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School-Based Suicide Awareness and Prevention Education for Licensed School Personnel

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School-Based Suicide Awareness and Prevention Education for Licensed School Personnel

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Abstract

Background: The numbers of youth at risk for attempting, contemplating, or completing suicide is a significant concern in the Commonwealth of Massachusetts. The Commonwealth has recognized the vital role that school personnel have in suicide prevention, yet training is not mandated due to a lack of funding. Though limited, evidence from the literature written to date has demonstrated improved outcome measures when suicide awareness and prevention training is implemented.

Purpose: This DNP project aimed to reduce the gap in practice by providing in-person suicide awareness and prevention education to nurses of a western Massachusetts school district.

Methods: A 60-minute suicide awareness and prevention presentation was developed and presented. Using a pre/post survey, participants' previous experiences, knowledge and attitudes about suicide, as well as level of confidence in identifying and responding to youth at risk were assessed. Descriptive statistics were used to determine whether the intervention was successful.

Results: Seventeen school nurses attended the presentation. The results of the pre/post survey suggested an improvement in knowledge and attitudes about suicide, as well as an increase in level of confidence in identifying and interacting with youth at risk for suicide. School nurses also demonstrated more knowledge of resources for referral.

Conclusion: School personnel are in a unique position to identify and assist youth at risk for suicide and suicide prevention education is necessary in providing school personnel with the knowledge and skills needed to address this issue.

Keywords: *suicide training, school, suicide prevention and awareness*

School-Based Suicide Awareness and Prevention Education for Licensed School Personnel

Introduction

Suicide in children and adolescents is a rising concern in the United States. The 2017 Youth Risk Behaviors Survey reported suicide as the third leading cause of death for individuals between the ages of ten and twenty-four (Centers for Disease Control and Prevention [CDC], 2018). Furthermore, the number of youth who attempt and or contemplate suicide is even greater, with 17% of high school students having seriously considered suicide, 13% having created a plan, and 8% having attempted suicide (CDC, 2018). School personnel play an invaluable role in the identification and prevention of suicide, in that they have daily interactions and build relationships with students. Moreover, students are often encouraged to seek help from teachers, school nurses, or other trusted adults in times of distress. Federal initiatives have recognized the importance of suicide prevention in schools and primary care settings for children and adolescents, yet funding for these programs is not always available (Shannonhouse, Lin, Shaw, & Porter, 2017).

Problem Statement

There is growing evidence to support the need and importance of necessary suicide training for educators and providers. Risk of not identifying and referring students at risk for suicide is indicated by data citing suicide as the third leading cause of death in individuals between the ages of 10 and 24, with 17% of high school students having seriously contemplated suicide, 13% having created a plan, and 8% having attempted suicide. This risk can result from a lack of suicide training for licensed school personnel, which include teachers, counselors, and school nurses. Massachusetts has identified suicide training as a priority, recommending at least

two hours of training for each school entity, however lack of funding has served as a barrier to the facilitation of the initiative in many school districts. Therefore, a Doctorate of Nursing Practice (DNP) Educational Intervention Quality Improvement project was created for the purpose of providing suicide awareness and prevention education to school nurses, to increase awareness and knowledge of suicide, and to appropriately intervene with students identified as at risk.

Background

Suicide is one of the leading causes of death in youth, particularly those between the ages of ten and twenty-four (CDC, 2018). Rates of suicidal ideation and suicide attempts in teens in Massachusetts are similar to the national statistics previously noted. In the 2015 Massachusetts Youth Risk Behavior Survey (MA YRBS), 15% of high school students reported having seriously contemplated suicide within the past year, with seven percent having made a suicide attempt, many of which required medical attention (Massachusetts Department of Public Health, 2017). As such, suicide among youth is a major public health concern. In an attempt to address this concern, the Commonwealth of Massachusetts has called for all public and charter schools to provide at least two hours of suicide prevention and awareness training within the existing professional development framework to licensed school personnel every three years (Department of Elementary and Secondary Education [DESE], 2019). However, due to a lack of funding, the training is not required, or even offered, in all school districts (DESE, 2019).

School nurses are in a unique position to identify and refer youth at risk for suicide as they have daily interactions with students that assist them in recognizing changes that might indicate risk. Additionally, school nurses play a vital role in community health via health promotion and prevention, focusing not only physical health, but mental health and emotional

and social needs as well (National Association of School Nurses [NASN], 2016). Children and adolescents spend a majority of their time in school, and as such schools are considered a primary care setting (Shannonhouse et al., 2017). The Massachusetts Coalition for Suicide Prevention (MCSP) (2015) called for the education of providers in primary care settings, as well as education and training for groups and communities on suicide risk, protective factors, warning signs, and available resources, yet school nurses are not receiving this crucial education.

While lack of funding prevents this training from being required, other factors prevent it from being implemented. The MCSP (2015) collected data from a number of sources to identify what needed to be improved upon in the state's suicide prevention plan. Common themes that emerged that might hinder the implementation of school-based suicide prevention training for school personnel include the belief that suicide is not preventable, as well as the stigma associated with suicide and mental health disorders. On the contrary, the information gathered also identified the importance of increased suicide awareness and prevention in the communities and its integral role going forward in the state's plan (MCSP, 2015).

Review of the Literature

A search for relevant literature was performed. Using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database, the key term "suicide prevention in schools" was searched with no limitations, which yielded 137 results. The results were then limited to display only the literature published within the past ten years, from 2008 to 2018, which resulted in 89 articles. After a brief review of the results, it was decided that the search terms needed to be adjusted to accurately reflect the topic being searched. The key terms "suicide intervention training" and "school" were searched, with results limited to publications within the past ten years, which yielded only five articles. Removal of the word "intervention" in the search

expanded the number of results, with 23 relevant articles available for review. Articles that included students as subjects of the studies were excluded.

After reviewing abstracts, six articles were selected for further review based on their relevance to this project. They were then rated and graded for their strength and quality of the evidence using the Johns Hopkins Nursing Evidence-based Practice Rating Scale (Newhouse, Dearholt, Poe, Pugh, & White, 2005). The six articles reviewed included one framework for evidence-based practice, one exploratory study, one descriptive study, one pre-test/post-test open trial study, and two quasi-experimental studies.

In their framework for evidence-based school suicide prevention, Singer, Erbacher, & Rosen (2018) discussed the three levels of suicide prevention programs that exist within the context of public health and the education system. Universal, or Tier 1, programs address all students whether they are considered at risk or not and are recommended for all school personnel. Selected, or Tier 2, programs are aimed at identifying and supporting youth at risk for suicide. Tier 2 programs should be provided to school personnel and administrators who are responsible for crisis preparedness and response, specifically school counselors, school psychologists, and school social workers. Indicated, or Tier 3, programs focus on suicide intervention and response (Singer et al., 2018).

Several studies have been conducted in an attempt to address the need for suicide prevention in schools and provide guidance in selecting an effective program. While a variety of suicide intervention training programs exist, many of the studies reviewed aimed to assess the same or similar measures which include attitudes and beliefs towards suicide and suicide training (Lamis, Underwood, & D'Amore, 2017; Shannonhouse et al., 2017; Gryglewicz et al., 2017; Tompkins, Witt, & Abraibesh, 2010); self-efficacy in responding to a suicidal youth following

training (Lamis et al., 2017; Shannonhouse et al., 2017; Walsh, Hooven, & Kronick, 2013); factors that might affect training effectiveness (Lamis et al., 2017; Tompkins et al., 2010); and school staff's previous experiences with students at risk for suicide (Walsh et al., 2013). These demonstrate the intended outcomes for trainings and the assessment of factors that might contribute to a program's success.

A number of studies have been conducted on several different suicide training programs for school staff. Tompkins et al. (2010) evaluated the effectiveness of the Question, Persuade, Refer (QPR) gatekeeper training program for school staff in a rural school district in the Pacific Northwest using a non-equivalent control group design (level II, B). Seventy-eight participants attended the hour-long training program, which was found to have positive effects on all outcome measures, including knowledge of the QPR method, the understanding of suicide as being preventable, and a self-evaluation of knowledge about suicide, though the study was limited by its design.

A second pre-test/post-test open trial study (level III, B) explored the effects of an online version of the QPR training on the abilities of mental health professionals to assess and treat individuals at risk for suicide (Gryglewicz, Chen, Romero, Karver, & Witmeier, 2017). In contrast to the previously mentioned study by Tompkins et al. (2010), the online training, which took about eight to twelve hours to complete, was completed by 225 mental health professionals who worked with youths and were not exclusively school personnel. Improved suicide literacy in five of the nine knowledge subdomains was found as a result of the training based on participants' post-test scores, though the study was limited by the lack of a control group (Gryglewicz et al., 2017). Singer et al. (2018) recommended QPR training for non-health care school personnel, noting that

this training has been shown to positively affect participants' readiness to help youth at risk for suicide in their suicide prevention practice guidelines for schools.

Other training programs are more intensive, such as the Applied Suicide Intervention Skills Training (ASIST), which consists of a two-day, fourteen-hour training. Shannonhouse et al. (2017) performed a quasi-experimental study (level II, B) on the effects of the ASIST program for school personnel in both elementary and secondary schools. One hundred and four participants completed the training, while 45 participants were placed on a wait list. Based on pre-test and post-test results, it was found that the training had positive effects on all outcome measures: suicide intervention skills, self-perceived attitudes towards suicide, self-perceived knowledge of suicide, and self-perceived knowledge, comfort, and competence in responding to a person at risk for suicide (Shannonhouse et al., 2017). Singer et al. (2018) suggested this training be offered to school mental health providers.

It is also plausible to implement a more individualized training program based on the specific needs of the attendees. Walsh et al. (2013) studied the effects of a specially designed training program for high school personnel from five high schools in one school district. In this level III B exploratory study, 237 participants attended a 90-minute program and completed surveys immediately prior to and at the end of the training. The results indicated that the training had positive effects on all measures including: a 13% increase in comfort asking a youth about suicide risk; 19% increase in the likeliness of asking a youth about suicide risk; a 30% increase in comfort level of checking in with youth regarding feelings; and a 14% increase in confidence in one's ability to check in with youth. Lamis et al. (2017) examined the effects of an online training program that is available for school personnel needing to complete mandated suicide training called the Act on Facts: Making Educators Partners in Youth Suicide Prevention (MEP

training). This level III B descriptive study used pre- and post-test scores of 700 participants who completed the MEP training and found that the training positively increased suicide knowledge, attitudes, and self-efficacy (Lamis et al., 2017).

While all of the training programs reviewed were shown to improve outcome measures, it is important to select a training that is accessible and feasible. Some studies utilized live trainings, while others evaluated online trainings. Online trainings were found to have high satisfaction ratings, with users identifying the training as engaging (Gryglewicz et al., 2017; Lamis et al., 2017). Gryglewicz et al. (2017) also noted that many users appreciated the convenience of the online format and felt comfortable with this training modality. Web-based programs can potentially increase the accessibility of suicide trainings for school personnel.

Much of the literature was hindered by the same limitations. Most importantly, none of the studies employed randomization in their designs. Additionally, the potential for “self-selection bias” may have limited the results in that individuals were interested and invested in the training they received (Gryglewicz et al., 2017; Shannonhouse et al., 2017; Walsh et al., 2013). Another common limitation was the lack of a control group for which to compare results (Gryglewicz et al., 2017; Lamis et al., 2017). Incomplete pre- and post-tests also limited the data that could be collected in one of the studies (Walsh et al., 2013). While all of the studies showed gains in knowledge, it remains unclear whether some of the interventions affected participants’ actual skills in assessing, identifying, and intervening with youths at risk for suicide (Lamis et al., 2017; Tompkins et al., 2010). It is important to take these limitations into account when identifying the best possible intervention.

Theoretical Framework/Evidence-Based Practice Model

In an attempt to address suicide within the military, the Department of Defense funded a study by RAND, a nonprofit research organization, to examine existing gatekeeper trainings. The researchers drew upon Bandura's social cognitive theory to develop a conceptual model to look at the connections between suicide training and suicide prevention behaviors, such as asking about suicide. The model postulates that there are four factors that may influence an individual's capacity to respond to someone at risk for suicide. The four factors include knowledge about suicide, beliefs and attitudes regarding prevention, reluctance/stigma, and self-efficacy to intervene. The influence of personal factors, as well as environmental factors, are also considered in this model (Burnette, Ramchand, & Ayer, 2015) (see Appendix A).

Methods

Goals, Objectives and Expected Outcomes

The goal of this project was to provide school-based suicide awareness and prevention education to school nurses in a western Massachusetts school district to increase suicide awareness and prevention. The objectives of this project were:

1. To offer two 60 minute in-person educational presentations in November and December 2019 to school nurses during regularly scheduled monthly meetings, with participation in one expected.
2. Assess the effectiveness of the training on three outcome measures: knowledge of suicide, level of confidence in identifying and responding to youths at risk for suicide, and attitude about suicide.

The expected outcomes for this project were:

1. 100% of school nurses would complete the training
2. Participants would demonstrate a 25% increase in knowledge of suicide, risk factors, warning signs, and protective factors, as well as resources
3. Improvement in attitudes and beliefs towards suicide
4. Increase in self-efficacy in identifying and interacting with at-risk youth.

Project Site and Population

This educational intervention quality improvement project took place in a western Massachusetts school district, which serves approximately 8,000 students in nine elementary schools, two middle schools, two high schools, and one alternative school. At present, there are about 800 teachers and seventeen school nurses employed in the district, none of whom receive suicide awareness and prevention training, despite recommendation by the Commonwealth of Massachusetts. Key stakeholders for this project included the district's nursing supervisor, as well as the assistant superintendent of student support services. These administrators recognized the importance of students' mental health needs and the role that school personnel play in supporting students. Much focus had been placed on mental health throughout the district and there was a genuine interest within the population in how to better serve youth with mental health needs. This was evident by the development of a mental health task force comprised of school nurses, counselors, teachers, and administrators within the district, as well as numerous services and interventions implemented within the school district that emphasized the importance of mental health care. Collaboration with these stakeholders was necessary to ensure that the material covered in the education was congruent with district policies and protocols.

Measurement Instruments

In order to measure the outcomes of this DNP project, a pre-/post survey was created by this DNP student to collect quantitative data. This tool was developed with guidance from the Suicide Prevention Resource Center (SPRC) (2015) report that outlined recommendations for evaluation of suicide prevention programs, as well as the *RAND Suicide Prevention Program Evaluation Toolkit* (Acosta, Ramchand, Becker, Felton, & Kofner, 2013). The survey included four demographic questions related to participants' role, previous participation in suicide awareness and prevention programs, previous experience in identifying a student as at risk for suicide, and familiarity with resources. Using a five-point Likert scale rating system, participants were asked to specify their level of agreement with four statements related to level of confidence in identifying and interacting with youth at risk for suicide and three questions related to perceptions of mental health and treatment. Finally, the pre-/post survey measured participants' knowledge about suicide via eight true or false questions (see Appendix B).

Project Design

The Educational Intervention Quality Improvement Project was implemented to increase suicide awareness and prevention for nurses employed in a large western Massachusetts school district. The project also aimed to improve the identification of and response to youths at risk for suicide. Quantitative data was collected to determine the effectiveness of the intervention.

Based on the recommendations of Singer et al. (2018) in their framework for evidence-based suicide prevention in schools, a Tier 1 gatekeeper training was developed. The educational program was created using the *Preventing Suicide: A Toolkit for High Schools* (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012) as a guide and

included information to assist in identifying youth at risk for suicide, including risk factors, protective factors, and warning signs, as well as suggestions for how to respond to youth identified as at-risk and tips for building resilience. Information regarding local and national resources was also included.

The educational training program occurred in the fall 2019 school year, with in-person education offered to school nurses at the monthly afterschool nursing meeting in November 2019, with a second presentation scheduled in December 2019 in the event of any absences (see Appendix C). The presentation was held in the designated meeting space at one of the high schools in the district. Participants were given ten minutes at the start of the 60-minute meeting to complete the pre-survey and collect printed copies of the PowerPoint presentation. Pre-surveys were then collected prior to starting the presentation. A 40-minute oral PowerPoint presentation was provided highlighting the aforementioned topics. Upon completion of the presentation, participants were asked to complete the post-survey, which was attached at the end of the presentation handout. These post-surveys were then collected as participants exited the meeting. A text copy of the presentation was given to the district's nursing supervisor so that it could be shared with new nurses who might enter the district.

Additionally, it was intended that this education be available online for other licensed school personnel, such as teachers and counselors, who might be interested in it. The presentation would have been available via the district's health resources page for staff with professional development credits offered to those who completed the training. However, due to a technological issue that was present in the district's intranet, it was not able to be included in this project at this time.

The pre-survey was administered in person to seventeen school nurses immediately prior to implementation of the training at the nursing meeting in November 2019 and collected shortly thereafter. Upon completion of the presentation, the school nurses completed the post survey, which was identical to the pre-survey, that was included at the end of the presentation handout. As previously mentioned, the pre- and post-surveys measured attitudes and knowledge about suicide, as well as participants' level of confidence in interacting with youth at risk for suicide.

There is literature to support the use of Microsoft Excel 2010 in statistical analysis (Acosta et al., 2013). Based on the nature of the data collected and the type of data analysis (i.e. descriptive analyses, changes in pre- and post-test data), it was feasible to use Microsoft Excel 2010. Descriptive statistics were used to describe characteristics of the participants and descriptive data regarding outcome measures.

Ethical Considerations/Protection of Human Rights

The University of Massachusetts, Amherst (UMass) Internal Review Board (IRB) approval was obtained prior to initiating the DNP Project. Written approval to implement this project was obtained from the school district's nursing supervisor. The human subjects participating in this program were school nurses in the district. No student records were accessed or analyzed as a part of this project. The surveys did not include any identifying information, and data was stored in a file folder at this writer's home and on this writer's personal, password protected computer.

Results

This project was completed fall of 2019 at a large western Massachusetts school district and consisted of providing in-person suicide awareness and prevention education to school

nurses. Seventeen (n=17) school nurses, all of whom were female, participated in the educational project, which accounted for 100% of the district's school nurses employed at the time of implementation. Based on pre-survey data, about 70% (n=12) of participants had previously participated in a suicide awareness and/or prevention program and 65% (n=11) had previously identified a youth at risk for suicide. Prior to the presentation, 71% (n=12) of participants were familiar with resources to which they could refer youth at risk for suicide to versus 88% (n=15) upon completion of the presentation.

Results of the pre-/post-survey yielded several themes. These themes included improvement in level of confidence in identifying and interacting with youth at risk for suicide; improved perceptions of mental health and treatment; as well as an increase in knowledge about suicide. These three themes are discussed in subsequent paragraphs within the results section.

Level of Confidence

In examining participants' levels of confidence in identifying and interacting with youth at risk for suicide, 82% (n=14) agreed or strongly agreed they felt confident that they could identify warning signs prior to the presentation, while 94% (n=16) of participants agreed or strongly agreed they felt confident in identifying warning signs after the presentation. In regards to feeling confident in asking whether a student was thinking about suicide if displaying warning signs prior to the presentation, 35% (n=6) strongly agreed, 47% (n=8) agreed, and 18% (n=3) were neutral, compared to 65% (n=11) strongly agreed and 35% (n=6) agreed at the conclusion of the presentation. Additionally, 94% (n=16) of participants strongly agreed or agreed they felt confident in referring a student at risk for suicide to an appropriate resource prior to the presentation, while 100% (n=17) felt confident upon completion of the presentation. See Tables 1 and 2 below as they outline participants' pre-survey and post-survey responses.

Table 1

Level of Confidence in Identifying and Interacting with Youth at Risk for Suicide

Pre Intervention Survey Results

<u>Question</u>	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
I can recognize the warning signs of students at risk for suicide	0	0	3	14	0
I am familiar with risk factors for suicide	0	0	1	15	1
I would directly ask a student about thoughts of suicide if showing warning signs	0	0	3	8	6
I would refer a student at risk for suicide to an appropriate resource	0	0	1	10	6

Table 2

Level of Confidence in Identifying and Interacting with Youth at Risk for Suicide

Post Intervention Survey Results

<u>Question</u>	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>
I can recognize the warning signs of students at risk for suicide	0	0	1	12	4
I am familiar with risk factors for suicide	0	0	1	12	4
I would directly ask a student about thoughts of suicide if showing warning signs	0	0	0	6	11
I would refer a student at risk for suicide to an appropriate resource	0	0	0	5	12

Perception of Mental Health and Treatment

Attitudes towards suicide and mental health treatment were also assessed and analyzed before and after the presentation. Prior to the presentation 88% (n=15) of participants strongly disagreed that treatment for suicidal thinking was a sign of weakness and that they would think less of an individual if they were aware they had received treatment for suicidal thoughts, compared to 94% (n=16) after the training. Additionally, 76% (n=13) of participants strongly disagreed that individuals should keep treatment for suicidal thoughts private both prior to and upon completion of the presentation. Interestingly, one participant was neutral to this question after the presentation, while none responded neutral prior to the presentation. The results of this section are presented in Tables 3 and 4 below.

Table 3

<i>Attitude and Perception of Mental Health and Treatment</i>					
Pre Intervention Survey Results					
<u>Question</u>	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
I think treatment for suicidal thinking is a sign of weakness	0	0	0	2	15
I would think less of an individual/student if I was aware they received treatment for suicidal thoughts	0	0	0	2	15
I think it is best for individuals to keep treatment for suicidal thoughts private	0	0	0	4	13

Table 4

Attitude and Perception of Mental Health and Treatment

Post Intervention Survey Results

<u>Question</u>	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
I think treatment for suicidal thinking is a sign of weakness	0	0	0	1	16
I would think less of an individual/student if I was aware they received treatment for suicidal thoughts	0	0	0	1	16
I think it is best for individuals to keep treatment for suicidal thoughts private	0	0	1	3	13

Knowledge About Suicide

Finally, participants were assessed on their knowledge about suicide using eight true or false questions on facts versus myths about suicide. The average score of those eight questions was 88% on the pre-survey versus 94% on the post-survey, demonstrating a six percent increase.

Discussion

The RAND conceptual model of gatekeeping was used to guide this DNP project, in that the model identified the influence that both personal and environmental characteristics can have on effective implementation of suicide prevention training and one's decisions to intervene with a person at risk for suicide (Burnette, Ramchand, & Ayer, 2015). When creating the school-based suicide training, it was necessary to consider the culture of the school district, as well as examine the facilitators and barriers to its implementation. Another factor that was considered was job role, as this could also influence one's knowledge and attitudes about suicide, as well as past experiences working with individuals at risk (Walsh et al., 2017). This guided the project in

that the education was provided based on the role of the target audience. School nurses received a more in-depth training that included more information regarding local resources and referral agencies that can assist once a student is identified as at-risk than would have been provided if teachers had been included in this project. Finally, the training itself included information and evaluation of the four factors identified as having influence on one's ability to identify and respond to an individual at risk for suicide, those being: knowledge about suicide, beliefs and attitudes about suicide and suicide prevention, reluctance/stigma, and self-efficacy to intervene (Burnette et al., 2015).

The review of the literature demonstrated support for the development and implementation of suicide prevention and awareness training for school nurses, and while a variety of suicide intervention training programs exist, many of the studies reviewed aimed to assess the same or similar measures. These measures, which included attitudes and beliefs towards suicide and suicide training, knowledge about suicide, and self-efficacy or level of confidence in identifying and interacting with students at risk, guided the educational material that was developed for the purpose of this project. The results presented above reflect those that were emphasized in the literature and show an overall increase in knowledge of suicide, including warning signs, protective factors, and resources; an improvement in attitudes towards suicide and mental health treatment; as well as an increase in level of confidence in identifying and interacting with youth at risk for suicide.

One of the expected outcomes of this DNP project was an increase in self-efficacy in identifying and interacting with youths at risk for suicide, which was met. Perhaps of greatest importance, there was an 85% increase in participants who strongly agreed that they felt confident in asking a student about thoughts of suicide if showing warning signs or a 25%

increase in those who strongly agreed and agreed. This surpassed the data presented in other studies, which showed increases of nineteen percent in likelihood of asking about suicide and thirteen percent in asking about suicide risk (Walsh et al., 2013). This topic was emphasized in the presentation as an important measure in suicide prevention.

On the contrary, the expected outcome of a 25% increase in knowledge about suicide was not met. This could be related to previous participation in a different suicide awareness and prevention program prior to the training, which resulted in an existing knowledge about suicide. The inclusion of other licensed school personnel, such as teachers, could have potentially resulted in greater gains in knowledge about suicide, which were seen in the literature.

In implementing this project, it was important to select a training that was accessible and feasible. Some studies reviewed prior to implementation utilized pre-existing live trainings, others evaluated online trainings, and others evaluated trainings that were developed specifically for an individual site or population. The use of an independently designed educational presentation for this DNP project was a cost-effective decision, however use of a standardized training, such as ASIST or QPR could have produced different results.

Additionally, while no formal program evaluation was used for this project, many of the nurses provided verbal feedback, noting that they felt the presentation was beneficial. This positive feedback reinforced the need to have the training available for future use with school nurses, as well as potentially extend it to other licensed school personnel, such as teachers and counselors.

One barrier that was encountered during the implementation of this project was a change in district policy and procedure related to response when a student was identified as at risk for

suicide. This was in part due to a change in personnel that occurred between the time that contact had been initiated with the site and project implementation. While this did not greatly affect the project, it would have been beneficial to include this information in the educational presentation so as to remain consistent, as well as reinforce the policy.

Conclusion

Suicide is a significant concern for children and adolescents and is a preventable public health concern. Children and adolescents spend a majority of their time at school and in the presence of school personnel, even outside of regular school hours. It is imperative that these school personnel are adequately trained on suicide awareness and prevention, so as to better identify youth potentially at risk and respond appropriately. While the evidence supporting such training programs is limited, the value of improving suicide awareness and knowledge, as well as skills, is apparent.

The implementation of a suicide awareness and prevention program for school nurses resulted in an increase of knowledge and confidence when working with and responding to youth who are at risk for suicide. While this education was successfully implemented with school nurses, it might be even more beneficial if all licensed school personnel, such as teachers and counselors, could receive a similar training. It has been found that web-based programs can potentially increase the accessibility of suicide awareness and prevention trainings for school personnel. With this in mind, an online version of the training could be created in the future for teachers and guidance counselors, as this would increase accessibility and likelihood of participation. Additionally, this project could be implemented in other Massachusetts school districts.

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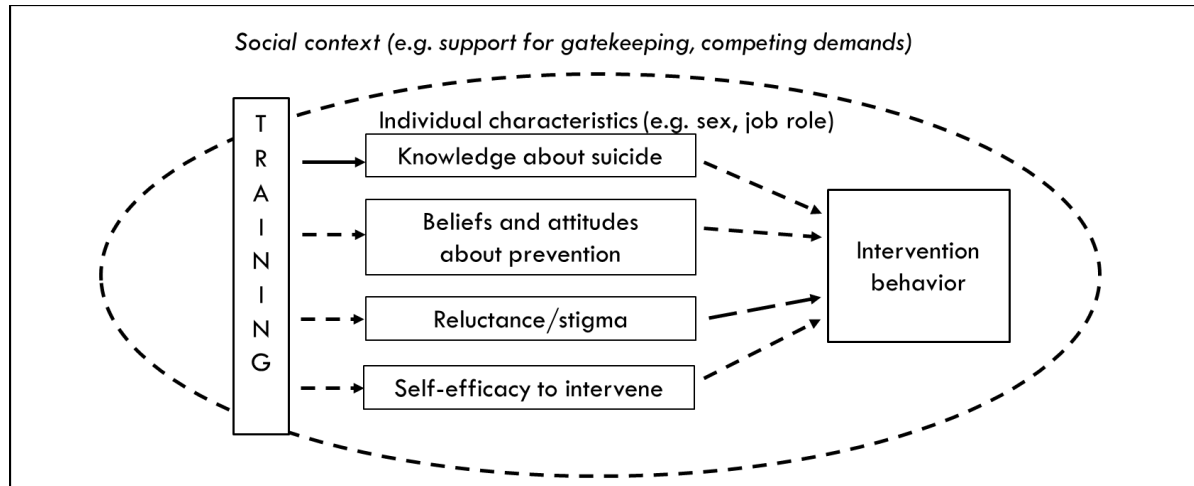
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Appendix A

Conceptual Model of Gatekeeping



(Burnette, Ramchand, & Ayer, 2015)

Appendix B

Pre-/Post-Intervention Survey

1. Please describe your current role:

☐ School nurse

☐ Guidance counselor

☐ Teacher

2. Have you previously participated in any suicide prevention and awareness programs?

☐ Yes

☐ No

☐ Don't know

If yes, which program: _____

3. Have you ever identified a student at risk for suicide?

☐ Yes

☐ No

4. Are you familiar with any resources to which you could refer a student?

☐ Yes

☐ No

If yes, please list: _____

5. Please rate your level of confidence in identifying and interacting with youth at risk for suicide.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I can recognize the warning signs of students at risk for suicide					
b. I am familiar with risk factors for suicide					
c. I would directly ask a student about thoughts of suicide if showing warning signs					
d. I would refer a student at risk for suicide to an appropriate resource					

6. Please rate your perception of mental health and treatment.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. I think treatment for suicidal thinking is a sign of weakness					
b. I would think less of an individual/student if I was aware they received treatment for suicidal thoughts					
c. I think it is best for individuals to keep treatment for suicidal thoughts private					

7. The following statements are facts and myths regarding suicide. Please select whether you think the statement is true or false.

	True	False
a. Suicide only affects individuals with a mental illness.		
b. Most suicides happen suddenly without warning.		
c. Talking about suicide will lead to or encourage suicide.		
d. Marked or sudden improvement in mental state following an attempt or depressed period signifies that the risk for suicide is over.		
e. Suicide is preventable.		
f. Social isolation is a risk factor for suicide.		
g. People who talk about suicide are seeking attention.		
h. Hopelessness is a warning sign of suicide.		

Appendix C

Timeline

Task	September	October	November	December	January	February	March	April
Proposal approval	X	X						
Data collection			X					
Implementation			X					
Data analysis				X	X	X		
Final Write-Up						X	X	X