMHL improved with various interventions (in person, online) r/t K/U	**LOE: II** **Strengths:** Utilized standardized review guidelines and measurement tool **Limitations:** Narrative synthesis does not provide strength of correlated evidence, did not address ES **Application to practice:** PMHL **K/U improves with various modes of interventions** (in person, online); more study is needed to assess behavior changes
LeCloux et al., 2016. Family supports and mental health service use among suicidal adolescents. **Funding:** None declared.	Anderson's Behavioral Model of Health Services Usage The Children's Network	**Design:** Longitudinal Study, Survey, Secondary Analysis **Purpose:** To assess the relationship btwn parent support,	N= 14,738 HS students responding to survey n= 1804 HS students who reported seriously considering suicide	**IV** Youth who considered suicide **DV1** Parental support **(Attitude)** **DV2** Symptom severity **DV3** Mental health treatment **(behavior)**	Pearson and Wilkinson parent support measures CES-D Questionnaires	Bivariate tests, logistic regression	**DV1** Decrease parental support p<.001 M=3.67, SE=.01 **DV2** Higher CES-D score P <.001 M=17.39. SE= .32	**LOI: III** **Strengths:** Standardized measurement tools, large cohort with control group **Limitations:** Measurement for MHT was self-report

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models, **MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition, **MHT** – Mental health treatment; **MHFA** Mental Health First Aid, **MHL** Mental Health Literacy, **NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health, **PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers, **YP** Young person, **YP-MHD** Young person with a mental health disorder, **DV**-dependent variable; **IV**- independent variable; **N** – number of studies; **n**- number of participants

IRB: Simon's College HSRB **Bias:** None declared. **Country:** US	Episode Model	symptom severity, and MHT use	White (69%) Black/AA 12% Latino 11% Asian/PI 3.4% AI/AN 3.4% Female 62% Mean age 15.18 years				**DV3** 73% of IV students had not received MHT	and focus limited to counseling., **App to Practice:** Symptom severity outweighed parent support in prediction of receiving treatment: **screening symptoms is important**
Maiuolo et al., 2019. Parental authoritativeness, social support, and help-seeking for mental health problems in adolescents. **Funding:** Partial, Australian Research Council **Bias:** Declare no conflict of interest. **IRB:** University HE10158 **Country:**	Logan and King's Model of Adolescent Health Seeking The Health Belief Model Cycle of Avoidance Model	**Design:** Descriptive longitudinal with cross sectional analysis **Purpose:** Impact of authoritative and supportive parenting adolescent help seeking for MHC Note: NOT authoritarian	**n**=1582 Year 11 Students 17 Schools 708 males 774 females Slightly higher socio-economic status than general Aus. pop	**IV** Survey **DV1** Psychological distress **DV2** Help-seeking (**behavior**) **DV3** Parental authority **DV4** Parent social support Second analysis: **IV** Psychological distress, Parental authority, Parental Social Support	GHQ-12 $\alpha = .90$ GHSQ $\alpha = .85$ PAQ $\alpha = .80$ SSSS-P Not stated	Cross-sectional analysis with standard multiple regression; binomial regression; sensitivity analysis	**DV1** GHQ-12 $\alpha = .90$ **DV2** GHSQ $\alpha = $ not stated **DV3** PAQ $\alpha = .79$ **DV4** SSSS $\alpha = .94$ **DV5** R=27, R2 = .07, adjusted R2=.07, $F_{(4, 1524)} =29.23$, $p< .001$ Gender significant factor in help-seeking	**LOE:III** Strength: Large sample size, standardized measurement tools **Weakness:** Questions asked in retrospect; broad category of MHC, limited range of parent variables and help-seeking sources, **App to Practice:** **Target interventions:** symptom severity, acknowledge adolescent

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment; **MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

							behavior (male<female)	developmental stage of autonomy
Australia				DV5 Help-seeking **(behavior)**				
Olfson et al., 2015. Trends in mental health care among children and adolescents. **Funding:** Agency for Healthcare Research and Quality; NY State Psychiatric Institute **Bias**: None disclosed. **Country**: US	Health Services Usage (inferred)	**Design:** Descriptive, Trend **Purpose:** Examine trends based on severity of MHC and MHT	N = 53,622 youth, 6-17 years old **1996-98** Cohort = 15,307 **2003-05** Cohort = 19,450 **2010-12** Cohort = 18,865	**IV:** Youth aged 6-17 **DV1** Severity of MHC **DV2** =Use of Outpatient MHT **(behavior)**	MEPS Questionnaire CIS	Estimated percentage, Chi square Corresponding unadjusted models using odds ratio and CI	**DV1** Slight decrease in high severity MHC: 12.8% to 10.7 % OR 0.81 (0.72-0.92) **DV2:** MHT for severe MHC 35.7% to 33.4%; OR 0.81 (.72-.92) chi-square test with 1'Freedom = 0.73, P=.39 **DV2** Increase in MHT for all: MHC: 9.2 to 13.3% OR 2.20 (1.76 - 2.75)	**LOI: III** **Strengths:** Large scale study with standardized measurement tools **Limitations:** Relied on respondent recall, CIS is not a diagnostic measure; cofounding variables not considered **Application to Practice:** MHT is increasing for less severe conditions; **target interventions for youth with severe symptoms**
Reardon et al., 2017. What do parents perceive are the barriers and facilitators to accessing psychological treatment for	Model of Help-Seeking Behavior	**Design:** Systematic Literature Review utilizing PRISMA **Purpose:**	N = 44 Quan = 20 Qual= 22	**IV:** YMHC **DV1** Mental health system challenges **DV2 Attitudes** towards treatment	Data extraction forms Quality rating checklist (w/ Dixon-Wood prompts for	Narrative Synthesis (ERSC Guidance on Conducing Narrative Synthesis);	**DV1** Demand (wait time (lack of space); cost; admin system; location **DV2**	**LOE: II** **Strengths:** Variety of demographics, settings **Limitations:**

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT** – Mental health treatment; **MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

mental health problems in children and adolescents? A systematic review of qualitative and quantitative studies. **Funding:** CC funded by NIHR Professorship; TR funded by U of R regional bursary. **Bias:** None disclosed. **Country**: UK		Report parents' perceptions r/t barriers to MHT for YMHC		**DV3 Knowledge**/U of MHC and HP **DV4** Family circumstances	qualitative research) Single-coding framework		Dismissive professionals; effective tx; trust professional; quality of service; other's opinions; consequence for child **DV3:** Recognize symptoms, severity, need for help; know where to get help **DV4** Other responsibilities; support network	Variable study characteristics, designs, variable levels of quality; did not include families who had not accessed services at all **Application to Practice**: Targeted interventions to overcome barriers: identify MH symptoms, reduce parent stigma, how to access MHT
Salloum et al., (2016). Barriers to access and participation in community mental health treatment for anxious children. **IRB:** completed	Model of Help-Seeking Behavior (inferred)	Descriptive, cross-sectional TBIE Aim 1: PT perception TAB comparing those who complete Tx	Baseline n=100 Tx n= 68 Parents and children with anxiety who were enrolled in an RCT for an on-line, computer assisted CBT program	Independent variable: CCAL(Tx) DV: Perceptions re: access to Tx, Tx participation **(attitude)**	ADIS-IV-C/P PARS CGI-Improvement CIS-P BTQ-P	All: p < 0.05 **DS:** demographic data **CST/FET:** whether TAB impacted tx completion **PCC:** relationship	**AIM 1:** 66% Unsure who/where to go/group comparison p=.596 46% did not know problem was MH related/ group	**LOE: III** **Strengths:** Diagnostic assessments with standardized tools; TB assessed prior to Tx and TPB assessed at end of Tx **Limitations:**

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment; **MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

Funding: Agency for Healthcare Research and Quality Bias: Authors did not declare conflict of interests. **Country:** United States		and those who drop out Aim 2: PT/Child perceptions TPB who receive CCAL Aim 3: Assoc btwn perceptions of TPB and SD, anxiety, Tx expectancy and satisfaction Aim 4: TPB assoc with tx response			BTPS	btwn continuous variables and BTPS scores **IST-tests:** group differences in BTPS scores based on gender, ethnic status, Tx responder **ANOVA** group differences when >2 groups **LMM:** BTPS scores moderated whether change in anxiety	comparison p=.686 **AIM 2:** PT: personal stress (32%); therapist did not call enough (27%). Child: not enough time for homework (22%). **AIM 3:** >TPB associated with <treatment satisfaction p=.002 **AIM 4:** Tx responders reported < barriers p=.025 and less Tx expectations p= .036 than non-responders. Child with >barriers had less change in anxiety p=.046	Limitation: 1)cross- sectional design 2) lack of well-established psychometric properties to measure barriers; 3) Engaged PT who were already seeking treatment for their child **Application to Practice**: Targeted interventions: **decrease stigma,** address barriers to treatment **(how to access and stay engaged** with services)**
Torok et al., (2019). Preventing adolescent	Model of Help-Seeking	Systematic Review;	N= 13 n= 2,363 Schools, home	IV: suicide prevention program (multiple)	PRISMA	Narrative Synthesis	DV1: Significant improvement DV2: Significant improvement	**LOE: II** **Strengths:**

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment; **MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person, **YP-MHD** Young person with a mental health disorder**, DV-**dependent variable;   **IV-** independent variable; **N** – number of studies; **n-** number of participants

suicide: A systematic review of the effectiveness and change mechanisms of suicide prevention gatekeeping training programs for teachers and parents. IRB: None identified. **Funding:** No specific grant funding for this project. **Bias:** None declared. **Country** Australia	Behavior (inferred)	Purpose: Examine effectiveness of suicide prevention programs for parents/teachers of adolescents		DV1: **Knowledge** (suicide literacy) DV2: Confidence DV3: **Attitudes** DV4: **Behaviors** (seeking help/treatment)			DV3: Significant improvement DV4: No significant improvement measured	Large sample size; clear grouping of construct into categories **Limitations:** Variations in study designs, lack of standardized measuring tools difficult to clearly compare constructs btwn studies. **Applications to practice:** Interventions increase knowledge, not enough is known about behavior change; **target interventions toward parents** (largest knowledge deficit)
Villatoro et al., (2018). Parental recognition of preadolescent mental health problems: Does stigma matter?	Model of Help-Seeking Behavior (inferred)	Descriptive, cross-sectional **Purpose**: To assess if parental stigma plays a role in	n=432 Cross-sectional data of PT sample taken at the 6-month	**IV:** Two vignettes **DV:** PT stigma **(attitude)** DV: PT help-seeking **(behavior)**	Social Distance Scale (mean α= 0.94) Mental health diagnosis gate questions:	Logistic Regression	Social Distance Scale: PT willingness for child to interact with another child with MHC	**LOE: III** **Strengths:** Population was racially, ethnically, and economically diverse; Informs that

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models, **MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition, **MHT** – Mental health treatment; **MHFA** Mental Health First Aid, **MHL** Mental Health Literacy, **NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health, **PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers, **YP** Young person, **YP-MHD** Young person with a mental health disorder, **DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

		the recognition of MH problem in child aged 10-12 yo	assessment of an RCT 6th grade students and their parents from 14 SE, racially/ethnically diverse,		23-item symptom screen (α=0.77-0.85) Abbreviated Level of Contact Report		(mean α= 0.94) PT avoided an individual with an MHC (mean α=.68) PT mental health greater knowledge/ positive attitudes (mean α= 0.79)	parental stigma may be a barrier to Tx **Limitation:** Cross section design, No measurement of mental health severity of child Did not measure parental mental health **Application to Practice:** Interventions to **decrease parental stigma** may decrease child's barriers to Tx
IRB approval: MHMR of Tarrant County and Columbia UMC **Grant funded:** NIMH, LRI at UT, Austin Authors did not declare conflict of interests. **Country:** United States								

Key: **ADIS-IV-C/P** Anxiety Disorders Interview Schedule, **ANOVA** Analysis of Variance, **BTPS** Barrier to Treatment Participation Scale, **BTQ-P** Barriers to Treatment Questionnaire-Parent version, **CASP** Critical Appraisal Skills Program, **CCOL** Camp Cop-A-Lot, **CGI-I** Clinical Global Impressions-Improvement, **CIS-P** Columbia Impairment Scale-Parent Version, **CSQ-8** Client Satisfaction Questionnaire, **CST/FET** Chi-Squared or Fishers Exact Tests, **DS** Descriptive Statistics, **ECQ** Expectancy/Credibility Questionnaire, **HS** – High school; **IST-tests** Independent samples t-tests, **LRI** Latino Research Initiative at the University of Texas, Austin, **LMM** Linear mixed models**, MBLS** Mental Health Beliefs and Literacy Scale, **MHC** Mental Health Condition**, MHT –** Mental health treatment; **MHFA** Mental Health First Aid**, MHL** Mental Health Literacy**, NCBH** National Council of Behavioral Health, **NIMH** National Institute of Mental Health**, PARS** Pediatric Anxiety Rating Scale, **PCC** Pearson Correlation Coefficient, **PT** Parent, **SAMSHA** Substance Abuse and Mental Health Services Administration, **SS** Sample Size, **TAB** Treatment access barriers, **TBIE** Trained, blinded Independent Evaluator, **TPB** Treatment participation barriers**, YP** Young person**, YP-MHD** Young person with a mental health disorder**, DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

Table A2

Quantitative Studies Synthesis Table

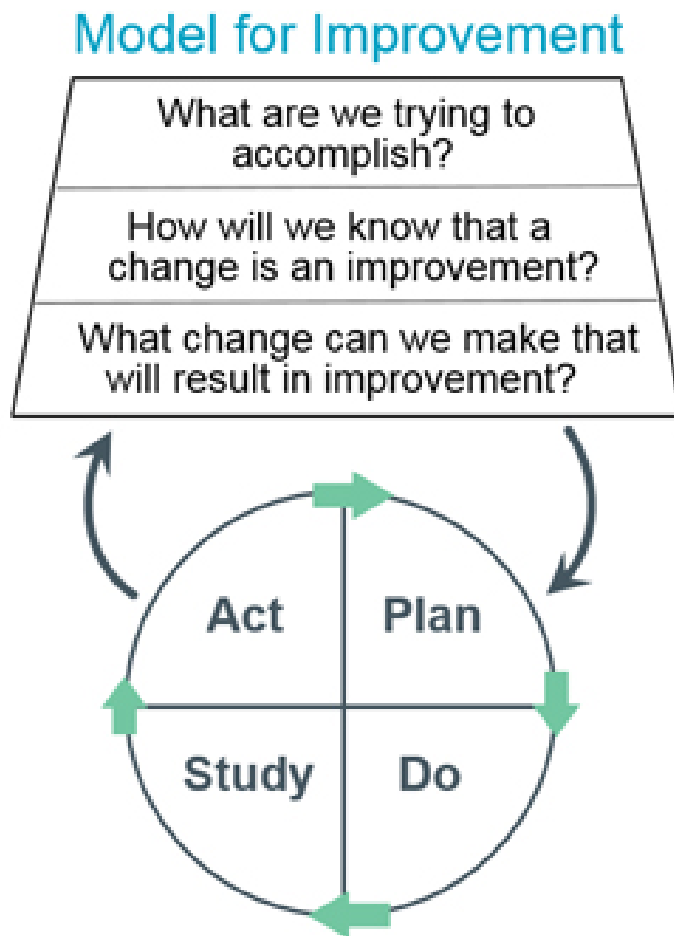| Author	Bahn	Clement	Hurley	LeCloux	Maiuolo	Olfson	Reardon	Salloum	Torok	Villatoro
Year	2019	2015	2020	2016	2019	2015	2017	2016	2019	2018
Design/LOE	Descriptive, Longitudinal Survey; III	Systematic Review; II	Systematic Review; II	Descriptive, correlational, secondary analysis; III	Descriptive, longitudinal, questionnaire; III	Descriptive, correlational; III	Systematic Review; II	Descriptive correlational; III	Systematic Review; II	Descriptive, cross-sectional; III
Study Size	n=76	N =144 n = 90, 189	N = 21 n = 9,019	n =1,804	n = 1,582	n= 53,622	N = 44 n= ~4,167	n =100	N = 13 n =2,363	n =432
Demographic	Any adult	Any person, any age	Parents & Caregivers of YP-MHD	YP-MHD, HS students	HS students	YP	PT of YP	PT of YP-MHD	PT and teachers of adolescents	PT of 6th Grade YP
Setting	Community Class with Online F/U	Research Review	Research Review	National Adolescent to Adult Health Database	Survey in schools	Medical Expenditure Survey: US Households	Research Review	Secondary data analysis of RCT	Research Review	Secondary data analysis of RCT
Intervention/ Focus of Study	Educational Curriculum	Impact of A/S on HSB	Review PMHL	Parent support and MHT	Parent support and MHT	Symptom Severity and MHT	Barriers to MHT	Barriers to MHT	Suicide Prevention Education	Parental Stigma and HSB
THEMATIC FINDINGS RELATED TO MENTAL HEALTH LITERACY: KNOWLEDGE, ATTITUDES/STIGMA, HELP-SEEKING BEHAVIORS										
Knowldege	Intervention ↑K	N/A	Intervetions ↑K	N/A	N/A	N/A	↓K of symptoms ↓HSB	↓K = ↓HSB	Intervention ↑K	↑K = ↓Stigma
Attitudes/ Stigma	Intervention ↓Stigma	↑Stigma = ↓HSB; ↓decreasing stigma = ↑HSB	Interventions ↓Stigma	N/A	N/A	N/A	N/A	↑Stigma = ↓HSB	Intervention ↓Stigma	↑Stigma = ↓recognition of symptom
Help-Seeking Behaviors	More studies needed		More studies needed	Determined by severity of symptoms	Determined by severity of symptoms	Overall HSB increasing; still gap btwn MHD and MHT	↑K = ↑ HSB	↑K & ↓A/S = ↑HSB	More studies needed	↑K & ↓A/S = ↑HSB

Key: **A/S** – Attitude/Stigma; **HS**- High-school; **HSB** – Help-seeking behavior, **K**- Knowledge; **MHT –** Mental health treatment; **MHFA** Mental Health First Aid, **MHL** Mental Health Literacy, **PT** Parent **SS** Sample Size, **TAB** Treatment access barriers, **TPB** Treatment participation barriers, **YP** Young person, **YP-MHD** Young person with a mental health disorder, **DV**-dependent variable;   **IV**- independent variable; **N** – number of studies; **n**- number of participants

Appendix B

Quality Improvement Model

Figure 1

Model for Improvement: Plan Do Study Act Model

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Act | Plan

Study | Do

Institute for Healthcare Improvement. (n.d.).

Appendix C

Support Group Survey

Thank you for participating in the support group and taking the time to share your feedback.

Your feedback will help us improve the support group for others.

Please responds: Strong Agree, Agree, Neutral, Disagree, Strongly Disagree, N/A

Attending this support group:

1. Provides support from people who are going through similar circumstances.

2. Leaves me feeling better when I leave than when I arrived.

3. Gives me practical information to help me support my family member.

4. Gives me a better understanding of the resources available in my community.

5. Has produced positive changes in my life.

6. Has improved my ability to access and advocate for mental services for my family member.

Please let us know the degree to which you agree or disagree with the following:

1. This support group is helpful for me.

2. I have learned information that was new to me.

3. The facilitators of this program communicated effectively.

4. I would recommend this program to others.

5. Additional comments: (optional)

Appendix D

Educational Class Pre and Post Survey

Thank you for participating in this survey. Your answers will remain anonymous and will help us as we improve our classes for future participants.

Pre and Post Survey Questions

Please state how much you agree or disagree with the following questions:

(Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree/NA)

1. I am able to recognize the signs and symptoms of mental illness.

2. I understand the type of services people with mental illness need.

3. I understand what "living in recovery" means as it relates to mental illness.

4. I am able manage crises that may result from symptoms of mental illness.

5. I am able to manage the stresses and negative impacts that the stigma of mental illness may cause.

6. I can access the care and support services that I or my family member need.

7. I see the symptoms of the mental illness as separate from the person who has the illness.

8. I do not believe mental illness is anyone's fault.

9. I believe individuals have a right and an obligation to actively engage and question their treatment provider.

Additional Post Survey Questions

Please state how much you agree or disagree with the following questions:

(Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree/NA)

1. This program was helpful for me.

2. I have learned information that was new to me.

3. The leader of this program communicated effectively.

4. I would recommend this program to others.

5. Additional comments: (optional)

Appendix E

Budget

Figure 1

Line Item	Budgeted Amount	Details
Direct Costs (Materials)		
Brochures	$ 500.00	Volunteer designed, professionally printed
Informational Business Cards	$ 125.00	Volunteer designed, professionally printed
In-house Photocopying	$ 75.00	$0.05/copy, volunteer designed, in house copier
Colored Paper	$ 57.00	$19/Ream x 3 reams
Direct Cost Subtotal	**$ 757.00**	
Indirect Costs (Personnel)		
Executive Director	$ 540.00	$45/hr x 2 hours/month x 6 months
Admin Coordinator	$ 408.00	$17/hr x 4 hours/month x 6 months
Indirect Costs Subtotal	**$ 948.00**	
Total Expenses	**$ 1,705.00**	
In-Kind Cost Savings		
Volunteer Hours	**$ 2,383.68**	$24.83/hour x 4 hours/month x 6 months x 4 volunteers (Independent Sector, 2018).

Budget Justification

Direct Costs:

The 2020 organizational budget has $1,700 on the education line item from which $757 can be

utilized towards the direct cost of marketing materials for program outreach. Brochures and other

marketing material templates are available at no cost; additional materials will be created as

needed by volunteers utilizing free online applications (ie: Canvas); therefore, the only direct

material costs incurred will be for printing and copying.

Indirect Costs:

The executive director will meet twice/monthly with the project committee and/or doctoral student. The administrative coordinator will provide administrative support with creating materials, posting materials to website/social media, and procuring professional printing services. Personnel time is inclusive of the hourly wage plus employee related expenses (ERE) that include employee benefits and federal insurance contributions (FICA). Staff salaries are fully allocated under the Personnel line item.

In-Kind Cost Savings:

This organization utilizes community volunteers to implement its programs, classes, and community presentations. Mobilizing volunteers to complete important work on behalf of the organization provides cost savings in staff salaries and extends the reach of programs beyond what the budget allows. In addition to time, volunteers often contribute supplies, food and beverages, and gas/mileage as they travel in the community on behalf of the organization. This projection includes four volunteers meeting twice monthly to complete the project deliverables, four hours/month, over the next six months.

Funding and Revenue Generation:

Organizational income is dependent largely on individual donations from community members and corporate sponsorships from behavioral health community partners. Increasing program participation through marketing and outreach increases the number of potential donors; programs are at no cost to the participant, but participants often become donors. Additionally, marketing programs through behavioral health providers creates a mutually beneficial relationship; the behavioral health providers are able to connect their consumers with important community resources which adds value to their organization; in return, these organizations often provide financial sponsorship for fundraising events.