School-Based Suicide Prevention Program Implementation: Improving Awareness among Parents and Faculty

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Abstract

The health development and critical transition period of preteen to adolescence are subject to adverse experiences and prevalent risk behaviors that may negatively influence mental health. Emerging issues of depression and suicide among school-aged youths present a global epidemic. Well-designed interventions, such as school-based programs, align with national strategies and health initiatives to reduce suicide rates and facilitate treatment of concerning symptoms.

Database searches for school-based, suicide, depression, prevention, and screening literature from 2012-2017 identified 12 relevant studies selected for review. Mental wellness and suicide prevention curricula must successfully improve wisdom, enhance coping skills/resilience, and foster relationships which support help-seeking behavior and provide intervention services. Health promotion, mental health assessment, and subsequent treatment addressing elements of suicidal ideation and self-harm are critical to plan design. Research findings continue to emphasize the need for validated effective prevention programs and additional research. Adopting ongoing intervention strategies is necessary to prevent further disparity. Innovative approaches to care possess significant value in addressing the dynamic health needs of adolescents suffering from depression and suicide.
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School-Based Suicide Prevention Program Implementation:
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Section II: Introduction

Every four hours one adolescent, or 2,061 youths each year die due to suicide (CDC, 2017). An estimated 3 million adolescents in the United States had at least one major depressive episode in the past year (NIH, 2015). Suicide is the second leading cause of death among 15 to 19-year-olds (CDC, 2016). It is imperative that we move beyond recognition, and act to prevent the devastating problem of teen suicide. The National Strategy for Suicide Prevention calls for interventions which (a) foster a positive public dialogue, (b) address the needs of vulnerable groups with programs tailored to culture and context, (c) coordinate and integrate suicide prevention with existing health efforts, and (d) promote changes in systems, policies, and environments that will facilitate prevention of suicide (DHHS, 2012). The grave nature of this problem combined with evidence-based research illuminates a pressing need for systems-level change to increase surveillance, integrate prevention, and transform mental health care among the generation of our future. In adolescent youths who experience major depressive episodes, does a school-based suicide prevention program decrease the rate of suicide?

Problem Description

Costs associated with self-harm hospitalization and suicide deaths among youths age 15-19 are estimated be to $1.17 billion and $2.94 billion, respectively (CDC, 2014). Recent increases in the prevalence of having considered suicide seriously combined with lack of decrease in suicide attempts illustrate concerning health-risk behavior trends among U.S. high school students in the last ten years (Lowry, Crosby, Brener, & Kann, 2014). The rise in bullying, peer-victimization, and social media pressure correlates to depression, suicidal ideation,
and suicide attempts in adolescents (Holt et al., 2015; van Geel, Vedder, Tanilon, 2014). The
U.S. Department of Health and Human Services (2017), initiative Healthy People 2020
establishes improvement objectives to (a) reduce the suicide rate, (b) reduce suicide attempts by
adolescents, (c) reduce the proportion of adolescents age 12 to 17 who experience major
depressive episodes, and (d) increase the proportion of children with mental health problems who
receive treatment. Adolescents maintain a complex social world, have an increased sense of self-
consciousness, and possess demands for privacy thus making genuine communication crucial to
identifying early depressive symptoms and preventing future impairment (Tusaie & Fitzpatrick,
2016). School-based programs which foster help-seeking behaviors and provide intervention
services are crucial to bridging current gaps in care.

Clinical, spiritual, and ethical implications occur in a magnitude of ways for parents,
siblings, peers, and healthcare providers in the aftermath of adolescent suicide; including
changes in emotional closeness and quality of remaining of relationships; (Andriessen, Draper,
Dudley, & Mitchell, 2016; Girard, & Silber, 2011). Adolescent suicide results in widespread
symptoms of traumatic grief and self-blame among on peers and siblings in bereavement (Abbott
can organize long-term support for surviving family members following the devastating trauma
and absence of teen suicide (Lindqvist, Johansson, & Karlsson, 2008). Suicide-exposed
individuals, especially adolescent peers, are at elevated risk for adverse mental health outcomes
making the role of professional healthcare imperative in crisis response (Cerel et al., 2016; Cerel,
Roberts, & Nilsen, 2005). An extended support network of family, friends, and community
endure ramifications of teen depression and suicide.
Nurse leaders play a crucial role in integrating patient-centered care and are essential to cultivating quality health outcomes in all settings, current and future (IOM 2010; IOM 2001). Responsibility towards virtuous judgments, decisions, and actions by the nurse extend to improving standards of practice, safeguarding patients, and raising ethical issues including but not limited to patient interventions or institutional constraint (ANA, 2015). Essential competencies for psychiatric mental health guide nurses to (a) maintain environmental safety, (b) assess, provide intervention, monitor, and re-evaluate outcomes for patients at risk of suicide, (c) develops protocols, policies, and practices consistent with zero suicide, and (d) participates in training for all milieu staff (APNA, 2017). School nurses are uniquely qualified as facilitators of screening, prevention, and treatment of mental health concerns and "serve a vital role in the school community by promoting positive mental health outcomes in students through school/community evidence-based programs and curricula" (Allison, Nativio, Mitchell, Ren, & Yuhasz, 2014).

Available Knowledge

Search Methodology. A rigorous search process involved the following electronic databases: Cochrane Database of Systematic Reviews, Cumulative Index of Nursing and Allied Health Literature (CINAHL Complete), PubMed, and PsycINFO. Through these databases, a search was conducted for both quantitative and qualitative studies. Meaningful peer-reviewed studies dated from 2012-2017 were included. Searches were explicitly limited by age range 13-18 years. Keywords used were school-based, suicide, (prevention or screening). This search yielded 1880 studies and 1663 unique titles. Exclusion criteria eliminated results that were not published in the English language and outside the specified age range. A title and abstract level review yielded 30 studies that were relevant to setting and practice. After assessing the
remaining studies and a full review of the text, 12 were selected for inclusion based on relevance to the aim of this review. For more details on the search process, please see Appendix A for a PRISMA flow diagram. The PRISMA diagram was initially developed for systematic reviews. It has utility in making the search strategy transparent and was thus included to more clearly document the process (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009). The Johns Hopkins Research Evidence Appraisal Tool (2012), was utilized to assess the level of evidence presented in each article. The flexibility of this tool allowed for critical appraisal of multiple methodologies. Selecting appropriate critical appraisal tools, such as the Johns Hopkins Evidence-Based Practice model, provides an optimal path to disseminating research into practice and sustained QI initiatives (Buccheri & Sharifi, 2017; Melnyk & Fineout-Overholt, 2015).

**Systematic Reviews.** To achieve positive outcomes, WHO Health Promoting School framework recommends programs aiming to improve the well-being of students should focus on critical elements impacting mental health (Langford et al., 2014). Research of Youth suicide intervention programs emphasizes the significant role of key community personnel combined with school engagement in advocating for therapeutic interventions (Calear et al., 2016). Programs which (a) enhance coping skills, (b) improve beliefs, and (c) foster supportive relationships such as dialectical behavioral therapy are found to reduce frequency of self-harm, depression, hopelessness and suicidal ideation in adolescents (Hawton, 2015). Evidence endorses gatekeeper training for school staff and screening programs as effective interventions to increase knowledge, improve attitudes, and combat poor help-seeking behaviors (Robinson et al., 2013). The impact of supportive relationships, teen resiliency, health literacy, and help-seeking behaviors are fundamental to depression screening and suicide prevention.
Cost-effectiveness of specific school-based intervention programs and whether they induce harm is a topic of debate (Wei et al., 2015; Robinson et al.). Less cost of treatment due to prevention, cost savings for lost days of work for bereaving families, and cost avoidance of community resources utilized in the aftermath of suicide represent alternative financial considerations for benefit analysis. School-based suicide prevention programs report effectiveness related to indicators of suicidal ideation and self-harm but are limited by measurable power of research findings (Calear et al., 2016). These factors should not restrict program implementation but emphasize the need for translational research and outcomes analysis to serve those in need effectively. Interventions for adolescent mental wellness must include health promotion, mental health assessment, and subsequent treatment (Hawton, 2015; Langford et al., 2014, Robinson et al., 2013). The impact of intervention programs on suicide rates is minimally validated, likely due to the inability to accurately measure suicide-related outcomes (Robinson et al., 2013; Wei et al., 2015). Nonetheless, screening and intervention efforts are of significant value among the adolescent population where signs of depression and suicidal ideation often remain hidden problems.

**Randomized Controlled Design.** According to Perry et al. (2014), mental health literacy, personal stigma, and negative attitudes towards mental illness are critical obstacles preventing adolescents from seeking care. Knowledge-based interventions and focused education are crucial in helping young people overcome these barriers. A five-module resource HeadStrong focusing on mental wellbeing, mood disorders, peer support, resilience, and awareness utilized a classroom-based program. Improved mental health literacy, personal stigma, and views about danger or unpredictability of individuals with mental illness are positive findings from the sample of 380 students in 22 classes from 10 different schools. Future
initiatives with similarly limited time and financial resources can reference the size of this initial trial. Engaging a similar number of adolescents can guide future communities hoping to evaluate the efficacy of depression screening and suicide prevention programs. A correlation between enhanced psychological functioning and reduced suicidal ideation was not validated. Results from this study "highlighted the importance of sustained program delivery, in order to maintain positive effects on knowledge, observe reductions in stigma, and potentially impact upon health seeking-attitudes" (Perry et al., 2014). This outcome aligns with psychiatric mental health nurse competencies of developing and maintaining collaborative and therapeutic relationships and developing an ongoing nursing plan of care based on continuous assessment (APNA, 2017). Thus, it is essential for program implementation to be ongoing consistent, provide knowledge based in the five indicated domains, and engage as many students as possible to achieve beneficial program outcomes.

A school-based suicide prevention program identified at-risk adolescent youth and analyzed the association between extreme negative self-stigma and mental health symptoms (Labouliere, Kleinman, & Gould, 2015). The screening identified a subset of students with extreme views of self-reliance involving negative attitudes about help-seeking and decreased reporting of dangerous mental health symptoms. Engaging all students, especially the most vulnerable and avoidant, is crucial to achieving positive outcomes through screening and prevention programs. Study results found participants with extreme self-reliance had higher depression scores, greater rates of suicidal ideation, and lower odds of seeking support from parents. Program administrators must carefully foster emotional safety and create supportive environments to minimize barriers. Suicide prevention programs must aim to diminish attitudes reinforcing extreme self-reliance and target students with a negative self-stigma who are more
willing to seek support from anonymous electronic sources (Labouliere et al., 2015). Appropriately assessing and modifying the environment in addition to managing personal reactions, attitudes, and beliefs are competencies demonstrated by psychiatric nurses (APNA, 2017). Programs offer a new pathway of behavior and opportunities for connectedness with teenagers who may otherwise remain unreached.

Research by Wasserman et al. (2015), investigated the Youth Aware of Mental Health Programme. This intervention aimed to enhance coping skills and increase awareness about risk/protective factors associated with anxiety, depression, stress, and suicide. The 12-month follow-up measured effective outcomes in preventing new cases of suicide attempts and suicidal ideation. Findings attributed success to (a) improved management of adverse life events or triggers of suicidal behavior and (b) verbal-emotional processing or sharing internalized suicidal behaviors. Intervention programs providing a framework for enhanced resiliency must include tools to increase self-awareness and promote positive self-perception. Student engagement, sustained integration, and disseminating knowledge are crucial because "suicidality is mainly an internal process, many warning signs might be scarcely visible or hidden in adolescents" (Wasserman et al., 2015). The role of nurses and prevention programs must help cultivate a foundation of wellness strategies and meaningful communication techniques for students to utilize when faced with anxiety, depression, stress, and suicide.

The exchange of information and thoughts related to suicide prevention must focus on empowering youth, changing negative perceptions, and promoting health-related behaviors. Through the Sources of Strength program, adolescent peer leaders promote help-seeking practices and model effective coping strategies related to mental health problems. Incorporating additional exercises, where students name supportive trusted adults, strengthens adolescent
engagement and personal involvement in communication (Petrova, Wyman, Schmeelk-Cone, & Pisani, 2015). Consistent with prior research, this study reinforces the useful role of peer leaders and their impact on prevention. The positive influence of role models is required to enhance acceptability, improve help-seeking, and to overcome barriers of social pressure associated with depression and suicide. Future suicide prevention programs and psychiatric mental health nurses serve as an integral platform to help adolescent youth find their voice and be heard.

**Retrospective and Quasi-Experimental Studies.** Substance abuse and school suspensions are known risk factors for suicidal ideation and attempts. Screening and intervention for students with mental health, drug, and alcohol abuse problems through the Student Assistance Program (SAP) included referral services, which demonstrated a statistically significant role in ceasing policy violations (Biddle et al., 2014). This retrospective analysis proposes gaps between program participation, identification of suicidal youth, and referral for services means every student should receive comprehensive assessment and on-going mental health care to moderate suicide risk and adverse educational outcomes. Suicide can effectively be averted by developing positive connections, building protective factors, and addressing psychosocial risk factors through services offered by nurses and school-based program team members (Biddle et al., 2014). In the absence of effective screening and prevention programs, risk factors can lead to life-long consequences. Linking students with resources is necessary to mitigate damaging effects to their future success and health.

Medical students teach the three-hour Adolescent Depression Awareness Program (ADAP) curriculum designed to destigmatize and improve health literacy for, depression and bipolar disorder (Ruble, Leon, Gilley-Hensley, Hess, & Swartz, 2013). Interactive teaching methods involving lectures, videos, and a group project provide various modalities for students
to acquire new knowledge related to identifying symptoms and seeking help. Format and delivery of new information should cater to the learning needs and interests of teenagers.

Ruble et al. (2013), explains participants’ depression literacy more than tripled, and attitudes towards reporting depression concerns shifted away from telling a friend to seeking help from a trusted adult. However, "there were still a concerning 60% of students that do not intend to tell someone about their concerns" (Ruble et al., 2013). Integrating current technologies enables high-school students to gain knowledge through a familiar modality. Adopting innovative approaches to enhance the ease and comfort of sharing mental health concerns should be considered in the future.

Replication and expansion of the Signs of Suicide (SOS) prevention program affirm participants' enhanced knowledge of depression and suicide, including more favorable attitudes towards help-seeking behavior for self and peers (Schilling, Aseltine, & James, 2016). The intervention assesses for a history of suicide attempts and high-risk youth, provides self-administered depression screening, educates about warning signs, and encourages students to pursue help. Strong evidence validates the efficacy of the SOS program. The study suggests a reduced probability of suicide planning in high-risk students. "Ninth grade students in the intervention group were approximately 64% less likely to report a suicide attempt in the past three months" (Schilling et al., 2016). This study provides continued support for and underlines the unique role of programs in screening for at high-risk youth, improved help-seeking behaviors, and reducing the likelihood of suicide. Changes in attitude are merely initial benefits of prevention programs, which can minimize suicide attempts in the future.

**Rationale**
According to the Institute of Medicine (2009), report Adolescent Health Services: Missing Opportunities, the patterns of behavior established during developmental years determine engagement in patient-provider relationships, access to disease prevention and health promotion, and current health status. These health habits in adolescents also contribute to quality of life and health over future adult years. Awareness and de-stigmatization of depression and suicide alone do not adequately aid prevention efforts during the developmental transition of adolescents. Evidence undeniably advocates for screening and evidence-based interventions to support mental well-being concerns of middle-school and high-school students. A continued call for validated effective school-based programs encounters challenging barriers related to the evolving biophysical nature and complex sociocultural environments experienced by this age group.

**Theoretical Framework.** Social, cognitive, and environmental elements determine how people acquire and maintain habits. In social cognitive theory, Bandura proposes continuous and reciprocal relationships between personal factors, environmental influences, and behavior cultivate interchange of reinforcements, expectations, and expectancies (see appendix B; Bandura, 1986). Dynamic factors between parents, adolescents, faculty, and school-based settings impact awareness and help-seeking related to suicide prevention. Core determinants of health promotion and disease prevention are knowledge, perceived self-efficacy, outcome expectations, health goals, perceived facilitators and barriers (see Appendix B; Bandura, 2004). Social cognitive theory provides the feedback necessary for the quality-improvement process and implementation of a school-based suicide prevention program to occur. Human capacity for collective change requires a strong foundation of action-oriented environmental and social
factors (Glanz, 2002). Understanding the principal elements of this theory guided the intentions and implications of this project aiming to influence health behaviors and health outcomes.

**Executive Summary.** Between 2001 and 2015 nearly one-fifth of students in grades 9 through 11 seriously considered attempting suicide (CDC, 2015). Warning signs and risk factors of suicide such as dramatic mood changes, defiant behavior, substance abuse disorder, depression, and other mental health issues often remain unrecognized or untreated in the school-aged population. In California, the rate of youth mental health hospitalization has risen by 50% (LPF, 2018). Cognitive, behavioral, and psychosocial aspects in an adolescent's life present multifactorial influence over mental illness and suicidality. Fifty percent of all lifetime cases of mental illness begin by the age 14 (NAMI, 2018). Gatekeeper training of parents and faculty provides education and framework for urgently addressing depression and suicide in adolescents. Reducing stigma, enhancing knowledge, and improving perceptions of mental illness are vital steps in prevention. The Signs of Suicide (SOS) Program allows for early identification of suicidal symptoms and prompts key stakeholders to provide referral services for professional care.

Suicide costs the State of California $4,246,494,000 of lifetime and work loss costs annually (AFSP, 2018). The SOS Program which includes gatekeeper training and curriculum for students present a nominal financial burden at the cost of $495 (SMH, 2018). Cost improvement and avoidance result from implementation of this quality improvement project. Benefits to students, parents, faculty, and the community are apparent upon analysis. The return on investment for implementing a suicide prevention program is priceless due to the invaluable nature of human life.

**Specific Aims**
The specific aim of this DNP quality improvement project is to improve adolescent suicide prevention by implementing a school-based education program for parents and staff which improves knowledge, attitudes, and promotes help-seeking behavior in adolescents. Implementation and conduct will adhere to DNP expectations and competencies. This project meets all criteria on the evidence-based change of practice project checklist (see Appendix C)

Section III: Methods

Context

The State of California passed legislation, chaptered California Education Code (Section 215, Assembly Bill 2246, Statues of 2016), mandating any local educational agency adopt a policy on pupil suicide prevention, intervention, and postvention (CDE, 2017). School-based suicide prevention programs are needed urgently on the frontlines where parents and faculty possess the potential for early action and intervention. Legislation further stipulates "the policy shall specifically address the needs of high-risk groups, include[ing] consideration of suicide awareness and prevention training for teachers" (CDE, 2017). This evidence-based DNP project is congruous with the objectives of the policy. Parents were included, in addition to faculty, as intended recipients and considered key stakeholders of this quality improvement intervention. Addressing both audiences emphasizes a comprehensive approach and promotes a cultural milieu where at-risk adolescents receive help.

The quality improvement project implementation occurred at two urban school-based settings in San Francisco. Key stakeholders at both schools were eager and open to the need for change. Site #1, located in the heart of the Tenderloin neighborhood of San Francisco, is comprised of 150 families with a staff to student ratio of 1:10. Site #2, located in the Outer Sunset neighborhood of southwest San Francisco, is comprised of 396 families and a ratio of 1:6 staff per student. Cost of attendance for Site #1 is $8,900.00 annually. Cost of attendance for
Site #2 is $30,510 per academic year. The contrasting socioeconomic status and demographics of each school-based setting were intended to reflect how the demand for enhanced knowledge is evident in all schools. The need for improved perceptions about suicidality and suicide prevention is felt by all communities, regardless of background.

**Intervention**

Assessment and rigorous review of literature (see Appendix D) by the DNP candidate identified the pressing deficiency and gap related to implementation of school-based suicide prevention programs. Development of the evidence-based literature search strategy included the formulation of a PICO question. The PICO question utilized as framework was: In adolescent youth who experience major depressive episodes (P), does a school-based suicide prevention program (I), versus no intervention (C), decrease rate of suicide (O). The timeframe (T) of implementation guiding the project was August through November 2018.

Key literature themes include screening, health literacy, decreased stigma and increased help-seeking behavior, teaching coping skills to increase resilience, and gatekeeper/community personnel training. The National Strategy for Suicide Prevention, calls for interventions which (a) foster a positive public dialogue, (b) address the needs of vulnerable groups with programs tailored to culture and context, (c) coordinate and integrate suicide prevention with existing health efforts, and (d) promote changes in systems, policies, and environments that will facilitate prevention of suicide (DHHS, 2012). This mandate coincides with the sociocognitive approach to mitigating suicidality among the adolescent population.

Community-level risk and protective factors influence developmental determinants of mental health and outcomes from adolescent depressive symptom (Stirling, Toumbourou, & Rowland, 2015). A school-based suicide prevention program cultivates a strong foundation to support needs surrounding adolescent mental health. Evidence endorses gatekeeper training for
school staff and screening programs as effective interventions to increase knowledge, improve attitudes, and combat poor help-seeking behaviors (Robinson et al., 2013). Education of parents and faculty with the framework provided by the SOS program meets these needs. The rise in bullying, peer-victimization, and social media pressure correlates to depression, suicidal ideation, and suicide attempts in adolescents (Holt et al., 2015; van Geel, Vedder, Tanilon, 2014).

Screening and intervention efforts are of significant value among the adolescent population where signs of depression and suicidal ideation often remain hidden problems.

**Needs Assessment.** Healthy People 2020 establishes improvement objectives to (a) reduce the suicide rate, (b) reduce suicide attempts by adolescents, (c) reduce the proportion of adolescents age 12 to 17 who experience major depressive episodes, and (d) increase the proportion of children with mental health problems who receive treatment (DHHS, 2012). Rigorous review and critical appraisal of recent literature establish the utility of school-based suicide prevention and depression screening programs to address these objectives. Integrating best practice evidence, healthcare provider's expertise, and values of consumers of healthcare services is key to implementing change (Melnyk, & Fineout-Overholt, 2015). In California, the majority of hospitalizations for self-inflicted injuries involve youth ages 16-20; additionally, 150 youth committed suicide in 2014 (Lucile Packard Foundation for Children's Health, 2018). The initiative for improving health, evidence-based research, and responsibility of improving public wellness prompted consideration of underserved settings in the San Francisco Bay Area. Needs assessment included compiling a list of school needing mental health services and resources. Informal surveys, informant interviews, and community meetings were utilized to lend focus on school sites lacking adolescent suicide prevention services. Based on this investigation of community concerns and resources, the SOS Program was selected from SAMSHA toolkit of
school-based prevention programs (SAMHSA, 2012) to address needs of the students, school, parents, and community.

**Project Management Plan.** Key stakeholders identified in support of the project included the school's Director (Site #1) or Headmistress (Site #2), school administrative staff, faculty, and a parent health committee (Site #2). Implications of team selection also accounted for influence upon families, friends, and the community where adolescents thrive. A timeline (see Appendix E), work breakdown structure (see Appendix F), and communication plan (see Appendix G) outlined valuable information and served as tools to guide implementation. A SWOT analysis (see Appendix H) was conducted to distinguish project resources and needs. Costs associated with the school-based quality improvement intervention are outlined in the project budget (see Appendix I), along with a cost improvement and avoidance analysis (see Appendix J).

**Narrative of Implementation.** Training parents and faculty as gatekeepers is an initial step of the SOS Program implementation strategy (see Appendix K). Train-the-trainer programs encourage expansion of curriculum via participants who learn to advocate, communicate, and support students by putting SOS Program content into action. The quality improvement project consisted of two educational interventions at each school-based setting. Utilization of separate group sessions for each audience occurred at the request of school administrator and stakeholders. This design intended to create an environment where individuals felt comfortable asking questions and experienced the freedom to dialogue openly. De-stigmatization of mental health and risk factors correlated with suicide were topics of focus during the educational session (see Appendix L). The presentation provided information about recognizing signs and symptoms of suicide, a Training Trusted Adult video, review of the validated Brief Screen for
Adolescent Depression (BSAD) form, and guidelines for how to respond. Guided discussion questions around key points were proposed to facilitate conversation and improve knowledge.

**Study of the Intervention**

Outcome measures tied to school-based suicide prevention, educating parents and faculty, and improving awareness to influence help-seeking behaviors in adolescents occurred by implementing this project. Goals of the SOS program include a) decreased suicidality through increased knowledge and adaptive behaviors about depression, b) promotion of help-seeking behaviors and acknowledgment of the importance of seeking professional care, c) reduced mental illness stigma, d) engagement of parents and school staff as partners in prevention through "gatekeeper" education, e) and encouraging schools to develop community-based partnerships to support student mental health (SPRC, 2016).

**Measures**

Pre- and post-implementation surveys measured improvement in knowledge and changes in perceptions related to suicide prevention and screening (see Appendix M). Previous assessments of the SOS Program utilized a tool adapted from the CDC Youth Prevention Risk Survey focusing on changes in knowledge and attitude. Similar true-false and Likert scale questions, which also coincide with SOS program content, were utilized for this project's surveys. Additional open-ended questions provided qualitative data for themes analysis. Previous evidence-based literature measuring awareness outcomes and SOS program efficacy via quantitative and qualitative tools influenced development of this quality improvement project's surveys (Aseltine, & DeMartino, 2004; Aseltine, James, Schilling, & Glanovsky, 2007; Keiffer, 2015; Schilling, Aseltine, James, 2016; SPRC, 2015). This DNP project (a) synergized
evidence-based literature, (b) formulated a comprehensive plan, and (c) examined specific outcomes measures striving to address the culture and context of suicide in the community.

**Analysis**

A portion of each intervention session was reserved for completion of pre-/post-surveys to encourage a higher rate of response. Allocating time for parent and faculty to thoughtfully participate was also intended to yield a sample size and data of significant value. Analysis of data included organization of raw data and comparison through Microsoft Excel. Quantitative data analysis for changes in knowledge and attitudes demonstrates efficacy of the intervention and indicates the quality improvement project met intended outcome measures. Qualitative responses were transcribed and analyzed for extraction of key themes. Themes analysis provided valuable information about the experiences and feelings of parents and faculty.

**Ethical Considerations**

The University of San Francisco's core Ignatian Values emphasizes the importance of Educating and Care of the Whole Person. This quality improvement project aimed to enhance knowledge and attitudes about adolescent suicide among parents and faculty. The intention to promote help-seeking, shine light on disparities tied to mental health, and influence the lives of those underserved also mirrors the University's Jesuit mission and this DNP project.

Nurse practitioner core competencies "facilitates the development of healthcare systems that address the need of culturally diverse populations and other stakeholders" (Thomas et al., 2017). Minor students were not part of this evidence-based translational research project. Rather the consenting adult participants in this quality improvement project were educated about the role of gatekeepers. This intervention included information about their role in recognizing
suicidality in adolescents, promoting help-seeking and professional referral services, and in improving prevention. The role of the nurse practitioner is to "create a climate of patient-centered care to include confidentiality, privacy, comfort, emotional support, mutual trust, and respect" (Thomas et al., 2017, p.14). Advocating for access and minimizing risk at the individual and population-specific level are ethical considerations accounted for by the PMHNP.

Parent and faculty participated in this project voluntarily. All participants received an informed consent statement at the beginning of pre- and post-surveys. No identifying data was collected or published about adult participants in the educational activity and surveys. Results of the surveys were shared with school sites, faculty, and parents once the project was complete.

A Statement of Determination form was completed and reviewed by the DNP committee (see Appendix C). This project was accepted by the author's DNP chairperson as an evidence-based quality improvement project. This author completed the Department of Health and Human Services and Institute for Healthcare Improvement certification regarding protection of human subjects and (see Appendix N) and assures this project complies with ethical guidelines and principles.

Section IV: Results

Results

A sample of 40 faculty total participated across the two school-based settings. Site #1 included 12 participants. The second location, Site #2, was comprised of 36 faculty in attendance. The 28 faculty who completed pre- and post-surveys are included in the data analysis. The parent session held at Site #1 had zero participants. The parent session at Site #2 had 11 attendants provided and provided a sample size of 5 participants. Lack of response or incomplete pre- and post-surveys are considered non-response bias; thus, excluded from data
analysis. Eight faculty from Site #2 and six parents from Site #2 were excluded for non-response bias (see Appendix O).

Analysis of data from pre/post surveys examined changes in knowledge and attitudes. Comparison between faculty at both settings occurred for quantitative responses, questions 1 through 9 (see Appendices O, P & Q). Baseline knowledge was high pre-intervention for parents at Site #2 and faculty at Site #1 and #2. Correct responses improved 4-18% across both settings for faculty who responded to true or false questions. However, for question number 1: "Its normal for teens to be moody, teens don't suffer from "real" depression," the percentage of correct responses decreased by 4% post-intervention at Site #2.

Pre and post-survey responses and changes to attitudes regarding suicide varied across the two settings (see Appendix R). Faculty at Site #1 agreed with evidence-based data about the subject for all Likert scaled questions. Response remained the same among 3% of faculty at Site #2 for question number 7: "If someone really wants to kill him/herself, there is not much I can do about it." The results otherwise demonstrated a positive shift in attitudes. Parent response to Likert scaled questions at Site #2 remained high. Question number 9: "Teenagers who try to kill themselves are "weak" or very disturbed," was an exception. The response "somewhat disagree" remained the same for one participant.

Analysis of qualitative responses included transcription, review, and extraction of key themes for survey items 10 and 11 (see Appendix S). Evaluation of qualitative responses revealed (a) limited understanding of the signs and symptoms of suicide and (b) beliefs about the association between bullying/social media and suicidality. Post surveys disclosed improved understanding related to specific knowledge of warning signs, changes in behavior, and how to support help-seeking behavior. Attitudes commonly expressed a desire to learn and the demand
for prevention/awareness. Post surveys revealed themes of (a) motivation to be a gatekeeper and seek professional help and (b) appeals for expansions of the SOS program and suicide prevention efforts.

**Unexpected Data.** The DNP student created journal entries following each implementation session. Guided discussion questions in each school-based setting elicited unexpected information related to the prevalence of risk factors and current life stressors among the student populations. The socioeconomic disparity between the two sites was a prominent contextual influence.

Faculty at Site #1 emphasized the pervasiveness of risk factors. Details included mention of environmental qualities like exposure to drug use and access to lethal weapons while traveling to and from school. Examples at Site #1 shared among educators also described student's exposure to suicide and mental illness within the home and community.

At Site #2, faculty and parents noted the pressure to excel in life and a competitive environment as contributing factors to the self-esteem and mental wellness of the student population. Faculty at this site also raised concerns about cultural adjustment after relocating from abroad, social-life among peers, and their influence on depression and suicide. Comparison of journal entries from the two school-based settings highlight contrasts related to Maslow’s hierarchy. The associations between chronic stress, social support, and vulnerability are also evident related to socioeconomic status and topics of concern in each guided discussion session.

**Missing Data.** Both schools publicized the educational event to parents via electronic newsletters, posters, take-home flyers. Sessions were held at similar times, after school, to account for commuting and encourage the presence of a parent audience. Data is missing for the parent population at Site #1 due to lack of attendance. The sample size for parents at Site #2 is
not significant. Therefore, a comparison between the two parent groups is not feasible. Characteristics of the aforementioned socioeconomic disparity have depth and breadth of influence and similarly emerge related to attendance. Reaching the parent population of adolescents with elevated risk factors becomes even more urgent of a concern.

**Unintended Consequences.** Meetings with the school's Director and faculty stakeholders at Site #1, led to the request for content in the Spanish language. Over 50% of the parent population at Site #1 only speak the Spanish language. Preparing the intervention in a bilingual format for parents at Site #1 was unforeseen. A volunteer translator was also arranged to assist with guided discussions and questions. The failure to gather a parent audience at Site #1 was also unforeseen. Financial strain and focus on short-term goals related to survival could leave little room for additional daily tasks. The Self Sufficiency Standard for a two-parent household with two small children in San Francisco is $92,914 (DCYF, 2016). Gaining an audience with parents who live at or below the poverty level could be achieved by other methods. Attempting to engage parents at religious establishments, community centers, or through non-profit organizations (i.e., Boys & Girls Club) based in the San Francisco Tenderloin neighborhood are potential alternatives.

As a result of this quality improvement project both school-based setting developed a formal response protocol, based on the SOS Program response protocol template. Both sites requested and received information about purchasing the SOS program. Intent was expressed to formally expand education and awareness into the classroom and directly to students.

**Section V: Discussion**

**Summary**
Nurses should provide continuous prevention and screening for depression and suicide in the school-based setting as part of a formulated risk assessment and on-going advocacy competencies (APNA, 2017). The project utilized the Doctor of Nursing Practice role and macrosystems expertise to deliver an educational program for adolescent suicide prevention. Bridging gaps in care and improving health services is a crucial function of the DNP. The SOS Program selected from the SAMSAH Preventing Suicide toolkit (2012), best met the learning objectives of the target populations. This project changed practice by addressing the needs of parents, faculty, and students by proxy at two local schools with limited health education programs in place.

**Interpretations**

In the months following implementation, an email received from the school director of Site #2 reported, "a student came to a teacher today saying he was feeling suicidal. Thanks to your presentation in October she knew exactly what to do." Reducing stigma and barriers surrounding mental health results in improved help-seeking behavior. The project impacted faculty and parents to cultivate self-efficacy and health behaviors towards suicidality. Barriers of perceived knowledge, behavioral capability, self-efficacy, and emotional coping responses were overcome to influence the systems in place at the school-based settings. The project resulted in action-oriented positive consequences. A formal response protocol and expansion of suicide-prevention in both school-based sites occurred. Implications of these findings mean leaders across all settings carry responsibility and must continue to improve practices related to suicide prevention at the frontlines.

**Limitations**
This project was limited by the sample size of parents and faculty participants. Thus, influencing generalizability of results to a larger population. Time constraints of this DNP project prevented expansion to additional schools and directly to students. Sustaining cultural change, of improved knowledge and enhanced attitudes, requires continuous effort and leadership. Future Nurse Practitioner or Clinical Nurse Leader students at the University of San Francisco may be delegated to continue the influence and involvement of the DNP student

Conclusions

Adolescent depression, suicide, and health-risk behaviors are a public safety concern. Continuous interventions promoting youth development of protective factors is crucial. New research may suggest adapting suicide prevention programs to web-based or mobile application increases access, decreases costs, and uniquely targets and engages young people (Perry, Werner-Seidler, Calear, & Christensen, 2016; Rice et al., 2016; Robinson et al., 2014). Enhancing wisdom, positive communication, and supportive relationships/resources are emphasized to minimize risk-factors and assist adolescents in receiving help.

A vital step in addressing mental health concerns among adolescence is influencing the cognitive and behavioral dynamics among key stakeholders. Training parents and faculty to be gatekeepers reflects the importance of expanding the scope and impact of health promotion efforts. Assessing and managing suicide risk through preventative intervention is an essential competency of psychiatric mental health nurses at the systems level and all settings demanding the unique expertise of nursing care (APNA, 2017). Continuing to shine a light on the topic of mental health within in the community emphasizes the collective approach necessary to create a culture of change. Education and prevention programs have the potential to influence public awareness and mobilize social systems to improve the health and wellness of our youths.
Increased prevalence and prevailing currents of mental health issues among adolescents have long-term implication for future generations. Societal commitment and resources are required to implement health improvement strategies, advocate informed change, and diminish the U.S. health disadvantage (IOM, 2013).
Section VI: References


https://doi.org/10.1177/1059840514525968


https://doi.org/10.1007/s00787-015-0783-4


https://doi.org/http://dx.doi.org/10.1016/j.cnur.2015.03.007

Labouliere, C. D., Kleinman, M., & Gould, M. S. (2015). When self-reliance is not safe: Associations between reduced help-seeking and subsequent mental health symptoms in


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Suicide Prevention Resource Center (SPRC). (2015). Challenges and recommendations for evaluating suicide prevention programs: State and tribal evaluators community of
learning. Waltham, MA: Education Development Center, Inc. Retrieved from


https://www.healthypeople.gov/2020/topics-objectives/topic/Adolescent-Health/objectives


https://doi.org/10.1016/S0140-6736(14)61213-7

Wei, Y., Kutcher, S., & LeBlanc, J. C. (2015). Hot idea or hot air: A systematic review of evidence for two widely marketed youth suicide prevention programs and
Section VII: Appendices

Appendix A

PRISMA

Records identified through database searching (n = 1880).

Records identified through other sources (n = 0).

Records after duplicates removed (n = 1663).

Records screened (n = 1663).

Records excluded (n = 1330).

Full-text articles assessed for eligibility (n = 30).

Full-text articles excluded, with reasons (n = 18).

Studies included in qualitative synthesis (n = 6).

Studies included in quantitative synthesis (meta-analysis) (n = 8).

Moher et al., (2009)
Appendix B

Theoretical Framework

*Bandura’s Triadic Reciprocal Determinism*

(Penn State University, 2018)

*Bandura’s Sociocognitive Influence Model*

(Figure 1. Structural paths of influence wherein perceived self-efficacy affects health habits both directly and through its impact on goals, outcome expectations, and perception of sociostructural facilitators and impediments to health-promoting behavior.)

(Bandura, 2004)
Appendix C

DNP Statement of Non-Research Determination Form

Student Name: Nicole M. Neuman

Title of Project:
School-Based Suicide Prevention Program Implementation: Educating Parents and Faculty

Brief Description of Project:
Nurses should provide continuous prevention and screening for depression and suicide in the school-based setting as part of formulated risk assessment and on-going advocacy competencies (APNA, 2017). This project will provide education to Parents and Faculty about suicide prevention and screening.

A) Aim Statement:
The specific aim is to improve adolescent suicide prevention by implementing a school-based education program for parents and staff which improves knowledge, attitudes, and promotes help seeking behavior in adolescents

B) Description of Intervention:
The program selected, from the SAMSAH Preventing Suicide toolkit (2012), best meets the learning objectives of the target population. Signs and Symptoms of suicide and Gatekeeper Training to educate parents and faculty.

C) How will this intervention change practice?
This project will meet the needs of parents, students, and staff at a local school with limited health education resources. Interactive teaching methods involving lectures, videos, and a group project provide various modalities to promote acquiring new knowledge related to identifying symptoms and encourage students to seek help.

D) Outcome measurements:
Pre- and Post- Implementation surveys will measure improvement in knowledge and changes in perceptions related to suicide prevention and screening

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the criteria outlined in federal guidelines will be used:
(http://answers.hhs.gov/ohrp/categories/1569)

☒ This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☒ This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

DNP Department Approval 5/8/14
**EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST**

**Instructions:** Answer YES or NO to each of the following statements:

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aim of the project is to improve the process or delivery of care with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>established/accepted standards, or to implement evidence-based change. There</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>is no intention of using the data for research purposes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The specific aim is to improve performance on a specific service or program and</td>
<td></td>
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<tr>
<td>is a part of usual care. ALL participants will receive standard of care.</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>The project is NOT designed to follow a research design, e.g., hypothesis</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>testing or group comparison, randomization, control groups, prospective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>comparison groups, cross-sectional, case control. The project does NOT follow</td>
<td></td>
<td></td>
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<tr>
<td>a protocol that overrides clinical decision-making.</td>
<td></td>
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<tr>
<td>The project involves implementation of established and tested quality standards</td>
<td></td>
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</tr>
<tr>
<td>and/or systematic monitoring, assessment or evaluation of the organization to</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>ensure that existing quality standards are being met. The project does NOT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>develop paradigms or untested methods or new untested standards.</td>
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<tr>
<td>The project involves implementation of care practices and interventions that</td>
<td></td>
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<tr>
<td>are consensus-based or evidence-based. The project does NOT seek to test an</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>intervention that is beyond current science and experience.</td>
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<tr>
<td>The project is conducted by staff where the project will take place and</td>
<td>√</td>
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<tr>
<td>involves staff who are working at an agency that has an agreement with USF</td>
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<tr>
<td>SONHP.</td>
<td></td>
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</tr>
<tr>
<td>The project has NO funding from federal agencies or research-focused</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>organizations and is not receiving funding for implementation research.</td>
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<tr>
<td>The agency or clinical practice unit agrees that this is a project that will</td>
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<tr>
<td>be implemented to improve the process or delivery of care, i.e., not a</td>
<td>√</td>
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<tr>
<td>personal research project that is dependent upon the voluntary participation</td>
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<tr>
<td>of colleagues, students and/or patients.</td>
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<tr>
<td>If there is an intent to, or possibility of publishing your work, you and</td>
<td></td>
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<tr>
<td>supervising faculty and the agency oversight committee are comfortable with</td>
<td>√</td>
<td></td>
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<tr>
<td>the following statement in your methods section: &quot;This project was undertaken</td>
<td></td>
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</tr>
<tr>
<td>as an Evidence-based change of practice project at X hospital or agency and as</td>
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</tbody>
</table>
| such was not formally supervised by the Institutional Review Board."

**ANSWER KEY:** If the answer to ALL of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is NO, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Holm, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.*
Appendix D

Literature Synthesis Table

PICO In adolescent youth who experience major depressive episodes (P), does a school-based suicide prevention program (I) versus no intervention (C) decrease rate of suicide (O)?

<table>
<thead>
<tr>
<th>Study Citation</th>
<th>Theoretical Framework Used</th>
<th>Study Design</th>
<th>Sample &amp; Setting</th>
<th>Independent &amp; Dependent Variables</th>
<th>Measures (scale, instrument)</th>
<th>Statistical test for analysis</th>
<th>Meaning of Results (in terms of clinical question)</th>
<th>LOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biddle, et al. (2014)</td>
<td>Protection risk model</td>
<td>Inferential retrospective secondary regression analysis</td>
<td>n = 2,122 Pennsylvania public school students</td>
<td>IV: 54 service recommended to students by SAP team members DV: drug/alcohol policy violations and suspensions, suicide risk</td>
<td>SAP Online data maintained by Pennsylvania Dept. of Education</td>
<td>Logistics regression models, backwards elimination of variable selection, power analysis, goodness of fit tests</td>
<td>Suicidal students who did not participate had double the rate of suicide Greater number of referral services received increased likelihood substance related behavior stopped</td>
<td>IIB</td>
</tr>
<tr>
<td>Study</td>
<td>Design</td>
<td>Type of Review</td>
<td>Sample Size</td>
<td>Intervention Setting</td>
<td>Intervention Content</td>
<td>Effect of Delivery Format</td>
<td>Data Analysis</td>
<td>Results</td>
</tr>
<tr>
<td>-------</td>
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<tr>
<td>Calear, et al. (2016).</td>
<td>NR</td>
<td>Systematic Review of Randomized Controlled Trials</td>
<td>n = 29 studies of adolescents or young adults age 12-25 in school community and healthcare setting delivery</td>
<td>IV: Intervention setting, intervention content, intervention approach, effect of delivery format</td>
<td>DV: suicide attempts/deliberate self-harm, suicidal ideation</td>
<td>Data was coded, extracted and standardized by two researchers</td>
<td>Cohen’s d, Phi, risk of bias assessment</td>
<td>Half of programs had significant effect on suicidal ideation, self-harm, and suicide attempts. Role of community and school engagement and advocacy for interventions.</td>
</tr>
<tr>
<td>Hawton, K. (2015).</td>
<td>NR</td>
<td>Systematic Review with Meta-analysis of Randomized Controlled Trials</td>
<td>n = 1,126 inpatient and outpatient setting</td>
<td>IV: psychosocial interventions, pharmacologic interventions</td>
<td>DV: treatment adherence, depression, hopelessness, suicidal ideation, problem-solving, suicide</td>
<td>Data extraction using validated psychometric scales</td>
<td>OR with 95% CI, MD with 95% CI, SMD with 95% CI</td>
<td>Significant reduction in repeated self-harm, depression, hopelessness, and suicidal ideation in adolescents in DBT.</td>
</tr>
<tr>
<td>Labouliere, et al. (2015).</td>
<td>NR</td>
<td>Convenience Randomized control group design</td>
<td>n = 2150 9-12 grade students at 6</td>
<td>IV: suicidal ideation, suicide attempts, depressive</td>
<td>Suicide Ideation Questionnaire, Junior</td>
<td>Mixed-effects linear models, Bonferroni</td>
<td>Extreme self-reliance associated with reduced</td>
<td>IIC</td>
</tr>
<tr>
<td>Inclusion Criteria</td>
<td>Logic Model</td>
<td>Sample Characteristics</td>
<td>Outcome Measures</td>
<td>Statistical Tests</td>
<td>Analysis Methodology</td>
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</tr>
<tr>
<td>Schools in three suburban counties of New York</td>
<td>Langford, et al. (2014)</td>
<td>n = 67 children and young people age 4-18</td>
<td>IV: WHO’s Health Promoting Schools framework/program</td>
<td>Double screened data extraction, PROGRESS PLUS check list</td>
<td>OR with 95% CI, MD with standard error, ANCOVA, pooled SD, SMDs, Borensteins methods</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Logic Model</td>
<td></td>
<td>DV: physical activity, nutrition, bullying, Tobacco, alcohol, sexual health, violence, mental health, hand-washing, multiple risk behaviors, cycle-helmet use (1), eating disorders (1), sun protection (1), and oral health (1).</td>
<td></td>
<td>Health promotion should address health issues including bullying, tobacco, alcohol, sexual health, violence, mental health, multiple risk behaviors and eating disorders.</td>
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<td></td>
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<tr>
<td></td>
<td>Perry, et al. (2014)</td>
<td>n = 70 secondary school students, age 13-16 years;</td>
<td>IV: HeadStrong Education Program</td>
<td>Depression literacy scale (D-lit), Depression Stigma Scale (DSS).</td>
<td>Logistics regression, independent samples t-tests and chi-square tests, Significant improvement to literacy and personal stigma</td>
<td></td>
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</tr>
</tbody>
</table>
| Petrova, et al. (2015). | Social Learning theory, Elaborate Likelihood model | Qualitative Quasi - experimental Randomized Control | n= 706 9th-12th grade students in 4 rural and metropolitan schools | IV: Sources of Strength Program  
DV: positive attitudes and perceptions, coping with distress and suicide concerns, perceptions of adult support, suicidal ideation | Help Seeking from Adults, Reject Codes of Silence, Adult Hep for Suicidal Youth scales; Youth Risk Behavior Survey,  
HLM 6.0, coded variables | Exposure enhanced coping attitudes and perceptions of adult support  
Peer leaders enhanced help seeking, attitudes towards overcoming barriers, and naming of trusted adults | IIB |
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Robinson et al. Mrazek</td>
<td>Systematic</td>
<td>n = 43</td>
<td>IV: suicide</td>
<td>Full text</td>
<td>NR</td>
<td>Programs aim</td>
<td>IVB</td>
</tr>
<tr>
<td>Study</td>
<td>Design</td>
<td>School Type</td>
<td>Participants</td>
<td>Measures</td>
<td>Methods</td>
<td>Findings</td>
<td></td>
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</tr>
<tr>
<td>al. (2013) and Haggerty</td>
<td>Review</td>
<td>School based programs, majority in the United States, students grade 8 to 12</td>
<td>Prevention programs (universal, selective, indicated or treatment, postvention) DV: suicide related behaviors, knowledge of suicide, attitudes towards suicide, help seeking behaviors</td>
<td>Review and independent classification by two authors</td>
<td>To reduce suicide-related behavior, changing attitudes towards suicide, increasing knowledge of risk factors and warning signs, and help-seeking strategies Various program lengths and delivery methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruble, et al. (2013)</td>
<td>Quasi-experimental with control</td>
<td>High school students from Tulsa, OK</td>
<td>IV: Adolescent Depression Awareness Program DV: depression literacy, help-seeking behaviors</td>
<td>Adolescent Depression Knowledge Questionnaire, pretest and posttest</td>
<td>SPSS, paired t-test, ANOVA, Cross tab analysis with chi-square analysis</td>
<td>Significant change in willingness to share concerns about depression in ADKQ depression knowledge scores</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Design</td>
<td>Sample Size</td>
<td>Independent Variables</td>
<td>Dependent Variables</td>
<td>Analysis</td>
<td>Findings</td>
<td></td>
</tr>
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<td>-----------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Schilling, et al. (2016)</td>
<td>Quasi-experimental with control</td>
<td>n = 1052 17 Connecticut high schools, 9th grade students</td>
<td>IV: Signs of Suicide (SOS) program DV: self-reported suicidal ideation, suicide planning, suicide attempts, knowledge and attitudes about depression and suicide</td>
<td>Center for Disease Control and Prevention’s Youth Risk Behavior Survey, pretest and posttest</td>
<td>Generalized estimating equations, regression models</td>
<td>Participation associated with significantly fewer self-reported suicide attempts Greater knowledge of depression and suicide More favorable attitudes towards intervening among peers and getting help</td>
<td></td>
</tr>
<tr>
<td>Wasserman, et al. (2015)</td>
<td>Cluster-Randomized Controlled Trial</td>
<td>n = 11,110 Students age 14-16 from 168 schools in 10 European Union Countries</td>
<td>IV: Youth Aware Mental Health Program DV: suicide attempts, suicidal ideation,</td>
<td>SEYLE Questionnaire, Paykel Hierarchical Suicidal Ladder, Strengths and Difficulties Questionnaire</td>
<td>Two-sided t-test, logistic regression, generalized linear mixed model,</td>
<td>Reduction in suicide attempts and suicidal ideation at 12 month follow up</td>
<td></td>
</tr>
<tr>
<td>Wei, et al (2015).</td>
<td>NR</td>
<td>Systematic Review</td>
<td>n = 5 high school staff, high school and middle school students</td>
<td>IV: Yellow Ribbon Suicide Prevention Program, SOS Suicide Prevention Program</td>
<td>DV: suicide attempts, self-harm, help-seeking behaviors, attitudes</td>
<td>Full text review, priori data extraction form</td>
<td>NR</td>
</tr>
</tbody>
</table>

**Key:** LOE: level of evidence (Johns Hopkins Hospital/The Johns Hopkins University, 2012). A: high quality, B: good quality, C: low quality; NR: Not reported, IV: Independent variable, DV: dependent var
Appendix E

Gantt Chart
Appendix F

Work Breakdown Structure (WBS)
## Appendix G

### Communication Plan

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Information / Content</th>
<th>Frequency</th>
<th>Form / Method of Delivery</th>
<th>Objective/Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>Proposal for, plan, and delivery of School-based Suicide prevention program</td>
<td>as often as needed</td>
<td>Emails with chair or parent organization, Face to Face meetings with power point and interactive presentations, pre/post surveys</td>
<td>Enhanced knowledge and improved perceptions of the signs and symptoms of suicide, organizational support from parent/guardian stakeholders</td>
</tr>
<tr>
<td>Faculty</td>
<td>Delivery of School-based Suicide prevention program</td>
<td>as often as needed</td>
<td>Face to Face meetings with power point and interactive presentations</td>
<td>Enhanced knowledge and improved perceptions of the signs and symptoms of suicide, organizational support from faculty stakeholders</td>
</tr>
<tr>
<td>School Administrators</td>
<td>Proposal for, plan, and delivery of School-based Suicide prevention program</td>
<td>as often as needed</td>
<td>Email, face to face, and meetings with administrators</td>
<td>Enhanced knowledge and improved perceptions of the signs and symptoms of suicide</td>
</tr>
<tr>
<td>DNP Chair</td>
<td>Progress, updates, and outcomes of project, feedback on results and progress</td>
<td>Weekly, and as often as needed</td>
<td>Email and Face to Face meetings</td>
<td>Successful implementation analysis and presentation of DNP project</td>
</tr>
</tbody>
</table>
### SWOT Analysis

<table>
<thead>
<tr>
<th>Internal</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Interest of the parents and community to initiate a school-based program</td>
<td>• Health literacy presents potential barrier</td>
</tr>
<tr>
<td></td>
<td>• Validated tool from SAHMSA</td>
<td>• Relies on parents, staff, and student’s motivation to engage in screening program</td>
</tr>
<tr>
<td></td>
<td>• Filling a gap in care</td>
<td>• Cultural barriers and resistant attitudes towards mental illness and new program</td>
</tr>
<tr>
<td></td>
<td>• Low cost</td>
<td>• Reliance on continued effort to sustain program objective once initial education is complete</td>
</tr>
<tr>
<td></td>
<td>• Improved quality/safety/patient-centered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Integration of technology for pre-post- survey data collection</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Future expansion and continuation of the program at this setting and other schools</td>
<td>• Short term duration of school-based screening program</td>
</tr>
<tr>
<td></td>
<td>• Enhanced knowledge and responsibility to address early signs and symptoms</td>
<td>• Future phases and adherence require continued reinforcement</td>
</tr>
<tr>
<td></td>
<td>• Awareness in the community, recognition of other mental health related concerns and seeking help</td>
<td>• Privacy and stigma concerns about mental health issues</td>
</tr>
<tr>
<td></td>
<td>• Integration of mobile technology</td>
<td>• Unforeseen Costs</td>
</tr>
<tr>
<td></td>
<td>• Pair patients with referral services</td>
<td>• Expense of time to implement, sustain, and expand school-based screening</td>
</tr>
<tr>
<td></td>
<td>• Foster continued learning environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Possible cost savings in related to early detection and treatment</td>
<td></td>
</tr>
</tbody>
</table>
Appendix I

Project Budget

*Table 1 Project Budget*

<table>
<thead>
<tr>
<th>Cost Element</th>
<th>Estimated Cost</th>
<th>Total Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personnel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse Time to plan/perform project</td>
<td>$45/hr x 145 hours = $6525 (of no expense, DNP Student donated time)</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Equipment/Tools</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOS Program</td>
<td>$495 x one time purchase</td>
<td>$495</td>
</tr>
<tr>
<td>Personal Laptop</td>
<td>$0 (owned by DNP student)</td>
<td>$0</td>
</tr>
<tr>
<td>Video Projector</td>
<td>$0 ($150 to purchase portable device - available through school, no cost)</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Travel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas and Mileage Commute to site</td>
<td>$25.24/trip x 4 visits</td>
<td>$101</td>
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<tr>
<td><strong>Indirect Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of school for teaching/meeting</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td><strong>Total Expense</strong></td>
<td></td>
<td><strong>$596</strong></td>
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</table>
Appendix J

Return on Investment

*Table 2 Cost Improvement and Avoidance Analysis*

<table>
<thead>
<tr>
<th>Cost of School-Based program implementation</th>
<th>$596</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per student (if 25 parents/faculty attend)</td>
<td>$23.84</td>
</tr>
<tr>
<td><strong>Cost of 1 suicide</strong>*</td>
<td><strong>$1,329,553</strong></td>
</tr>
<tr>
<td>Benefit–cost ratio for investments in additional medical, counseling, and linkage services reducing suicide attempts per patient**</td>
<td>6:1</td>
</tr>
</tbody>
</table>

IF program costs $24 per student
AND benefit-cost ratio is 6:1
THEN Cost Avoidance is $144 per cost of suicide

The return on investment for this project is priceless due to the invaluable nature of human life

References

Appendix K

SOS Program Implementation Strategy

Theory of Change for the SOS Certified Training Institute

- 20 professionals are certified as regional SOS experts to encourage, train and support schools to implement SOS.

2-day SOS CTI Train-the-Trainer hosted in a region (state, county, etc.)

- Each certified trainer hosts 1 SOS Trusted Adult Training for ~50 parents and/or staff

- Each certified trainer hosts 1 SOS Implementer Training for ~50 school staff

- ~1,000 adults trained by certified trainer to identify and respond to signs of depression or suicide in youth

- ~1,200 adults trained by certified trainer to identify and respond to signs of depression or suicide in youth and implement the evidence-based SOS Program in the classroom

- ~140 schools train parents and staff using SOS Program adult training resources

- ~140 schools implement the SOS Program with middle and high school students

- ~7,000 adults trained to identify and respond to signs of depression or suicide in youth

- ~56,000 students receive evidence-based suicide prevention education and screening, decreasing suicide attempts by 40-64% (Sautaine et al., 2007; Schilling et al., 2015)

Prevent Youth Suicide

NOTE: Numbers are based on one CTI taking place, over a two year period. Theoretically, impact would continue to grow over time as trainers continue to train.

(SMH, 2018)
Appendix L

Presentation Slides (English)

**Agenda / Format**
- Introduction
- Pre Survey
- Signs of Suicide information / Lecture
- Video
- Group Discussion/Questions
- Post Survey
- Additional Comments

---

**Building Bridges:**
Suicide Prevention/Awareness
with Faculty and Parents

Nicole M. Neuman  
MSN, RN
DNP-FRNP Candidate, Class of 2019

Advisor - Dr. Jo Loomis
DNP, FNP-C, CHSE, CLC, ANLC, NCMP, CNL

---

**Introduction**
- About Me
  Doctor of Nursing Practice / Psychiatric Mental Health Nurse Practitioner Student
- Before We Begin
  Sensitive, serious topic – Take space if needed
- Purpose/Program
  Signs and symptoms of Suicide Program
  Gatekeeper
  Initial Phase
- Informed consent

---

**Pre Survey**
- Please take a few minutes to complete the survey before we begin
- Your participation is greatly appreciated!

---

**Important to the Community**
- Uncomfortable Topic
  Discussion of mental health issues – important prevention step
- Youth Development
  Normal vs. serious mental health issue
- Statistics
  2nd leading cause of death among people age 15-18...7
  Disenrolled mental health disorder – Inestible
- Recognize Symptoms
  Trusted Adult
  Help-Seeking Behaviors

---

**Risk Factors**
- Any personal trait or environmental quality:
  - History of abuse
  - Use of drugs / alcohol
  - History of mental illness
  - Previous suicide attempts
  - Access to lethal weapons
  - Exposure to suicidal behaviors in others
  - Family history of mental illness
  - History of significant loss
  - Struggles with sexual orientation/gender identity and fears of acceptance
- Not necessarily causes of suicide
Warning Signs

• Indication an individual may be experiencing depression or thoughts of suicide:
  - changes in eating or sleeping patterns
  - increased irritability/moodiness/rapid fluctuation in mood
  - decreased interest in usual activities/hobbies
  - isolation
  - involvement in illegal activities

• Occur over a period of at least two weeks
• Most suicidal individuals give warning signs

Precipitating Events

• Recent Life Event – Trigger
  - when thinking about suicide moves to an attempt
• Precipitating Events are confused with Causing Suicide
• No single event causes suicide
  - Other risk factors are typically present

Protective Factors

• Personal Traits or Environmental Qualities (that can reduce risk):
  - strong problem-solving skills
  - positive self-image
  - spiritual faith
  - close family relationships
  - strong peer support system
  - involvement in hobbies/activities
  - community connectedness
  - access to treatment
  - restricted access to firearms and other means

• No one is immune to suicide

Signs of Suicide Gatekeeper Video

SOS GATEKEEPER VIDEO
SOS Signs of Suicide® Prevention Program
A Program of Screening for Mental Health, Inc.

Screening Form

SOS Signs of Suicide® Prevention Program

Guidelines for Response

• Do not leave the student alone
  - keep them safe until additional help arrives
• Be open. Listen
• Contact parent/guardian
  - referral services, professional help
• Stay supportive
• ACT
  - Acknowledge
  - Care
  - Tell
Building Bridges with the Community

- School’s Response Protocol
  - see school’s Director/Headmaster
- Referral Plan
  - mental health resources list
- National Suicide Prevention Lifeline
  [available 24/7]
  1-800-273-TALK (8255)

Group Discussion

1. Why do you think suicide prevention is important for the community?
2. What risk factors/warning signs from the video stick out to you?
3. What are some protective factors you might find in your students?
4. What are some steps to take if a student discloses the need for help?
5. What qualities do you think make you a trusted adult?

Post Survey

- Thank you for your time and support of this project
- Please complete the post survey

Reference


*program purchased by DNP candidate for purposes of capstone project educating parents and faculty.

nmneuman@usfca.edu
Creando Conexiones:
Conciencia y Prevención del Suicidio con Padres y Profesores

Nicole M. Newman  MSN, RN
DNP-PMrNP Candidate, Class of 2019

Adviser - Dr. Jo Loomis
DNP, PMrNP, CHSE, CLC, ANLC, NCAIF, GNL

Agenda / Formato

- Introducción
- Pre Encuesta
- Signos de Suicidio Información / conferencia
- Video
- Discusión de grupo / Preguntas
- Post Encuesta
- Comentarios adicionales

Introducción

- Sobre MI
  Doctor de Práctica de Enfermería
  Estudiante Enfermera Psiquiátrica de Salud Mental Practicante
- Antes de Comenzar
  Temas sensibles y serio – tomar espacio si es necesario
- Propósito / Programa
  - Signos y síntomas de suicidio
  - Guía
  - Fase inicial
- Consentimiento Informado

Pre Encuesta

- Tómesa unos minutos para completar la encuesta antes de comenzar
- ¡Tu participación es altamente apreciada!

Importante para la Comunidad

- Tema incómodo
  Discusión de problemas de salud mental – importante paso de prevención
- Desarrollo juvenil
  Problema de salud mental normal y grave
- Estadística
  Segunda causa principal de muerte entre personas de entre 11 y 15 años …?
  Tratamiento de salud mental diagnóstico es tratable
- Reconocer los Síntomas
  Adulto de confianza
  Conducciones de búsqueda de ayuda

Factores de Riesgo

- Cualquier rasgo personal o ambiental:
  - Historia de aislamiento
  - Uso de drogas / alcohol
  - Historia de enfermedad mental
  - Incisión de suicidio previas
  - Acceso a armas letales
  - Exposición a comportamientos suicidios en otros
  - Antecedentes familiares de enfermedad mental
  - Historia de pérdida significativa
  - Lucha con la orientación sexual / identidad de género y temores de aceptación
- No necesariamente causas de suicidio
Señales de Advertencia

- Indicación de que una persona puede estar experimentando depresión o pensamientos de suicidio:
  - cambios dramáticos con su alimentación o ritmos de dormir
  - aumento de la inquietud / mal humor / fluctuación rápida en el estado de ánimo
  - disminución del interés en actividades / pasatiempos habituales
  - abandono
  - participación en actividades ilegales
- Ocurren durante un periodo de al menos dos semanas
- La mayoría de las personas suicidas dan señales de advertencia

Eventos Precipitantes

- Evento de vida reciente - desencadenante
  - cuando se piensa en el suicidio y se mueve a un intento
- Los eventos precipitantes se confunden con el causa del suicidio
- Ningún evento individual causa suicidio
- Otros factores de riesgo están típicamente presentes

Factores Protectores

- Rasgos personales o cualidades ambientales (que pueden reducir el riesgo):
  - fuente de tratamiento para resolver problemas
  - autoestima positiva
  - fuente espiritual
  - relaciones familiares cercanas
  - fuente de sistema de apoyo entre pares
  - participación en pasatiempos / actividades
  - conectividad comunitaria
  - acceso al tratamiento
  - acceso restringido a armas de fuego y otros modos
- Nadie es inmune al suicidio

Señales de Suicidio Guardián Video

(lo sentimos es solo disponible en inglés con subtítulos en español)

SOS GATEKEEPER VIDEO
SOS Signs of Suicide® Prevention Program
A Program of Screening for Mental Health, Inc.

La Forma Revisión de Suicidio

Normas en como responder

- No dejes al estudiante solo
  - manténlo seguro hasta que llegue ayuda adicional
- Mantengan abierto. Escucha
- Contactar un padre / tutor
  - servicios de referencia, ayuda profesional
- Mantengan abierto y disponible en darse apoyo
- ACT
  - Acknowledge (Razonar)
  - Care (Cuidar)
  - Tell (Decir)
Construyendo Conexiones con La Comunidad

- Protocolo de respuesta de la escuela
  informar Director de la escuela
- Plan de referencia
  lista de recursos de salud mental
- Línea de Vida Nacional para la prevención del suicidio
  (available 24/7)
  1-800-273-TALK (8255)

Discusión de grupo

1. ¿Por qué crees que la prevención del suicidio es importante para la comunidad?
2. ¿Qué factores de riesgo / señales del video te han sorprendido?
3. ¿Cuáles son algunos de los factores de protección que puede encontrar en sus estudiantes?
4. ¿Cuáles son algunos pasos a seguir si un alumno revela la necesidad de ayuda?
5. ¿Qué cualidades crees que te hacen un adulto de confianza?

Post Encuesta

- Gracias por su tiempo y apoyo de este proyecto
- Por favor complete la encuesta

Reference


*program purchased by DNP candidate for purposes of capstone project educating parents and faculty.

nnseaman@ucla.edu
Appendix M

Pre-/Post-Survey (English)

Pre / Post Survey

(Informed consent) Thank you for your participation. Your feedback is important. The purpose of this survey is to help measure your knowledge and attitudes about suicide. I do not anticipate that taking this survey will pose any risk or inconvenience to you. Your participation is strictly voluntary and you may withdraw your participation at any time. All information collected is confidential. There will be no connection to you individually in the results or in future publication of the results. Once the study is completed, I will share the results with you if you desire. If you have any questions please ask or contact me.

1. It's normal for teens to be moody, teens don't suffer from "real" depression.
   True False

2. People who talk about suicide don't really kill themselves.
   True False

3. If I talk to someone about their suicidal feelings it may cause them to commit suicide.
   True False

4. It's easy to tell when a teen is depressed because they cry all the time and are withdrawn from family and friends.
   True False

5. Depression is the only mental health problem connected to suicide.
   True False

6. If I noticed a student felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities, I would be concerned:
   strongly agree somewhat agree neutral somewhat disagree strongly disagree

7. If someone really wants to kill him/herself, there is not much I can do about it:
   strongly agree somewhat agree neutral somewhat disagree strongly disagree

8. If a student told me he/she is thinking about committing suicide, I would keep it to myself:
   strongly agree somewhat agree neutral somewhat disagree strongly disagree

9. Teenagers who try to kill themselves are "weak" or very disturbed:
   strongly agree somewhat agree neutral somewhat disagree strongly disagree

10. Please describe your current knowledge (ie. understanding, awareness) of the signs and symptoms of suicide:

11. Please describe your current attitudes (ie. thoughts, feelings) towards suicide and prevention:

12. Additional Comments:
Pre-/Post-Survey (Spanish)

Pre/Post Encuesta

(Consentimiento Informado) Gracias por la participación, tu opinión es importante. La intención de esta encuesta es ayudarme a medir tus conocimientos y actitudes sobre el suicidio. No anticipó que tomar esta encuesta sea de riesgo o inconveniente. Tu participación es estrictamente voluntaria y puede retirar tu participación en cualquier momento. Toda la información recopilada es confidencial. No habrá conexión con usted individualmente en los resultados o en la futura publicación de los resultados. Una vez que se complete el estudio, puedo compartir los resultados con usted, si Ud. lo desea. Si tiene alguna pregunta, pregúnte o contáteme.

1. Es normal que los adolescentes sean temperamentales, los adolescentes no sufren de depresión "real"
   - Verdadero
   - Falso

2. Las personas que hablan de suicidio en realidad no se suicidan
   - Verdadero
   - Falso

3. Si hablo con alguien acerca de sus sentimientos suicidas, puede causar que se suiciden
   - Verdadero
   - Falso

4. Es fácil saber cuándo un adolescente está deprimido porque llora todo el tiempo y se retira de su familia y amigos.
   - Verdadero
   - Falso

5. La depresión es el único problema de salud mental relacionado con el suicidio
   - Verdadero
   - Falso

6. Si notara que un estudiante se sentía tan triste o desesperado casi todos los días durante dos semanas o más seguidas que dejaban de hacer algunas actividades habituales, me preocuparía
   - Totalmente de acuerdo
   - Algo de acuerdo
   - Neutral
   - Algo en desacuerdo
   - Muy en desacuerdo

7. Si alguien realmente quiere suicidarse, no hay mucho que pueda hacer al respecto
   - Totalmente de acuerdo
   - Algo de acuerdo
   - Neutral
   - Algo en desacuerdo
   - Muy en desacuerdo

8. Si un estudiante me dijo que están pensando en suicidarse, no diría nada a nadie
   - Totalmente de acuerdo
   - Algo de acuerdo
   - Neutral
   - Algo en desacuerdo
   - Muy en desacuerdo

9. Los adolescentes que intentan suicidarse son "débiles" o muy perturbados
   - Totalmente de acuerdo
   - Algo de acuerdo
   - Neutral
   - Algo en desacuerdo
   - Muy en desacuerdo

10. Por favor describa su conocimiento actual (es decir: comprensión, conocimiento) de los signos y síntomas del suicidio

11. Por favor describa sus actitudes actuales (es decir: pensamientos, sentimientos) hacia el suicidio y la prevención

12. Comentarios adicionales
Appendix N

IRB certificate of Completion

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that Nicole Neuman successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 02/25/2017.

Certification Number: 2337373.
### Appendix O

Raw Data Pre-/Post-Assessment All Settings

#### Raw Data Pre/Post-Assessment Knowledge and Attitudes

<table>
<thead>
<tr>
<th></th>
<th>Site #1 (Faculty)</th>
<th>Site #2 (Faculty)</th>
<th>Site #2 (Parents)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Assessment</td>
<td>Post Assessment</td>
<td>Pre Assessment</td>
</tr>
<tr>
<td>1.</td>
<td>Its normal for teens to be moody, teens don’t suffer from “real” depression.</td>
<td>True</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>False</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>People who talk about suicide don’t really kill themselves.</td>
<td>True</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>False</td>
<td>12</td>
</tr>
<tr>
<td>3.</td>
<td>If I talk to someone about their suicidal feelings, it may cause them to commit suicide.</td>
<td>True</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>False</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>It’s easy to tell when a teen is depressed because they cry all the time and are withdrawn from family and</td>
<td>True</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>False</td>
<td>11</td>
</tr>
<tr>
<td>5.</td>
<td>Depression is the only mental health problem connected to suicide.</td>
<td>True</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>False</td>
<td>11</td>
</tr>
<tr>
<td>6.</td>
<td>If I noticed a student felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities, I would be concerned:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly agree</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>somewhat agree</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>neutral</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>somewhat disagree</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>7. If someone really wants to kill him/herself, there is not much I can do about it:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly agree</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>somewhat agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>neutral</td>
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<tr>
<td></td>
<td>somewhat disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>If a student told me he/she is thinking about committing suicide, I would keep it to myself:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly agree</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>somewhat agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>neutral</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>somewhat disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Teenagers who try to kill themselves are &quot;weak&quot; or very disturbed:</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>strongly agree</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>somewhat agree</td>
<td>3</td>
<td>3</td>
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<tr>
<td></td>
<td>neutral</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>somewhat disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix P

Question 1-5: Pre- and Post-Assessment by Audience
Appendix Q

Question 6-9: Pre- and Post-Assessment by Audience

Site #1 Faculty: Likert Comparison

Site #2 Faculty: Likert Comparison
Appendix R

Question 1-5: Percent of Correct Responses Compared between Site #1 and Site #2 (Faculty)
## Appendix S

### Qualitative Themes

<table>
<thead>
<tr>
<th>Qualitative Themes Analysis</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10. Please describe your current knowledge (i.e., understanding, awareness) of the signs and symptoms of suicide:</strong></td>
<td><strong>Limited Understanding:</strong></td>
<td><strong>Specific Knowledge:</strong></td>
</tr>
<tr>
<td></td>
<td>&quot;It's difficult to tell signs and symptoms&quot;</td>
<td>&quot;If a student is withdrawn from normalcy for two or more weeks it may be a sign of depression and needs immediate attention&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Low knowledge of specific signs&quot;</td>
<td>&quot;Change in behavior for two weeks&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Signs can be hidden - If an individual speaks out about it, it is often seen as not serious&quot;</td>
<td>(x2) &quot;change in mood, sense of hopelessness, isolation&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Signs and symptoms are varied some show depressive symptoms other student not&quot;</td>
<td>&quot;Changes in behavior, dangerous acts, or concerned communication&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;Insufficient&quot;</td>
<td>&quot;I am more aware now of signs&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;I am only briefly aware of the signs and symptoms of suicide&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;I would describe my knowledge as average&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Limited. Space that's why I am attending&quot;</td>
<td></td>
</tr>
<tr>
<td><strong>Association with Bullying/Social Media:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Depression, Isolation, Posts on social media&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Mental Illness, and bullying can contribute to suicide but they are not the only causes&quot;</td>
<td></td>
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<tr>
<td></td>
<td>&quot;As a teacher, I have witnessed students as young as 6th grade going through the process due to cyber bullying&quot;</td>
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<td><strong>11. Please describe your current attitudes (i.e., thoughts, feelings) towards suicide and prevention:</strong></td>
<td><strong>Desire to Learn:</strong></td>
<td><strong>Motivated:</strong></td>
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<tr>
<td></td>
<td>&quot;I am very open to learning more about suicide prevention&quot;</td>
<td>&quot;Empowered to help&quot;</td>
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<tr>
<td></td>
<td>&quot;Everyone should learn about suicide prevention, especially the warning signs&quot;</td>
<td>&quot;We got to!! ACT&quot;</td>
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<td></td>
<td>&quot;Eager to help students in need and to be as benevolent as I can with suffering students&quot;</td>
<td>&quot;There are a lot of signs and risk factors. It is important to address them&quot;</td>
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<td></td>
<td>&quot;All we can do to educate is important&quot;</td>
<td>&quot;More informed about how to identify and help&quot;</td>
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<td>&quot;I wondered what other things can cause it, things I can stop or help with&quot;</td>
<td>&quot;Availability communication support&quot;</td>
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<td><strong>Demand:</strong></td>
<td>&quot;It is a real thing, needs to be talked about&quot;</td>
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<td>&quot;There should be more prevention awareness b/c silence doesn't help anyone involved&quot;</td>
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<td>&quot;Definitely think it needs more nationwide conversation&quot;</td>
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<td>&quot;Suicide is a sad thing and should never occur, prevention is important&quot;</td>
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<td>&quot;Prevention is not taken seriously enough in our institution and in society in general&quot;</td>
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<td></td>
<td>&quot;I am really concerned about this issue with my students&quot;</td>
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<td>&quot;Lost. Unable to know what to do/how to act or react&quot;</td>
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<td>&quot;Mental health issue - taboo&quot;</td>
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</tbody>
</table>

**Site #1 – Blue**  **Site #2 – Green**