Evaluation of Middle School Teachers Knowledge, Attitudes, and Barriers Pertaining to Adapted Youth Mental Health First Aid for Middle School Students

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Evaluation of Middle School Teachers Knowledge, Attitudes, and Barriers Pertaining to Adapted Youth Mental Health First Aid for Middle School Students

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing Practice at the University of Kentucky

By
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Louisville, KY
2022
Abstract

**Background:** An estimated 17.1 million youth have experienced a mental health disorder, more than the number of children with cancer, diabetes, and AIDS combined (National Council for Behavioral Health, 2016). Unfortunately, of those children with a diagnosable condition, only a third receive mental health treatment (National Council for Behavioral Health, 2016). If a child or adolescent’s mental health disorder is left untreated, then unresolved issues may continue to affect them as adults, creating physical and mental health impairments, that could potentially have a negative impact on their futures. Youth Mental Health First Aid (YMHFA) is an evidenced-based training program that teaches professionals a five-step action plan to identify, understand, and respond to signs of mental health conditions in children and adolescents, including suicidal situations (National Council for Behavioral Health, 2016). The purpose of this DNP project was to evaluate if a web-based educational module could improve the knowledge, attitudes, and behaviors of teachers regarding mental health and Adapted YMHFA.

**Design:** Using a one group pretest-posttest design, this project evaluated the effect of an Adapted YMHFA educational module for middle school teachers on their knowledge of mental health problems among students, attitudes towards students with mental health problems, subjective norms about addressing mental health issues, perceived behavioral control in addressing mental health issues, and intentions to address mental health issues.

**Methods:** This web-based intervention had 3 main components including: 1) a 5-minute electronic presurvey and pretest, 2) a 20-minute web-based educational module, and 3) a 5-minute electronic postsurvey and posttest. Teachers’ willingness to enroll in and complete the formal YMHFA training course within the next year was assessed prior to education and
following education. This project was implemented in January 2022 at multiple catholic grade schools within the Archdiocese of Louisville.

Results: Data was collected from five participants. There was a statically significant increase in perceived behavioral control. While there was not a statistically significant change in knowledge, findings from the postsurvey showed improvement in attitudes, subjective norms, and intentions.

Conclusion: Findings did not display a statistically significant change in teachers’ knowledge post intervention which is likely because of the small sample size and knowledge levels were high prior to the intervention. Though minimal improvements were noted in three out of the four categories from pre to postsurvey, statistically significant improvement was noted in teachers perceived behavioral control following the educational intervention. With this being the first quasi-experiment on YMHFA web-based trainings within school settings, this project will hopefully set a precedent for future research, because teachers are in a prime position to positively impact students’ lives, especially those who may be suffering in silence.
Acknowledgements

I would like to acknowledge the members of my project committee, including Dr. Evelyn Parrish, my advisor, Dr. Andrew Makowski, my co-chair, Dr. Holly Gray, my clinical mentor, and Dr. Chizimuzo (Zim) Okoli, my committee member. I truly appreciate all the support and guidance I have received from each of you throughout this process, and a special thanks to Dr. Okoli for always going above and beyond the call of duty. He is truly one of a kind. I would also like to acknowledge Dr. Amanda Thaxton Wiggins for her assistance with the statistical analysis portion of my project. I would like to recognize and thank my colleagues from the PMHNP cohort for their unwavering support and encouragement. Lastly, I would like to thank my amazing family and friends for their love and patience during this journey.
Dedication

I would like to dedicate this project to Dr. Peggy El-Mallakh. From the moment I met Dr. El-Mallakh for my interview, I realized I had made the right choice by changing tracks, and though she was only my instructor for a brief time, she left a lasting impression on my life. She embodied all that a mentor should be. I wish she were still here today but replaying her words of encouragement has helped push me through to the finish line. Thanks for believing in me, Dr. El-Mallakh, this is for you.

I would also like to thank my wonderful fiancé, Garry Dennison, for his endless positivity and love. Thank you for being my voice of reason, but more importantly, thank you for always finding a way to make me smile. I could not have done this without you.
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Background and Significance

Problem Statement

Mental health disorders are illnesses which can affect the way a person thinks, their emotions, and consequently their behavior. These disorders are considered such when they negatively impact a person’s ability to work, carry out activities of daily living or meaningful relationships (National Council for Behavioral Health, 2016). An estimated 17.1 million youth have experienced a mental health disorder, more than the number of children with cancer, diabetes, and AIDS combined (National Council for Behavioral Health, 2016). Unfortunately, of those children with a diagnosable condition, only a third receive mental health treatment (National Council for Behavioral Health, 2016). If a youth’s mental health disorder is left untreated, then unresolved issues may continue to affect them as adults, creating physical and mental health impairments, that could potentially have a negative impact on their futures.

Context, Scope, and Consequences of Problem

The youth mental health crisis has impacted the world. According to the World Health Organization (2020), mental health disorders account for 16% of the global burden of disease and injury in people 10-19 years of age. In the United States, approximately one in five children and adolescents lives with a mental health disorder (National Alliance for Mental Illness, 2019). In Kentucky, 11.7 percent of youth have had at least one depressive episode in the past year, and Kentucky ranks 48th in access to care nationally with 67.5% of youth with depression not receiving mental health services (Florell & Salins, 2018). Multiple factors make youth susceptible to mental health disorders. An array of physical, emotional, and social changes, and exposure to poverty or adverse childhood experiences increases susceptibility (World Health Organization, 2020). The direct medical costs associated with mental health disorders in the
United States is astronomical and reached $201 billion in 2013, surpassing costs for heart disease and traumatic injury (United Health Foundation, 2019). In addition to the financial costs, if mental health disorders among youth are not addressed in a timely manner, the repercussions could negatively impact every aspect of a child’s life. The repercussions of untreated mental health disorders in youth include increased rates of absenteeism, poor academic performance, decreased ability to focus within the classroom, lower grade point averages, and greater likelihood of dropout (Swick & Powers, 2018). In addition to academic consequences, untreated youth are at a greater likelihood of engaging in high-risk behaviors, such as substance use, sexual activity, and violence (Swick & Powers, 2018).

**Current Evidence-Based Interventions**

The current evidence-based interventions for youth suffering with mental health disorders, include youth suicide prevention programs, cognitive behavioral therapy-based programs, and skills-based training courses for adults who regularly interact with young people (Melynk et al., 2015; National Council for Behavioral Health, 2016; Sullivan, 2017). Among them, Youth Mental Health First Aid (YMHFA) is an evidenced-based training program that teaches professionals a five-step action plan to identify, understand, and respond to signs of mental health conditions in children and adolescents, including suicidal situations (National Council for Behavioral Health, 2016). The training course teaches participants various risk factors and warning signs for mental health and addiction concerns, strategies regarding how to assist youth in crisis or non-crisis situations, and where to seek help for youth (National Council for Behavioral Health, 2016). The course also explains how to apply the five-step action plan in a variety of scenarios, which makes it easy to implement in real life situations. After completing YMHFA training programs, participants have increased knowledge regarding mental health,
improved ability to recognize mental illness, and increased confidence in providing aid during crisis situations (Hadlaczky et al., 2014). Trained individuals also note a decrease in personal stigma, and their view and attitudes towards people with mental illness significantly change (Morawska et al., 2013). Youth Mental Health First Aid is an effective evidence-based strategy that can assist suffering youth (National Council for Behavioral Health, 2016).

**Purpose and Objectives**

The purpose of this DNP project was to evaluate if a web-based educational module can improve the knowledge, attitudes, and behaviors of teachers regarding mental health and Adapted YMHFA. The specific aims of this study were to examine:

1.) Changes in knowledge regarding youth mental health and Adapted YMHFA

2.) Changes in attitudes, subjective norms, and perceived behavioral control pertaining to mental health and Adapted YMHFA

3.) Impact of education based on ratings of intent to enroll in and complete the formal YMHFA Training Course within the next year.

**Theoretical Framework**

The Theory of Planned Behavior (Ajzen, 1991) is the theoretical framework that guided implementation of the Adapted YMHFA web-based educational module for this DNP project. The Theory of Planned Behavior proposes that attitudes toward the behavior, subjective norms towards the behavior, and perceived behavioral control, predict an individual’s intention to perform the behavior, and this intention predicts actual performance of the given behavior (Ajzen, 1991). The Theory of Planned Behavior constructs were used to design the measures for evaluating the Adapted YMHFA educational module. Specifically, the Theory of Planned Behavior was used to develop questionnaires that assessed attitudes towards engaging youth in
conversations about mental health, subjective norms of addressing mental health in youth, perceived behavioral control of engaging youth in conversations about their mental health and intentions to engage youth in discussions about their mental well-being.

**Review of Literature**

To determine the evidence supporting the use of YMHFA Web-Based Trainings in enhancing teachers’ knowledge, attitudes, and behaviors pertaining to mental health and YMHFA, a review of the literature was conducted. Specifically, using the PICO format, the question guiding the review was: Among teachers, how has the implementation of YMHFA web-based trainings in school settings affected educator knowledge and willingness to deliver mental health first aid to students in crisis or non-crisis situations?

An initial review was conducted to understand the use of web-based trainings for teachers on YMHFA or health-related topics with no studies obtained. So, the search was adjusted to examine web-based trainings for healthcare providers on mental health-related topics, such as cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT). The search of PubMed and CINAHL included the following key terms: web-based trainings, mental health, behavioral health, healthcare provider. The search yielded 175 articles and was narrowed down to the most relevant studies. The inclusion criteria were studies in the English language, full text, and published between 2011 and 2021. The exclusion criteria were Non-English studies and studies published prior to 2011.

**Synthesis of Evidence**

A total of five studies were selected for inclusion. These studies included one randomized controlled trial, three pilot studies, and one quasi-experimental study. Four of the studies were conducted in the United States and one in Germany. The sole use of web-based training modules
was utilized in the randomized controlled trial, quasi-experimental study, and one of the pilot studies (Sansen et al., 2020; Heck et al., 2015; Taylor et al., 2021). Among two of the pilot studies, live video conferencing was utilized in addition to web-based training modules (Kobak et al., 2013; Kobak et al., 2017). The inclusion of live video conferencing was considered a facilitator with the use of online training, because participants were given immediate feedback (Kobak et al., 2013; Kobak et al., 2017). Web-based programs that delivered psychotherapy components via a multimedia approach demonstrated higher participant satisfaction ratings and program completion rates (Kobak et al., 2017; Sansen et al., 2020; Kobak et al., 2013).

Based on post-test results from each of the five studies, a significant increase in healthcare provider knowledge was noted following participation in web-based trainings for CBT or IPT (Sansen et al., 2020; Heck et al., 2015; Taylor et al., 2021; Kobak et al., 2013; Kobak et al., 2017). After web-based training programs, self-efficacy levels and willingness to utilize CBT improved (Sansen et al., 2020; Kobak et al., 2013; Kobak et al., 2017). These results from web-based programs are applicable to the proposed project for teachers on YMHFA, which also measures educator knowledge and willingness to deliver mental health first aid to students in crisis or non-crisis situations.

**Gaps in Practice**

The youth mental health crisis affects one in five children, but only a third receive mental health treatment (National Council for Behavioral Health, 2016). Teachers are in the perfect position to provide front line support for students in need within the classroom setting (Ohrt et al., 2020). Youth spend a significant portion of their day in the classroom and one teacher can potentially reach up to a hundred students each day. These invaluable opportunities allow teachers the possibility to create a monumental effect on the current mental health crisis. The
limited research regarding YMHFA web-based trainings for teachers, represents a significant gap in the literature. Therefore, the lack of research indicates the dire need for implementation of a web-based training module addressing youth mental health first aid for middle school teachers.

**Methods**

**Design**

This project used a one group pretest-posttest design to pilot an adapted YMHFA educational module for middle school teachers. The knowledge of mental health issues, attitudes pertaining to mental health, subjective norms about addressing mental health issues, perceived behavioral control in addressing mental health issues, and the intentions to address mental health issues were examined before and immediately after the intervention.

**Setting**

**Agency Description**

This DNP project was implemented at The Catholic Schools in the Archdiocese of Louisville. This is a school system consisting of 59 Catholic elementary and high schools in seven counties of the Archdiocese of Louisville. Annually, the school system serves more than 23,400 students.

**Project Congruence to Agency’s Vision**

The Catholic Schools in the Archdiocese of Louisville include in their mission statement the importance of developing holistic lifelong learners. Their purpose is to serve and engage students in response to Christ’s call to “teach all nations”. The Catholic Schools in the Archdiocese of Louisville prepare graduates to transform the world through Christian leadership (Archdiocese of Louisville, 2021). To support this mission, the current project assessed teachers’ knowledge of mental health and any barriers to assisting students with mental health challenges.
Through participating in this project teachers were given the tools to recognize their students’ struggles and learned the importance of addressing mental health concerns.

**Stakeholders**

For this project, several stakeholders were involved. Middle school teachers at Catholic grade schools in the Archdiocese of Louisville were the most important stakeholders because they met criteria to participate in the project and the students in their classrooms could directly benefit from their participation. In addition, the Superintendents of Catholic Schools in the Archdiocese of Louisville, Leisa Schulz and Mary Beth Bowling, agreed to support the project implementation. The superintendent’s assistant, Lori Weiter, invited middle school teachers from multiple Catholic grade schools within the Archdiocese of Louisville to participate in the project and disseminated project information to participants via the principals at the Catholic grade schools.

**Facilitators and Barriers**

There were several facilitators of completing this project at the Catholic Schools in the Archdiocese of Louisville, specifically, the ‘buy-in’ from the superintendents and the school system’s focus on student mental health. The main barrier to implementing the project is limited accessibility to the target population due to the current COVID-19 pandemic and outside visitor policies. To overcome this barrier, the PI worked closely with the superintendent and administrative staff to develop a timeline that would be conducive for the project implementation and evaluation.

**Sample**

A convenience sample of 60 middle school teachers from approximately 14 Catholic grade schools in the Archdiocese of Louisville was targeted for this project. Inclusion criteria for
the project were: 1) middle school teachers, and 2) full-time employees. Exclusion criteria were: 1) non-middle school teachers, and 2) student teachers.

**Procedure**

*IRB Approval*

Prior to the implementation of the project, Institutional Review Board (IRB) approval was obtained from the UK IRB in December 2021. To facilitate the approval, a letter was obtained from Leisa Schulz, Superintendent of the Catholic Schools in the Archdiocese of Louisville, that demonstrated support for the project.

*Description of Intervention*

This primary investigator (PI) created an educational intervention by adapting the YMHFA training program, which has strong evidence support from the National Council for Behavioral Health (National Council, 2016). The adapted web-based educational intervention had 3 main components including: 1) a 5-minute electronic presurvey and pretest, which included, demographics, a questionnaire on attitudes, subjective norms, perceived behavioral control, and intentions, and a true/false knowledge questionnaire, 2) a 20-minute web-based educational module, and 3) a 5-minute electronic postsurvey and posttest, which included a questionnaire on attitudes, subjective norms, perceived behavioral control, and intentions, and a true/false knowledge questionnaire. The results from the presurvey/pretest and postsurvey/posttest were compared to assess changes in knowledge and attitudes. Teachers’ ratings of intent to enroll in and complete the formal YMHFA training program in the next year was assessed before and after the educational intervention.

The web-based educational module that was developed by the PI consisted of three sections. The first section provided general information on mental health disorders and mental
health challenges in youth, including warning signs, risk factors, and protective factors related to youth mental health challenges or disorders. The next section of the module introduced the YMHFA five step action plan and various techniques that can be utilized to support students in crisis or non-crisis situations. The last section provided information on how to enroll in the formal 8-hour training program to become officially trained in YMHFA.

Measures and Instruments

For this project, the first tool utilized was a presurvey to obtain the following demographic measures about the participants: gender, ethnicity, and grade level taught (See Appendix A). The presurvey (See Appendix A) and postsurvey (See Appendix C) also contained a questionnaire that was developed using the guidelines provided by the developer of the Theory of Planned Behavior, Icek Ajzen (1991). The presurvey and postsurvey were identical and differed only in the time of administration considering each survey was in a separate link. The questionnaire adapted from Ajzen’s Theory of Planned Behavior consisted of 11 questions that assessed attitudes, subjective norms, perceived behavioral control, and intentions to provide assistance to students in non-crisis or crisis situations, and each question was on a 5-point Likert scale with a potential range from 1 (strongly disagree or very unlikely) to 5 (strongly agree or very likely), with higher scores demonstrating greater agreement (See Appendix A and Appendix C). The final question on the presurvey and postsurvey measured the impact of the educational intervention based on ratings of intent to enroll in and complete the formal YMHFA Training Course within the next year. The level of intent was measured on a 5-point Likert scale with higher scores demonstrating a greater level of intent.

The last tool was a pretest (See Appendix B) and posttest (See Appendix D) created by the PI. The pretest and posttest were knowledge-based questionnaires that consisted of ten
true/false questions over content from the web-based educational intervention on youth mental health and Adapted YMHFA (See Appendix B and Appendix D). Like the presurvey and postsurvey, the pretest and posttest were identical and differed only in the time of administration considering each test was in a separate link. The ten true/false questions were scored as correct or incorrect and a summary score was calculated with higher scores demonstrating greater knowledge acquisition.

**Data Collection**

Data collection for this project occurred from January 19, 2022 to May 15, 2022, via email survey links sent by the superintendent’s administrative assistant to principals at approximately 14 Catholic Schools in the Archdiocese of Louisville. The principals then sent email survey links to teachers that met inclusion criteria. A cover letter was attached to the email and participants were informed that clicking on the links implied their consent and willingness to participate in this project. There were separate links for each component of the web-based educational intervention and links were in the following order: presurvey, pretest, web-based educational module, postsurvey, and posttest. The presurvey was to be completed first, then the pretest, followed by viewing the educational module, and then completing the postsurvey, followed by the posttest. Data was collected anonymously via Qualtrics software to protect participants identities.

**Data Analysis**

Data analysis was conducted using IBM SPSS version 27 to determine if there was a significant difference between outcome measures before and after the web-based educational intervention. Demographic data was analyzed using descriptive statistics. Changes in knowledge from pretest to posttest and changes in attitudes, subjective norms, perceived behavioral control,
and intentions from presurvey to postsurvey were evaluated using independent samples t-tests. An alpha level of 0.5 was used for all statistical analyses.

Results

Demographics

A total of 60 middle school teachers were invited to participate in this DNP project. Three participants submitted all demographic, presurvey/pretest, and postsurvey/posttest data, and two additional participants submitted only pretest/posttest data, for a total sample size of five participants. Of the three participants that submitted demographic data, all three identified as female (100%) and all three were White/Caucasian (100%) (see Table 1). When asked about the grade levels taught, two teachers taught 6th and 7th grade, one taught 7th grade only, and two taught 7th and 8th grade (see Table 1).

Findings

Attitudes, subjective norms, perceived behavioral control, and intentions were examined pre and post intervention with the Adapted Theory of Planned Behavior Surveys. Analysis was based upon the three participants who completed the pre and postsurvey using independent samples t-tests. The 11-item surveys had a potential range from 1 (indicating strongly disagree or very unlikely) to 5 (indicating strongly agree or very likely) for each item. Table 2 displays the comparison data for each category between Adapted Theory of Planned Behavior presurvey and postsurvey results. Attitudes increased from a mean of 4.00 (SD=1.05) to 4.33 (SD=.47) with a p-value of .21, indicating a non-significant increase in attitudes among teachers toward students with mental health problems. Of note, under the attitudes category, the mean for the following belief statement, “I believe that individuals with mental health problems are generally easy to talk with”, increased from 2.67 (SD=.47) on the presurvey to 4.00 (SD=.00) on the postsurvey
with a p-value of <.01, indicating a statistically significant change in this belief after the intervention. Subjective norms increased from a mean of 4.50 (SD=.76) to 4.67 (SD=.47) with a p-value of .27, indicating slight, but non-significant, improvement in normative beliefs or perceived social pressure to help students with mental health problems. Perceived behavioral control displayed a statistically significant change, increasing from a mean of 4.67 (SD=.47) to 5.00 (SD=.00) with a p-value of .03. This indicated an improvement in perception of ease to provide assistance to students with mental health problems in crisis or non-crisis situations after the intervention. Intentions changed from a mean of 4.33 (SD=.47) to 4.67 (SD=.47) with a p-value of .26, indicating a non-significant increase in intent to become officially trained within the next year in YMHFA following the intervention.

Knowledge was examined pre and post intervention with the Adapted YMHFA questionnaires, and analysis was based upon the five participants who completed the pre and posttest using independent samples t-tests. Table 3 displays knowledge scores for pretest and posttest results. Despite the absence of a statistically significant change in knowledge before and after the intervention (p=.07), there was a slight increase in knowledge scores from a mean of 9.4 (SD=.55) to 10.0 (SD=.00), suggesting some improvement in knowledge regarding youth mental health.

The PI provided contact info to participants at the conclusion of the web-based educational module and one of the participants provided feedback via email. The participant stated the following about the intervention, “Your presentation was very impactful. I am definitely going to take the YMHFA training course and hope other teachers will too.”
Discussion

The purpose of this DNP project was to determine the effect of an educational intervention on teachers’ knowledge, attitudes, subjective norms, and perceived behavioral control in relation to youth mental health and YMHFA, and to determine the impact of the education based on teachers’ intentions to become officially trained in YMHFA within the next year post intervention. The results from the attitudes category within the Adapted Theory of Planned Behavior Presurvey suggest that the stigma surrounding mental health is unfortunately still present even among teachers; but following the educational intervention, there was a statistically significant increase in participants’ beliefs that individuals with mental health problems are generally easy to talk with. More importantly, following the web-based educational intervention, postsurvey results from the perceived behavioral control category displayed a statistically significant increase in teachers’ beliefs in their abilities to provide assistance to students in crisis or non-crisis situations. These findings demonstrate that the educational intervention may have been effective in improving teachers’ willingness to utilize skills from YMHFA. The results also indicate that the intervention effectively improved self-efficacy levels in relation to helping youth struggling with mental health challenges, whether it involves talking to students about their problems, encouraging students to utilize self-help strategies, or approaching a student in crisis to offer help. These improvements in teachers perceived behavioral control suggest that previous barriers to providing students aid can be minimized after receiving the educational intervention.

There was not a statistically significant change in knowledge scores upon comparison of pre and posttest results, and knowledge of youth mental health improved minimally. This finding, given the small sample size, is likely because the teachers initially scored high on their
knowledge regarding youth mental health in the pretest. Prior research has demonstrated a significant increase in participant knowledge following participation in web-based trainings for CBT (Sansen et al., 2020; Heck et al., 2015; Taylor et al., 2021; Kobak et al., 2013; Kobak et al., 2017). Therefore, replication of this project with a greater sample size may display a statistically significant increase in teachers’ knowledge following the web-based intervention.

**Implications**

With the ongoing mental health crisis among youth and the effects of the global pandemic on mental health, further research is desperately needed to determine the effects of YMHFA teacher trainings on educators’ knowledge levels of youth mental health and intent to offer aid to students in crisis or non-crisis situations. The replication of this DNP project should be a priority because teachers are on the frontlines and encounter countless opportunities to offer a helping hand within the classroom. Future projects need to be implemented in person, if possible, or via live video conferencing to allow the opportunity to provide feedback to participants. Research has shown that live video conferencing was considered to be a facilitator with the use of online training, because participants were given immediate feedback (Kobak et al., 2013; Kobak et al., 2017). The feasibility of the study was enhanced by the ‘buy-in’ from the superintendents of catholic schools, in addition to the school system’s current focus on mental health in many of the Catholic grade schools. The incorporation of the educational module into new hire training and offering a yearly mini-refresher course for teachers will support the sustainability.

Though modest improvements were noted in three out of the four categories within the Adapted Theory of Planned Behavior Survey from presurvey to postsurvey, the only statistically significant change before and after the intervention was in the improvement of teachers
perceived behavioral control. Although no policy recommendations can be made, there are several educational recommendations based on a notable finding from this project. Post-intervention, teachers’ perception of ease to provide assistance to students with mental health problems significantly improved. The following educational recommendations have been made, including providing YMHFA web-based trainings for teachers during new hire orientation. In addition to the web-based training, offering yearly in-person YMHFA refresher training could be beneficial for teachers. These refresher courses may be offered during an in-service or professional development day. A live course would allow for role playing and in-depth discussions amongst colleagues regarding the five-step action plan and various skills pertaining to YMHFA. The notable findings mentioned above could also be used to guide future interventions and research to address the lack of studies on web-based trainings for teachers on mental health and YMHFA.

Limitations

The primary limitations of this DNP project were the small sample size and implementation of the project during the global coronavirus pandemic. There were five total participants, and only three completed all components of the survey, including the demographic, presurvey/postsurvey, and pretest/posttest sections of the survey. Participants were asked to complete all sections of the survey; however, two participants completed only the pretest and posttest components. The timing of project implementation during the COVID-19 pandemic may have contributed to this challenge in survey completion and survey fatigue or technological difficulties could also explain this finding. The project may have also been limited because all the participants were exclusively female and Caucasian. A repeat of the project with a larger
sample size and varying demographic characteristics would allow the findings to be more
generalizable in the future.

Conclusion

The purpose of this DNP project was to implement an evidence-based, web-based
educational module to improve the knowledge, attitudes, and behaviors of teachers regarding
mental health and Adapted YMHFA. Findings did not display a statistically significant change in
teachers’ knowledge post intervention which is likely because of the small sample size and high
levels of knowledge prior to the intervention. Though minimal improvements were noted in three
out of the four categories from pre to postsurvey, statistically significant improvement was noted
in teachers perceived behavioral control following the educational intervention. Participant
feedback from one of the teachers regarding the web-based educational module was positive
demonstrating that the intervention was beneficial. With this being the first known quasi-
experiment on YMHFA web-based trainings within school settings, this project will hopefully
set a precedent for future research, because teachers are in a prime position to positively impact
students’ lives, especially those who may be suffering in silence.
References


https://www.americashealthrankings.org/explore/annual/measure/mental_distress/state/KY


https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health
Table 1.

*Descriptive Summary of Study Variables*

<table>
<thead>
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<th>Demographic Variable</th>
<th>n (%)</th>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
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<tr>
<td>Male</td>
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</tr>
<tr>
<td>Female</td>
<td>3 (100%)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
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</tr>
<tr>
<td>White/Caucasian</td>
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<tr>
<td><strong>Grade Levels Taught</strong></td>
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</tr>
<tr>
<td>6th Grade</td>
<td>2 (66.7%)</td>
</tr>
<tr>
<td>7th Grade</td>
<td>3 (100%)</td>
</tr>
<tr>
<td>8th Grade</td>
<td>2 (66.7%)</td>
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### Table 2.

**Comparison of Pre and Post-Survey by Independent Samples T-test**

<table>
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<th>Belief Statements</th>
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<th>Mean (SD) Post-Survey</th>
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<th>Z</th>
</tr>
</thead>
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<td><strong>Attitudes</strong></td>
<td>1 – 5</td>
<td>4.00 (1.05)</td>
<td>4.33 (.47)</td>
<td>.21</td>
<td>.80</td>
</tr>
<tr>
<td>I believe that individuals with mental health problems are generally easy to talk with.</td>
<td>1 - 5</td>
<td>2.67 (.47)</td>
<td>4.00 (.00)</td>
<td>&lt;.01</td>
<td>2.41</td>
</tr>
<tr>
<td>I believe that individuals with mental health problems are generally dangerous</td>
<td>5 - 1</td>
<td>5.00 (.00)</td>
<td>4.67 (.47)</td>
<td>.19</td>
<td>.89</td>
</tr>
<tr>
<td>I believe that individuals with mental health problems generally get better with treatment.</td>
<td>1 - 5</td>
<td>4.33 (.47)</td>
<td>4.33 (.47)</td>
<td>.50</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Subjective Norms</strong></td>
<td>1 – 5</td>
<td>4.50 (.76)</td>
<td>4.67 (.47)</td>
<td>.27</td>
<td>.61</td>
</tr>
<tr>
<td>Most people who are important to me think that I should encourage an individual experiencing a mental health crisis to seek professional help.</td>
<td>1 - 5</td>
<td>4.67 (.47)</td>
<td>4.67 (.47)</td>
<td>.50</td>
<td>.00</td>
</tr>
<tr>
<td>Most people who are important to me think that I should ask an individual directly about suicidal thoughts or harm if they are potentially experiencing a mental health crisis.</td>
<td>1 - 5</td>
<td>4.00 (1.00)</td>
<td>4.33 (.47)</td>
<td>.32</td>
<td>.46</td>
</tr>
<tr>
<td>Most people who are important to me think that I should listen non-judgmentally to an individual about their mental health problem(s).</td>
<td>1 - 5</td>
<td>5.00 (.00)</td>
<td>5.00 (.00)</td>
<td>.50</td>
<td>.00</td>
</tr>
<tr>
<td>Most people who are important to me think that I should provide resources, such as, self-help information or crisis hotline information, to an individual experiencing a mental health problem(s).</td>
<td>1 - 5</td>
<td>4.33 (1.15)</td>
<td>4.67 (.47)</td>
<td>.34</td>
<td>.42</td>
</tr>
<tr>
<td><strong>Perceived Behavioral Control</strong></td>
<td>1 – 5</td>
<td>4.67 (.47)</td>
<td>5.00 (.00)</td>
<td>.03</td>
<td>1.86</td>
</tr>
<tr>
<td>I would talk to an individual about their mental health problem(s) if the person was open to talking to me about the problem.</td>
<td>1 - 5</td>
<td>4.67 (.47)</td>
<td>5.00 (.00)</td>
<td>.19</td>
<td>.89</td>
</tr>
<tr>
<td>I would encourage an individual experiencing a mental health problem(s) to utilize self-help strategies if I knew strategies to recommend.</td>
<td>1 - 5</td>
<td>4.67 (.47)</td>
<td>5.00 (.00)</td>
<td>.19</td>
<td>.89</td>
</tr>
<tr>
<td>I would approach an individual with a mental health problem(s) if I had the knowledge to talk to them about their problems.</td>
<td>1 - 5</td>
<td>4.67 (.47)</td>
<td>5.00 (.00)</td>
<td>.19</td>
<td>.89</td>
</tr>
<tr>
<td><strong>Intentions</strong></td>
<td>1 – 5</td>
<td>4.33 (.47)</td>
<td>4.67 (.47)</td>
<td>.26</td>
<td>.65</td>
</tr>
<tr>
<td>How likely are you to enroll and complete the formal Youth Mental Health First Aid Training Program within the next year?</td>
<td>1 - 5</td>
<td>4.33 (.47)</td>
<td>4.67 (.47)</td>
<td>.26</td>
<td>.65</td>
</tr>
</tbody>
</table>
Table 3.

Comparison of Pre and Post-Test by Independent Samples T-test

<table>
<thead>
<tr>
<th>True False Questions</th>
<th>n (%) Number Correct Pre-Test</th>
<th>n (%) Number Correct Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 1 in 5 children and adolescents lives with a mental health disorder or mental health challenge.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>2. Youth may display feelings of distress through the expression of anger, increased irritability, or thoughts of worthlessness.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>3. A significant risk factor for youth diagnosed with a mental health disorder is a history of trauma.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>4. You should not ask youth if they are thinking of killing themselves because this may increase their risk for suicide.</td>
<td>4 (80%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>5. Youth under the influence of substances, such as drugs or alcohol, are at increased risk for suicide.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>6. Suicide was the second leading cause of death among individuals between the ages of 10 and 14.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>7. For youth, the most important protective factor is having the presence and involvement of at least one supportive adult in their life.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>8. There is never any warning prior to suicide.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>9. The most frequently diagnosed mental health disorders among children and adolescents are anxiety disorders.</td>
<td>5 (100%)</td>
<td>5 (100%)</td>
</tr>
<tr>
<td>10. The average delay between onset of symptoms and intervention is 8-10 years.</td>
<td>3 (60%)</td>
<td>5 (100%)</td>
</tr>
</tbody>
</table>

Comparison of Pre and Post-Test by Independent Samples T-test

<table>
<thead>
<tr>
<th>time</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
<th>Std Err</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>9.4000</td>
<td>0.5477</td>
<td>0.2449</td>
<td>9.0000</td>
<td>10.0000</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>10.0000</td>
<td>0</td>
<td>0</td>
<td>10.0000</td>
<td>10.0000</td>
</tr>
<tr>
<td>Diff (1-2)</td>
<td>-0.6000</td>
<td>0.4140</td>
<td>0.2777</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method Variances DF t Value Pr > |t|
Pooled Equal 7 -2.16 0.0676
Satterthwaite Unequal 4 -2.45 0.0705
Appendix A: Adapted Theory of Planned Behavior Presurvey Questionnaire

Ethnicity
American Indian
Black/African American
Hispanic/Latino
Native Hawaiian/Pacific Islander
White/Caucasian
Other or Unknown

Gender
Male
Female
Other
Prefer not to answer

Grade level of students
6th grade
7th grade
8th grade

Please answer the following questions pertaining to attitudes and beliefs in relation to mental health.

Q1
I believe that individuals with mental health problems are generally easy to talk with.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q2
I believe that individuals with mental health problems are generally dangerous.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q3
I believe that individuals with mental health problems generally get better with treatment.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q4
Most people who are important to me think that I should encourage an individual experiencing a mental health
Q5
Most people who are important to me think that I should ask an individual directly about suicidal thoughts or harm if they are potentially experiencing a mental health crisis.

Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q6
Most people who are important to me think that I should listen non-judgmentally to an individual about their mental health problem(s).

Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q7
Most people who are important to me think that I should provide resources, such as, self-help information or crisis hotline information, to an individual experiencing a mental health problem(s).

Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q8
I would talk to an individual about their mental health problem(s) if the person was open to talking to me about the problem.

Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q9
I would encourage an individual experiencing a mental health problem(s) to utilize self-help strategies if I knew strategies to recommend.

Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely
Q10
I would approach an individual with a mental health problem(s) if I had the knowledge to talk to them about their problems.
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q11
How likely are you to complete the formal Youth Mental Health First Aid Training Program?
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely
Appendix B: Adapted Youth Mental Health First Aid Pretest

Please answer each of the following pretest questions by selecting true or false.

Q1
1 in 5 children and adolescents lives with a mental health disorder or mental health challenge.
True
False

Q2
Youth may display feelings of distress through the expression of anger, increased irritability, or thoughts of worthlessness.
True
False

Q3
A significant risk factor for youth diagnosed with a mental health disorder is a history of trauma.
True
False

Q4
You should not ask youth if they are thinking of killing themselves because this may increase their risk for suicide.
True
False

Q5
Youth under the influence of substances, such as drugs or alcohol, are at increased risk for suicide.
True
False

Q6
Suicide was the second leading cause of death among individuals between the ages of 10 and 14.
True
False

Q7
For youth, the most important protective factor is having the presence and involvement of at least one supportive adult in their life.
True
False

Q8
There is never any warning prior to suicide.
True
False

Q9
The most frequently diagnosed mental health disorders among children and adolescents are anxiety disorders.
True
False
Q10
The average delay between onset of symptoms and intervention is 8-10 years.
True
False
Appendix C: Adapted Theory of Planned Behavior Postsurvey Questionnaire

Please answer the following questions pertaining to attitudes and beliefs in relation to mental health.

Q1
I believe that individuals with mental health problems are generally easy to talk with.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q2
I believe that individuals with mental health problems are generally dangerous.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q3
I believe that individuals with mental health problems generally get better with treatment.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q4
Most people who are important to me think that I should encourage an individual experiencing a mental health crisis to seek professional help.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q5
Most people who are important to me think that I should ask an individual directly about suicidal thoughts or harm if they are potentially experiencing a mental health crisis.
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q6
Most people who are important to me think that I should listen non-judgmentally to an individual about their mental health problem(s).
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q7
Most people who are important to me think that I should provide resources, such as, self-help information or crisis hotline information, to an individual experiencing a mental health problem(s).
Strongly disagree
Somewhat disagree
Neither agree nor disagree
Somewhat agree
Strongly agree

Q8
I would talk to an individual about their mental health problem(s) if the person was open to talking to me about the problem.
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q9
I would encourage an individual experiencing a mental health problem(s) to utilize self-help strategies if I knew strategies to recommend.
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q10
I would approach an individual with a mental health problem(s) if I had the knowledge to talk to them about their problems.
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q11
How likely are you to complete the formal Youth Mental Health First Aid Training Program?
Extremely unlikely
Somewhat unlikely
Neither likely nor unlikely
Somewhat likely
Extremely likely

Q12
Additional comments:
Appendix D: Adapted Youth Mental Health First Aid Posttest

Please answer each of the following posttest questions by selecting true or false.

Q1
1 in 5 children and adolescents lives with a mental health disorder or mental health challenge.
True
False

Q2
Youth may display feelings of distress through the expression of anger, increased irritability, or thoughts of worthlessness.
True
False

Q3
A significant risk factor for youth diagnosed with a mental health disorder is a history of trauma.
True
False

Q4
You should not ask youth if they are thinking of killing themselves because this may increase their risk for suicide.
True
False

Q5
Youth under the influence of substances, such as drugs or alcohol, are at increased risk for suicide.
True
False

Q6
Suicide was the second leading cause of death among individuals between the ages of 10 and 14.
True
False

Q7
For youth, the most important protective factor is having the presence and involvement of at least one supportive adult in their life.
True
False

Q8
There is never any warning prior to suicide.
True
False

Q9
The most frequently diagnosed mental health disorders among children and adolescents are anxiety disorders.
True
False
Q10
The average delay between onset of symptoms and intervention is 8-10 years.
True
False