Mental Health Training: Pathway to Early Mental Health Intervention

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Abstract

There is an increase in the prevalence of mental health problems in the United States. Healthy People 2020's leading mental health indicator is to increase the delivery of care to those with mental health issues and lower the number of youth who experience a major depressive disorder. Teachers and non-teaching staff are well placed in the community to identify youth undergoing emotional distress and facilitate early interventions, yet do not receive adequate training in mental health. A project was undertaken to determine if a mental health training intervention affected the community youth mentors knowledge, attitude and self-efficacy towards helping youth with mental health issues. Three instruments with good validity and reliability namely Mental Health Literacy Scale (MHLS), Attitudes to Severe Mental Illness (ASMI) scale, and Gatekeeper Behavior Scale were used in pre intervention, immediately post intervention and two weeks post intervention questionnaires. The Wilcoxon Signed Ranks test indicated changes in the pre and post intervention scores as significant in knowledge, and attitude between pre intervention and immediately post intervention time periods. Cohen's effect size value suggested large, medium, small, and minimum clinical significance in the variables over period of time. Mental health literacy narrows the gap between symptom onset and intervention. Numerous mental health trainings are currently available worldwide. Schools and after school clubs in collaboration with hospital mental health and other community agencies are better equipped to bridge the gap. School staff report better confidence in addressing mental health and behavioral health issues among youth when equipped with additional resources within the school in the form of psychologists, social workers, and counselors.

Keywords: non-teaching staff, mental health training, youth mentors, major depressive disorder

The World Health Organization defines health as a state of complete physical, mental and social well- being and not merely the absence of disease or infirmity. It has also identified mental health as a state of complete wellbeing without psychological distress and impaired functioning (Delfabbro et al., 2018). Psychological wellbeing is a state in which individual flourishes emotionally and is able to reach goals, and thrive. An estimated 50% of adults suffering from psychological syndromes reported having its onset before 15 years of age (O'Reilly et al., 2018).

Problem Statement

Death by suicide is the second leading cause of death among youth aged 10 to 34 and 50% of all lifetime cases of mental illness begin by 14 years of age (National Alliance on Mental Illness [NAMI]. (2019). The average delay between the onset of illness manifestation and interventions is 11 years, and only 50.6 % of youth 6 to 17 years of age with mental health disorder received mental health services in 2016 (NAMI, 2019). Self-harm is a leading public health issue concerning adolescents internationally with a lifetime prevalence estimated at 16.1% to 18% in adolescents 11- 18 years of age (Townsend et al., 2018).

Children in Arizona spend an average of 6.43 hours per day and an average of 181 days per year in school (National Center for Education Statistics [NCES], 2008). Despite the integral role teachers and non-teaching staff play in mental health services in schools, they receive limited training to support the mental health of children (Ball et al., 2016). Nationwide, currently there is shortage of 6.4 percent of the psychiatrists we need and 15,000 behavioral health practitioner shortages by 2025 (Nenn, 2017). Over one-half of teachers and non-teaching staff are unable to identify traumatic stress in children (Long, Albright, McMillan, Shockley, & Price, 2018). They also do not possess knowledge regarding the procedures for referral, or obtaining additional resources, which make them less supportive to traumatized children (Le et al., 2017).

They feel overwhelmed in handling mental health needs due to their lack of knowledge (Imran, Rahman, Chaudhry & Asif, 2018).

Purpose and Rationale

Healthy people 2020's leading mental health indicator is to increase the number of children with mental health problems who receive treatment and reduce the number of adolescents 12 - 17 years of age who experience major depressive disorder (Office of Disease Prevention and Health Promotion [ODPHP], 2014). Teachers and non-teaching staff have an integral role in school mental health and specific training in mental health literacy will lead to early detection and referral in mental health of children. Desired outcomes include an increase in youth mentors and non-teaching staff's knowledge and beliefs regarding mental health, which will influence how they respond to children mental health crises. They will not feel overwhelmed and incompetent from lack of knowledge, and skills in the area of mental health. They will promote positive mental health and a sense of connectedness among stakeholders. They will experience reduction of stigma, knowledge improvement and confidence in providing support to the students.

A project was undertaken to examine if the implementation of an evidence- based mental health training will impact the knowledge, attitude and self-efficacy of youth mentors at after school club.

Background & Significance

Children and adolescents fail to receive adequate treatment for disorders related to mental health, with only 24% of children 6- 11 years of age receiving psychotherapy compared to 33 % who received psychotropic medications (Long, Albright, McMillan, Shockley, & Price, 2018). Mental health problems result in truancy, repeating a grade, dropping out of school, suicidal

thoughts and attempts, and developing internalizing and externalizing mental health disorders

(Schulte-Korne, 2016). In 2019, in the United States, 17% of youth, 6- 17 years of age

experienced a mental health disorder and only 51% received treatment (NAMI, 2019).

Being bullied is often associated with depressive symptomatology, suicidal behaviors,

self-harm, suicide attempt, higher somatization scores, more functional neurological symptoms,

and anxiety (John et al., 2018). There is strong evidence supporting the relationship between

bullying victimization and hospitalization for acute psychiatric illness (Leader et al., 2018).

Environmental triggers along with genetic predisposition lead to emergence of personality

disorders in adolescents. If untreated, adolescents are at risk of experiencing significant social,

educational, employment and financial impairments later in life (Townsend et al., 2018).

Teachers and non-teaching staff are strategically positioned in community settings to

bridge the gap in delay in mental health services. Evidence suggests that teachers do not receive

training to address students' mental health problems. Lack of training in early detection of

psychological distress contributes to delay in intervention and accessing mental health services

(Ball et al., 2016). Nationwide, there is shortage of behavioral health practitioners, and this

shortage is predicted to nearly double by 2025 (Nenn, 2017). There exists disparities in providing

services, with only 24% of children, aged 6 to 11 receiving psychotherapy compared to 33 %

who received psychotropic medications (Long, Albright, McMillan, Shockley, & Price, 2018).

Teachers and non-teaching staff report lack of adequate training and resource availability in

addressing youth mental health problems (Ball et al., 2016). Youth experiencing psychological

distress will likely experience truancy, repeating a grade, school drop-out, suicidal thoughts and

attempts, developing internalizing, and externalizing mental health disorders (Schulte-Korne,

2016). The ripple effect of mental illness includes higher chances of cardiovascular and

metabolic diseases, higher rates of unemployment, higher rates of school drop outs, and

substance use disorder. Per data updated in 2020 on NAMI website from CDC (Centers for

Disease Control and Prevention), in the US, the revenue lost in providing care for serious mental

illness were $193.2 billion dollars, and 60% of U.S. counties do not have a single practicing

psychiatrist.

   There is an increase in mental health disorders among youth over the last two decades

with greater interest in youth mental health worldwide. The high incidence of onset of mental

health disorders before 25 years of age and its persistent impact results in social and economic

burden. Additional challenges include delay in initial assessment and access to care; lack of

family involvement; youth to adult care transitioning challenges; and high rate of discontinuation

from services (Malla et al., 2018). A recent systematic review shows clear evidence that

adolescents with mental health issues have suboptimal academic performance and

unemployment. Additional factors contributing to poor mental health include social exclusion,

cannabis use, alcohol use and smoking (Hale &Viner, 2018). Mental health training programs

without doubt equip teachers and school staff to recognize mental health difficulties. Mental

health training programs offer a basic understanding to help with children's mental health issues,

facilitating early identification and intervention. Mental Health First Aid USA and ALGEE

(Assess for risk of suicide; Listen non-judgmentally; Give reassurance and information;

Encourage professional help; Encourage self-help) training notably improves mental health

knowledge, attitude, confidence and skills among teachers and non-teaching staff (Kidger et al.,

2016).

   Mental health literacy is foundational for improving access to care and reducing stigma

regarding mental illness (Kutcher et al., 2015). Health literacy which includes mental health

literacy is recognized globally as a foundation and strong determinant of good health. It is stronger than income, education level, employment status, and racial or ethnic group (Kutcher et al., 2016). The four components of mental health literacy are; (1) maintaining positive mental health; (2) understanding the types of mental health disorders and its treatment; (3) reducing mental health stigma; (4) knowing when to seek help and developing competencies in improving mental health (Kutcher et al., 2016). Mental health literacy is the foundation for mental health promotion, early identification of mental illness, intervention and continuing care. This has led to the clinically relevant PICOT question: Among youth mentors and non-teaching staff at after school club, does mental health training affect the knowledge, attitude and self-efficacy of youth mentors in helping youth with psychological distress over two week time period?

Search Strategy

A database search was accessed through the Arizona State University Library website. The databases searched were PsycINFO, Grey literature; worldwide services, Cochrane library and PubMed. The search strategies for each resource were guided by the PICOT question. The grey literature search initially yielded 942 studies. It did not yield any final studies without duplicate studies found in other database searches.

The database search involved the use of keywords. The search on the PsycINFO database included combinations of words 'mental health training for teachers', 'in schools', ' impact on students mental health'. Each term was linked with the Boolean term 'AND'. The initial search yielded 118 results. The same database search with different combinations including, 'mental health education', 'for teachers', ' mentors' 'in schools', yielded 93 search results. The final search yields from PsycINFO database were six studies.

The Cochrane Library database involved the use of keywords as 'mental health training', 'among teachers OR educators', and 'in schools'. Advanced filters were applied to the search criteria, which included randomized control trials, research articles, peer reviewed, systematic review, meta-analysis, within the past five years, published in English language only. The final yield was three studies.

The PubMed database involved the use of keywords, 'mental health education', 'AND', 'among school teachers' 'youth club leaders'. Advanced search filters were applied which included meta-analysis, randomized controlled trial, systematic reviews, within five years of publication, and studies done in English. The initial yield were 46 studies and the final yield was seven studies.

Critical Appraisal & Synthesis of Evidence

The Melnyk and Fineout-Overholt's (2011) rapid critical appraisal was used to evaluate the quality of the 10 articles selected for this literature review. Ten studies included the teaching staff and teachers both male and female. The studies were published from 2015 to 2019. The level of evidence ranged from VI to I. The largest sample size was 18, 896 teachers (Appendix B). The setting was primarily community schools. Among the study groups there were significant heterogeneity in the use of measurement tools. Two studies by the same author used similar measurement tools, questionnaires on knowledge, attitude and comfort. The duration of intervention was from one to three days. There was heterogeneity in the interventions, only two studies by Kutcher et al., 2015 and Kutcher et al., 2016 used the same intervention tool: Mental health literacy- African Guide Malawi version (Appendix B). Another study by Kidger et al., 2016 used the Mental Health First aid (MHFA) and ALGEE training to improve knowledge, attitude and skills among teachers and school staff. All the above mentioned studies reported

significant increase in knowledge, attitude, skills and comfort among teachers and non-teaching

staff towards youth with mental health issues. There were significant difference in the sample

size in the above mentioned studies. The Kutcher et al, 2015 & 2016 studies had sample size of

218 and 61 respectively and the setting was specific to Tanzania in Africa. The Kidger et al.,

2016 study had a sample size of 648 staff and setting was secondary schools in the United

Kingdom. A statistically significant increase in teachers and non-teaching staffs' knowledge of

mental illnesses, confidence in helping students and helping behaviors towards students were

reported. Due to the heterogeneity of interventions no single intervention was superior.

Conceptual Framework

The social cognitive theory, (SCT), developed by Albert Bandura, is a learning theory

that focuses on observational learning, modeling, and self- efficacy (Butts & Rich, 2015).

Principles of modifying behavior to improve health behavior are derived from SCT. Self-efficacy

influences health behavior change by enhancing confidence in one's ability to act and persist in

the act despite challenges or obstacles when applied to the mental health first aid (Appendix C)

and ALGEE training, the self- efficacy model suggests that staff will experience possible

outcomes of persistence, continued performance and approach challenges instead of avoiding

them. Mental health first aid (MHFA) training significantly improves mental health knowledge,

attitude, confidence and skills among teachers and non-teaching staff (Kidger et al., 2016).

Evidence Based Practice (EBP) Model

The Rosswurm and Larrabee's evidence based model (Appendix D) was used to guide

the project implementation. The focus is on changing the culture from status quo to

implementation of an EBP process. The model uses six steps which includes assessing the need

for change in practice; link problem, intervention; aid outcomes; synthesize best evidence;

design practice change; implement and evaluate change in practice (Reavy, 2016). The

Rosswurm and Larrabee model incorporates the self-efficacy model of Bandura to facilitate

practice change. One of the six steps of the EBP model is design practice change, guided by

evidence. Increasing mental health literacy is an evidence based practice change aimed at

improving children's mental health.

Methods

Increasing mental health literacy through the mental health first aid and ALGEE training

facilitate early identification, intervention and or referral for treatment. A project utilizing the

mental health training and the ALGEE model was implemented among youth mentors at after

school club in East Valley. The key stakeholders of this project included staff and manager of

after school club, club members, families, social workers, behavioral health counselors, case

managers, registered nurses, nurse practitioners, and psychiatrist.

The sample inclusion criteria included youth mentors, office staff and administrative staff

at the after school club. Participants were required to be 18 years of age or older and able to

speak, write, and understand the English language. Individuals who did not meet the inclusion

criteria were excluded. Completion of a pre-education questionnaire and attending the

educational session was considered consent for participation in this project. Participants were

informed regarding no physical risk associated with the training and questionnaires, and to skip

questions if they do not wish to answer. Project site approval was secured prior to project

implementation. Individuals willing to participate in the project attended a 45 minute mental

health training and filled out anonymous questionnaires pre intervention, immediately post

intervention, and 2 weeks post intervention. Each participant created a unique ID, and used it in

the pre and post intervention questionnaires.

Measures

The measures included sociodemographic data: age of participant, gender, ethnicity, level of education, experience as youth mentor, and if mental health training received in the past. The major variables measured were knowledge, attitude and self-efficacy in helping youth with mental health issues. The project evaluation questionnaire included six questions on the quality of the educational presentation (Appendix G). Three scales were utilized to measure knowledge, attitude and self-efficacy at pre intervention, immediate post intervention and two weeks post intervention.

Mental Health Literacy Scale (MHLS) (O'Connor & Casey, 2015) was used to measure participants' knowledge about mental health illnesses. This scale has good reliability, Chronbach's alpha (α = .873) and construct validity $p < .001$ (O'Connor & Casey, 2015). Five items from this scale was used to measure knowledge (see Appendix F)

Attitudes to severe Mental Illness (ASMI) scale (Madianos et al., 2012) was used to measure participants' attitudes toward mental Illness. This scale has good reliability, Chronbach's alpha (α = 0.88) and construct validity $p < 0.01$ (Madianos et al., 2012). Five items from this scale was used to measure the attitude (see Appendix F).

Gatekeeper Behavior Scale (Albright et al., 2016) was used to measure participants' self-efficacy in helping youth with mental health issues. This scale has high reliability, (α = .94), construct validity $p < .01$, and Cohen's d= -1.02. (Albright et al., 2016). Four items from this scale was used to measure self-efficacy (see Appendix F).

Results

Descriptive statistics were used to describe the sample and outcome variables. SPSS Statistical software was used to analyze data. The sample (n=11) were youth mentors at after

school club. The sample consisted of 55% (n=6) female and 45% (n=5) male. The age of the

participants ranged from 18 to 46 years, with a mean of 23.6 and (SD= 8.69). The Latino and

Hispanic ethnicity were the largest at 64%, and the African American and Caucasians were 18%

each. The educational level were high school graduate and some college at 91% and only 9% had

a college degree. The years of experience as a mentor ranged from 0- 25 years, with mean of

5.82 (SD= 7.56). The participants with 0- 5 years of experience as a youth mentor were 18 % and

27% had 11 to 15 years of experience. Those with mental health training in the past were 36%

and 64% had no mental health training in the past.

At pre intervention (T0) knowledge score had mean of 15.72 (SD= 1.79), attitude score

had a mean of 7.09 (SD= 1.92), and self-efficacy score had mean of 11.90 (SD= 3.56). At

immediately post intervention (T1) the knowledge score mean was 17 (SD=1.78), attitude score

mean was 6.09 (SD= 1.22) and self-efficacy score mean was 12.36 (SD= 1.29). At two weeks

post intervention (T2) the knowledge score mean was 16.29 (SD= 2.36), attitude score mean was

5.71 (SD= 1.38) and self-efficacy score mean was 11.86 (SD= 0.69). Appendix I, shows the

variables along with their mean and standard deviation. The sum of knowledge, attitude and self-

efficacy scores over time are represented in figures 6, 7 and 8 respectively in Appendices J and

K.

A non-parametric test was conducted due to small sample size and Wilcoxon Signed

Ranks test was used to describe key variables and to compare scores over time. Cohen's effect

size was utilized to determine the clinical significance of the project findings. The Wilcoxon

Signed Ranks test indicated changes in the pre and post intervention scores as statistically

significant in knowledge for T0 and T1 (Z = 2.35, p = .01), and between T0 and T1 attitude

score (Z = 2.07, p = .03). The T0 and T1 self-efficacy scores was not significant (Z = 1.12, p =

.26). The T1 and T2 knowledge score was (Z = 0.73, p = .46). The T1 and T2 attitude score was

(Z =1.00, p = .00). The T1 and T2 self-efficacy score was (Z = 1.00, p = .31). The T0- T2

knowledge score was not significant (Z = 0.27, p = .8). The T0-T2 attitude and self-efficacy

score were (Z = 1.5, p = .12), and (Z = 1.51, p = .13) respectively.

Cohen's effect size value suggested large clinical significance in knowledge score

between T0 and T1 (d = .89), small effect size for knowledge between T1 and T2 (d = .28), and

very small effect size for knowledge between T0 and T2 (d = .08) (see Appendix J). There was

medium effect size for attitude scores at T0-T1 (d = .74) and between T0 and T2 (d = .63) (see

Appendix K). There was no clinical significance seen in attitude between T1 and T2. The clinical

significance of self-efficacy score between T0 and T1 was very small (d = .13), between T1 and

T2 the effect size was small (d = .38) and between T0 and T2 the effect size was medium (d =

.63) (see Appendix L).

Descriptive statistics were utilized to examine the evaluation of the mental health training

intervention and 91 % strongly agreed that the content presented was appropriate to address

mentor's understanding of mental health. 90% agreed with improvement in mental health

knowledge. About 72% agreed with being more comfortable in identifying signs and symptoms

of mental distress, 64% agreed they felt confident in identifying students who may have mental

health problem, 82% reported better understanding about helping student access appropriate

mental health care in the community, and 82% reported they were more comfortable in

supporting students who may have a mental health problem.

Discussion

Several mental health training interventions are available, namely, mental health

awareness training; anti stigma intervention; online anti-stigma video; MHFA; audio-visual

synchronous podcast related to autism; and many more (Booth et al., 2017). Students of teachers trained in MHFA reported receiving help and resources regarding mental health problems compared to students of teachers who did not receive the training. Teachers also reported increase in confidence and knowledge (Booth et al., 2017).

More recent developments have been in mental health training intervention for school nurses and other health providers in schools. Recommendations for meeting the barriers include web based accessible training modules, including a mental health assessment triage flowchart for step by step guidance for school nurses, and inclusion of resources for crisis management.

Several positive outcomes can be concluded from this project. The project revealed statistically significant outcomes over time in knowledge and attitude. The result suggested further on-going training to ensure knowledge and self-efficacy is sustained over time. The participants were given resources for a one day MHFA and ALGEE training at their nearest location in order to sustain the outcomes of the project intervention. The participants need further training in identifying symptoms of psychological distress among youth.

Additional resources within the after school clubs like counselors and social workers provide linkage of students and families to mental health services in the community. A multi-tiered system within the school providing prevention, assessment, screening, identification, intervention and treatment services have been accepted widely by clinicians and educators.

Conclusion

Increasing mental health literacy is a community based preventive measure in maintaining psychosocial wellbeing among youth. Early intervention in mental health reduces hospitalization and healthcare expenditure. Even though teachers and non-teaching staff play a vital role in the early identification of mental illness they admit to high degree of uncertainty in

assisting children experiencing psychological distress. With the increase in occurrence of

depressive symptoms, suicidal thoughts and attempts among adolescents in Arizona, there is

evidence in literature reviewed and the mental health training project implemented that mental

health training intervention significantly improves knowledge, attitude, and self-efficacy among

staff interacting with youth experiencing mental health issues. This grass-root level preventive

measure facilitates early identification of symptoms of mental health disorders among youth. The

implementation of this practice change will reduce the current gap of onset of behavioral health

symptoms and its therapeutic intervention.

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Appendix A

Table1

Evaluation Table of Quantitative Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings/ Results	Level/Quality Of Evidence; Decision for practice/ application to practice
Ball et al., (2016). School mental health content in state in- service K-12 teaching standards in the United States. **Funding:** None **Bias:** None. **Country:** US	Teacher competency framework.	**Design:** quantitative content analysis **Purpose:** To examine the difference and similarities in content across state standards for teachers and the extent to which state standards for teachers include competencies for SMH.	N= 40 **Sample Type**: In-service teaching standards documents. **Inclusions:** Documents describing the standards for in-service for K-12 teachers that were passed by legislation. **Exclusion:** Standards in debate, in process, awaiting licensure. **Attrition:** None	**IV:** SMH competency content in state standards documents and in InTASC **DV1:** TC in policies and laws. **DV2:** TC in provision of learning support. **DV3:** TC in collection and use of data measuring student behavior. **DV4**: TC in communication. **DV5**: TC in engagement in multiple systems. **DV6:** TC in personal and professional growth.	Code books. Pilot test. Agreement rate of coders.	Descriptive statistics	**DV1:** n = 29 60% of states. **DV2:** n = 43 89.6% states. **DV3**: n= 48 100% of states. **DV4**: n = 34 70.8% of states. **DV5**: n= 44 90% of states.	**LOE**: V **Strengths:** National view of requirements of in service. **Weaknesses:** descriptive quantitative study. **Conclusions:** Study shows the extent to which state teaching standards reflect SMH competencies. **Feasibility**: Recommended for understanding state-standards for teachers in SMH competency.

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings/ Results	Level/Quality Of Evidence; Decision for practice/ application to practice
Franklin et al., (2017). The effectiveness of psychosocial interventions delivered by teachers in schools: a systematic review and meta-analysis. **Country**: US. **Funding**: None. **Bias**: None.	Response to intervention framework.	Systematic review and meta-analysis of RCT's. **Purpose**: To determine the outcomes of teacher delivered psychosocial interventions on students internalizing and externalizing symptoms.	E databases= 9 Websites= 19 Experts= 6 Studies published from 2000 to 2016. **Setting**: School classrooms. **Exclusions**: If study did not involve teachers; study did not report information for calculating effect size; study samples were not independent; studies that did not measure	**IV**: PI **DV1**: Internalizing outcomes. **DV2**: Externalizing outcomes. **Definition**: PI is delivered in a school setting to improve students behavioral, emotional or social functioning. Internalizing symptoms are anxiety, depression and somatic. Externalizing: impulsive, disruptive and substance use symptoms.	Hopelessness scale for children. Children's pessimistic explanatory style. Externalizing outcomes measures.	Bivariate meta-regression.	**DV1**: d= .133 CI= 95% $p < 0.5$ **DV2**: d= .015 CI= 95% $P > .05$	**LOE**: I **Strength:** Exhaustive literature search. **Weakness**: Interventions were not culturally competent, not specific for ethnic minority youth. **Conclusions:** School based PI delivered by teachers are more effective with internalizing symptoms. **Feasibility**: PI by teachers are effective in internalizing and externalizing outcomes

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John et al., (2018). Self-harm, suicidal behaviors and cyberbullying in children and young people: systematic review. **Country**: UK **Funding:** None. **Bias**: None.	Inferred to be the social cognitive theory.	Systematic Review **Purpose:** To review evidence for associations between CB involvement and SH or SB in children and young people. **Inclusion:** Studies that examined any association between CB involvement and SH or SB in a sample aged under 25 years	Articles= 33 N= 156,384 Electronic search from 01/1996 to 02/2017 across MEDLINE, Cochrane and PsycINFO	**IV**: Bullying via electronic communication-CB. **DV1**= SH **DV2**=SB **DV3**= Suicide attempt **Definition**: Bullying is an aggressive, intentional act carried out by a group or an individual repeatedly overtime against a victim who cannot easily defend himself or herself CB is bullying that occurs via electronic forms of contact.	Critical appraisal of the paper. Data extraction sheet. Independent reviewers.	Meta-Analysis Forest plot Der Simonian and Laird random-effects model.	**DV1**: OR 2.10 CI 95% **DV2**: OR 2.57 CI 95% **DV3**: OR 1.21 CI 95%	**LOE**: 1 **Strengths**: Meta-analysis, large pool of population. **Weakness**: No analysis on intervention, no mention of type of CB, frequency and gender. **Conclusion:** CB victims have higher risk of SH and SB.

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Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings/ Results	Level/Quality Of Evidence; Decision for practice/ application to practice
Kutcher et al., (2016). A school mental health literacy curriculum resource training approach: effects on Tanzanian teachers' mental health knowledge, stigma and help seeking efficacy. **Country:** The United Republic of Tanzania. **Funding**: Grand Challenges, Canada. **Bias:** None.	Inferred to be the Social Cognitive Theory.	Cohort study Pre and post study design. **Purpose:** To evaluate the impact of participating in the refresher training exercise on the mental health knowledge and attitudes of teachers.	N=61 **Setting:** Secondary school in Tanzania. **Exclusions:** Teachers selected by education administrative authorities from 35 schools in Arusha and Meru districts of Tanzania. Teachers previously trained in AGMv. **Attrition:** 18%	**IV:** Refresher training in AGMv. **DV1**: Teachers knowledge change. **DV2:** Teachers attitude change. **DV3:** Teachers comfort in addressing the mental health needs of students.	Pre and posttests. Knowledge: Pretest $\alpha=0.601$ Posttest $\alpha=0.435$ Attitude: Pretest $\alpha=0.661$ Posttest $\alpha=0.631$ Comfort level: Pretest $\alpha=0.667$ Posttest $\alpha=0.748$	Independent samples t test. Paired t test. Descriptive statistics	**DV1:** $p < 0.001$ $d = 1.14$ **DV2:** $p < 0.001$ $d = 0.50$ **DV3:** $p > 0.05$ $d = 0.19$	**LOE: VI** (Evidence from a single descriptive study). **Strength:** modest sample size, significant outcomes. **Weakness:** Cohort study, modest sample size, participants not generalized to Tanzania. **Conclusion**: The AGMv is an effective tool for increasing MHL within the school system at an international level.

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Kutcher et al., (2015). Improving Malawian teachers' mental health knowledge and attitudes: an integrated school mental health literacy approach. **Funding**: Grand Challenges, Canada. **Country:** The Republic of Malawi. **Bias**: None.	Inferred to be the Social Cognitive Theory.	Repeated measures design **Purpose**: To evaluate the impact of training educators on the use of mental health curriculum in improving Educators positive attitudes and a decrease in stigmatizing attitudes towards MH.	N 218 F 96 M 121 Gender Unknown 1 **Pop. type:** Teachers and YCL from primary and secondary schools. **Setting**: Semi urban community in The Republic of Malawi. **Inclusions:** Teachers and YCL selected by the MOE from both primary and secondary school. **Attrition:** 11% lost to post-attitude scale.	**IV**: Educator training on use of AGMv **DV1:** Knowledge of MH. **DV2:** Attitude towards MH. Educator training is a 3 day training through 6 modules on LO, MC, LP, CA and TR	Pretest and Posttest Questionnaires on Knowledge (α= 0.638) and Attitude (α= 0.549).	Paired t test	**DV1:** Knowledge P = < 0.0001 d = 1.16 **DV2:** Attitude P = < 0.0001 d = 0.79	**LOE:** IV **Strength:** Large N, low risk, non-invasive intervention, low attrition rate. **Weakness**: Non randomized non control group. Demographic limitation, funding needs for program implementation. **Conclusions:** MH literacy among teachers reduces stigma of MH and improves knowledge of MH among teachers. **Feasibility**: Potential for reducing the burden of MH care costs and improvement in psychosocial wellbeing among student.

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Leader et al., (2018). Association between bullying and pediatric psychiatric hospitalizations **Funding**: The Department of Pediatrics, SIUH. **Bias**: None **Country**: USA	Inferred to be the Social Cognitive Theory	Correlational Study **Purpose**: To study correlation between BV and AH for MH related problems	N= 185 **Pt. Type**: White 46%, Hispanic 29%, AA 10%, Other 12%. Unknown ethnicity 18%. Enrolled in Grades 3 to 12. **Setting:** Pediatric Inpatient unit in SIUH. **Inclusions**: Children in public or private schools in grades 3- 12. Capable of reading and comprehending the questionnaire. **Attrition rate:** 6%	**IV**: Psychiatric hospitalization in children **DV1**: BV in public schools **DV2**: BV in private schools **DV3**: BV in IPP admissions. **DV4**: BV and suicidal ideation. **DV5**: BV and psych consult and social consult. BV is being a victim of physical, verbal and/ or cyber bullying.	**OBQ** Extensively validated and included in 2011 compendium by CDC.	Fisher's exact test Logistic regression	No difference in **DV1** versus **DV2** Pr > Z= 0.5064 **DV3:** Significant Mean BV Pr > Z < 0.0001 **DV4:** Significant Pr > Z< 0.0001 **DV5:** Significant Pr > Z < 0.0001 Location of BV: hallway 47%, stairwells 47%, lunchrooms 42%. Methods of BV: Verbal 17%, Exclusions 16%, rumors 16%.	**LOE**: IV **Strengths**: Elevates the perception of risk of a behavior. Low risk, low attrition rate, correlational study. **Weakness**: OBQ sub-scores had not been independently validated. OBQ intended for school setting not Hospital. **Conclusions**: Pediatric psychiatric inpatient status has a serious link to psychosocial wellbeing and BV. **Feasibility**: Strong evidence exists between BV and hospitalization for acute psychiatric illness.

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Long et al., (2018). Enhancing educator engagement in school mental health care through digital simulation professional development. **Country**: US **Funding:** Department of prevention and community health at the Milken institute of school of public health at The George Washington University. **Bias**: None	Inferred to be the Social Cognitive Theory	Randomized control trial.	**N**= 18,896 **IG**= 9427 **CG**= 9469 **Population Type**: Teachers in elementary schools. **Setting:** Elementary school **Inclusion:** Elementary teachers who completed some part of the training and evaluation. **Exclusion:** Participants who did not complete all required parts of the study. **Attrition** = 31%.	**IV**: Self-paced online simulation for 45 to 90 minutes. **DV1:** Gatekeeper behavior preparedness. **DV2:** Gatekeeper behavior likelihood. **DV3:** Gatekeeper behavior self-efficacy. Gatekeeper behavior is the positive role among teachers in SMH on identification and referral of students with behavioral health issues.	Gatekeeper behavior scale	Multivariate analysis. Hotelling's T2 Internal reliability for preparedness .95, for likelihood .85, for self-efficacy .94	**DV1:** Post training preparedness increased significantly in CG, $p < 0.001$ **DV2:** Likelihood of IG higher than CG, $p < 0.001$ **DV3:** Self-efficacy of the IG significantly higher than CG, $p < 0.001$ Knowledge, attitudes, skills and confidence increased significantly after training	**LOE**: II **Strengths**: Large sample size. Randomized controlled trial, low risk. **Weakness:** Modest attrition rate; limited to elementary teachers; short follow up time. **Conclusions:** Virtual online simulation teachers training increases preparedness, likelihood and self-efficacy of teachers

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Townsend et al., (2018). A whole of school intervention for personality disorder and self-harm in youth: a pilot study of changes in teacher's attitudes, knowledge and skills. **Country:** Australia **Funding:** New South Wales Department of Education, New South Wales Ministry of Health. **Bias:** None	WHO's whole of School Framework	**Design:** Pilot Study- non randomized non controlled trial; Pre and Post Test. **Purpose:** To evaluate the ability and confidence of class teachers to respond to students with CMH and self-harm in the school setting, after participating in training provided by school counselors.	N= 400 **Mean Age:** 42 y.o. **Pt. Type**: Female = 285, ST from rural and urban communities **Setting:** Public Secondary School in Australia. **Inclusions:** ST in public schools in New south Wales, Australia. **Attrition:** None discussed	**IV:** Training for ST **DV1:** KDS **DV2:** ADSH **DV3:** AS with CMH issues Training is workshop on PD theory & skills training for identifying and responding to young people with CMH needs.	**Questionnaire** KDSQ, ADSHQ, (α=.83 pre- test) (α= .89 post- test), ASQ	Paired sample *t*-test	.**DV1**: d= 0.27 CI= -0.62 **DV2**: d= 0.55 p value= < .001 CI= -3.29 **DV3**: Skills & Confidence p value= <.001 CI= -1.01, - 0.84 D= 0.67	**LOE**: IV **Strengths:** Large population size, low risk, non-invasive intervention. High level of significance with p value <0.001 **Weaknesses:** Public secondary school teachers only, reliability of KDSQ is unknown. **Conclusions:** Teachers training on CMH improves the knowledge, attitude, skills and confidence of teachers towards adolescent students. **Feasibility:** Effective in early identification and intervention in mental health issues in Adolescents

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Appendix B

Table 2

Evaluation Table of Mixed Studies

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings/ Results	Level/Quality Of Evidence; Decision for practice/ application to practice
Eustache et al., (2017). Mental health training for secondary school teachers in Haiti: a mixed methods, prospective, formative research study of feasibility, acceptability and effectiveness in knowledge acquisition. **Country:** Haiti. **Funding**: National Institute of Mental Health. **Bias**: None	Task sharing Framework.	Prospective and convergent Mixed method. **Purpose**: To determine teacher's role as 'teacher-accompagnateur' in providing students with guidance and support that could facilitate	**N**= 22 Male= 18 Female= 4 Mean age= 40 **Population Type**: Secondary school teachers in Haiti's Central Plateau. **Setting:** School in rural Haiti **Inclusions**: Teachers nominated by their principals from public and independent schools in Haiti's Central Plateau. **Attrition rate:** 8.3%	**IV**: Two and a half day SMH training for teachers. **DV1**: Feasibility and acceptability of teachers training to teachers. **DV2**: Knowledge and attitude of teachers to SMH. Teacher 'Accompagnateur' is a teacher's role of guidance and support.	Likert scales. Mean scores Pre- post training assessments. Self-report written open-ended responses. FGD interview MHKA At Time 0 α= 0.69 At Time 1 α= 0.84 At Time 2 α= 0.81	ANOVA Paired sample *t* test Shapiro- Wilk test	**DV1** teachers participation= 91.7% Participants completing training= 100% **DV2**:Increase in knowledge and attitude p< 0.001 & p= 0.011 respectively. Time 2 scores higher than pre test scores for knowledge and attitude	**LOE**: VI **Strengths**: Mixed methods design. **Weakness**: Small sample size; teachers selected by principals; unstandardized measure with unknown validity. **Conclusions**: SMH training is acceptable, feasible and improves knowledge, and attitude among teachers towards SMH **Feasibility**: Use of unstandardized measures is not recommended.

Key: **AA**- African American; **ADSH-** Assessment towards Deliberate Self Harm; **ADSHQ-** Assessment towards Deliberate Self Harm Questionnaire; **AGMv –** African Guide: Malawi version**; AH-**Acute hospitalization; **ALGEE**- assess risk of suicide, listen non judgmentally, give advice and information; **AS**- Attitudes and Skills; **ASQ**- Attitudes and Skills Questionnaires; **BV**- Bullying Victimization; **CB**- cyberbullying; **CDC**- Center for Disease Control; **CG-** control group; **CI**- confidence interval; **CMH**- Complex Mental Health; **d**- Cohen's; **DV**- Dependent Variable; **F**-Female; **FGD**-focus group discussions; **IG**- Intervention group; **InTASC**- interstate teacher assessment and support consortium; **IPP**- In- patient pediatric; **IV**- Independent Variable; **KDS**- Knowledge of Deliberate Self Harm; **KDSQ**- Knowledge of Deliberate Self Harm Questionnaire; **LOE**- Level Of Evidence; **M**- Male; **MH**- Mental health; **MHFA**- mental health first aid; **MHKA**- mental health knowledge and attitudes; **MHL**- mental health literacy; **MOE**- Ministry of education; **N**- Number of participants; **OBQ**- Olweus Bully/Victim Questionnaire; **OR**- odds ratio; **p**- level of significance; **PD**- Personality Disorder; **PHQ**- patient health questionnaire; **PI**- psychosocial intervention; **RCT**- randomized control trial; **SB**- suicidal behaviors; **SH**- self harm; **SIUH**- Staten Island University Hospital; **SMH**- school mental health; **ST**- School Teachers; **TC**- teacher competency; **Time 0**- baseline; **Time 1**- immediate post training; **Time 2**- 6-9 weeks post training; **WEMWBS**- Warmick Edinburg Wellbeing scale; **WISE**- well-being in secondary education; **WHO**- World Health Organization; **YCL**- Youth club leaders; **y.o.**- year old; α – Cronbach's alpha value.

					Unstandardized written assessment		p < 0.001 & p = 0.002 respectively	

Citation	Theory/ Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables & Definitions	Measurement	Data Analysis	Findings/ Results	Level/Quality Of Evidence; Decision for practice/ application to practice
Kidger et al., (2016). A pilot cluster randomized controlled trial of a support and training intervention to improve the mental health of secondary school teachers and students – the WISE study. **Country:** UK **Funding**: National Institute for Health Research's School for	Logic model of the WISE Intervention.	Pilot cluster randomized controlled trial **Purpose:** To provide support for staff mental health and strengthen their ability to support students.	Schools= 6 Staff= 648 **Setting:** Secondary schools in English administrative areas. **Exclusion:** Fee paying schools outside the local English Administrative areas.	**IV:** WISE intervention for teachers. **DV1:** Will staff participate in RCT? **DV2:** Is MHFA training appropriate and does it improve MH knowledge and attitude among staff? **DV3:** Is a peer support service feasible and sustainable?	Strength and difficulties questionnaire Interviews and audio recording. Inspection of transcripts WEMWBS PHQ-9 for assessing staff depression.	Linear and Logistic regression. Qualitative data analysis.	**DV1:** Total 648 staff Attrition greater in control schools vs, intervention schools. 74.5% vs, 55.9% **DV2:** Those who received training had better knowledge, less stigmatizing attitudes and greater tendency to use ALGEE	**LOE:** IV **Strength:** qualitative and quantitative findings indicate that both adults and youth MHFA were effective in improving knowledge, attitude, confidence and skills in supporting others **Weakness:** Imbalance between CG and IG. CG had low staff response rate. **Conclusion**: MHFA and ALGEE training increases the knowledge, attitude, confidence and skills

Key: **AA**- African American; **ADSH-** Assessment towards Deliberate Self Harm; **ADSHQ-** Assessment towards Deliberate Self Harm Questionnaire; **AGMv –** African Guide: Malawi version**; AH-**Acute hospitalization; **ALGEE**- assess risk of suicide, listen non judgmentally, give advice and information; **AS**- Attitudes and Skills; **ASQ**- Attitudes and Skills Questionnaires; **BV**- Bullying Victimization; **CB**- cyberbullying; **CDC**- Center for Disease Control; **CG-** control group; **CI**- confidence interval; **CMH**- Complex Mental Health; **d**- Cohen's; **DV**- Dependent Variable; **F**-Female; **FGD**-focus group discussions; **IG**- Intervention group; **InTASC**- interstate teacher assessment and support consortium; **IPP**- In- patient pediatric; **IV**- Independent Variable; **KDS**- Knowledge of Deliberate Self Harm; **KDSQ**- Knowledge of Deliberate Self Harm Questionnaire; **LOE**- Level Of Evidence; **M**- Male; **MH**- Mental health; **MHFA**- mental health first aid; **MHKA**- mental health knowledge and attitudes; **MHL**- mental health literacy; **MOE**- Ministry of education; **N**- Number of participants; **OBQ**- Olweus Bully/Victim Questionnaire; **OR**- odds ratio; **p**- level of significance; **PD**- Personality Disorder; **PHQ**- patient health questionnaire; **PI**- psychosocial intervention; **RCT**- randomized control trial; **SB**- suicidal behaviors; **SH**- self harm; **SIUH**- Staten Island University Hospital; **SMH**- school mental health; **ST**- School Teachers; **TC**- teacher competency; **Time 0**- baseline; **Time 1**- immediate post training; **Time 2**- 6-9 weeks post training; **WEMWBS**- Warmick Edinburg Wellbeing scale; **WISE**- well-being in secondary education; **WHO**- World Health Organization; **YCL**- Youth club leaders; **y.o**.- year old; **α** – Cronbach's alpha value.

Public Health Research **Bias**: None	**DV4:** What sample size is required for a full cluster RCT with score on WEMWBS as the primary outcome?	$p < 0.01$ **DV3:** peer support service utilization 6.3% Those finding it helpful 73.7% **DV4:** Sample size of 24 schools	towards mental health among teachers.

Key: **AA**- African American; **ADSH-** Assessment towards Deliberate Self Harm; **ADSHQ-** Assessment towards Deliberate Self Harm Questionnaire; **AGMv –** African Guide: Malawi version**; AH-**Acute hospitalization; **ALGEE**- assess risk of suicide, listen non judgmentally, give advice and information; **AS**- Attitudes and Skills; **ASQ**- Attitudes and Skills Questionnaires; **BV**- Bullying Victimization; **CB**- cyberbullying; **CDC**- Center for Disease Control; **CG-** control group; **CI**- confidence interval; **CMH**- Complex Mental Health; **d**- Cohen's; **DV**- Dependent Variable; **F-**Female; **FGD**-focus group discussions; **IG**- Intervention group; **InTASC**- interstate teacher assessment and support consortium; **IPP**- In- patient pediatric; **IV**- Independent Variable; **KDS**- Knowledge of Deliberate Self Harm; **KDSQ**- Knowledge of Deliberate Self Harm Questionnaire; **LOE**- Level Of Evidence; **M**- Male; **MH**- Mental health; **MHFA**- mental health first aid; **MHKA**- mental health knowledge and attitudes; **MHL**- mental health literacy; **MOE**- Ministry of education; **N**- Number of participants; **OBQ**- Olweus Bully/Victim Questionnaire; **OR**- odds ratio; **p**- level of significance; **PD**- Personality Disorder; **PHQ**- patient health questionnaire; **PI**- psychosocial intervention; **RCT**- randomized control trial; **SB**- suicidal behaviors; **SH**- self harm; **SIUH**- Staten Island University Hospital; **SMH**- school mental health; **ST**- School Teachers; **TC**- teacher competency; **Time 0**- baseline; **Time 1**- immediate post training; **Time 2**- 6-9 weeks post training; **WEMWBS**- Warmick Edinburg Wellbeing scale; **WISE**- well-being in secondary education; **WHO**- World Health Organization; **YCL**- Youth club leaders; **y.o.**- year old; **α** – Cronbach's alpha value.

Appendix C

Table 2

Synthesis Table

					Literature Review						
Author	Ball	Eustache	Franklin	John	Kidger	Kutcher	Kutcher	Leader	Long	Townstead
Year	2016	2017	2017	2018	2016	2016	2015	2018	2018	2018
Design/LOE	V	VI (mixed study)	I	I	IV (mixed study)	VI	IV	IV	II	IV
					Study Characteristics						
Sample size/ Studies	22	24	24	33	648	61	218	185	18,896	400
Community setting		X			X	X	X		X	X
Measurement tools	CB	LS, PPTA, SRWOR, FGD, MHKA	CDI, HSC, CPES	CA, DES, IR	SDQ, WEMWBS	Questionnaire	Questionnaire	OBQ	GBS	KDSQ, ADSHQ, ASQ
Duration of Intervention		2.5 days			2 days	3 days	3 days			1 day
					Interventions						

Key; **ADSH-** Assessment towards Deliberate Self Harm; **ADSHQ-** Assessment towards Deliberate Self Harm Questionnaire; **AGMv –** African Guide: Malawi version; **ALGEE-** assess risk of suicide, listen non judgmentally, give advice and information; **ASQ-** Attitudes and Skills Questionnaires; **BV-** Bullying Victimization; **CA-** critical appraisal; **CB-** Codebook; **CDI-** children depression inventory; **CMH-** chronic mental health; **CPES-** Children's pessimistic explanatory style; **DES-** data extraction sheet; **DV-** Dependent variable; **FGD-** Focus group discussion; **GBS-** gatekeeper behavior scale; **HSC-** Hopelessness scale for children; **IR-** independent reviews; **LOE-** Level of evidence; **LS-** Likert scale; **KDSQ-** Knowledge of Deliberate Self Harm Questionnaire; **MH-** Mental health; **MHFA-** mental health first aid; **MHKA-** mental health knowledge and attitude; **MHL-** mental health literacy; **MI-** Motivational interviewing; **OBQ-** Olweus Bully/Victim Questionnaire; **PPTA-** Pre post training assessment; **SA-** suicide attempt; **SB-** suicidal behaviors; **SDQ-** strength and difficulties questionnaire; **SH-** self harm; **SI-** suicidal ideation; **SMH-** School mental health; **SRWOR-** Self- report written open ended responses; **WEMWBS-** Warmick Edinburg Wellbeing scale; **WISE-** well-being in secondary education; **▲-** Increase; **-* Statistically significant with **p** ≤ 0.050

WISE					X				
SMH	X								
TAPS Training		X							
Psychosocial			X						
MHFA-ALGEE					X				
MHL-AGMv						X	X		
Simulation - MI								X	
CMH Training									X
DV									
Skills									▲*
Behaviors								▲*	
Professional growth									
Acceptability		▲							
Knowledge and Attitude		▲*			▲	▲*	▲*		▲*
Internalizing			*						
SH/SB/SA				▲					
Comfort						▲*			
BV & SI							▲*		

Key; **ADSH-** Assessment towards Deliberate Self Harm; **ADSHQ-** Assessment towards Deliberate Self Harm Questionnaire; **AGMv –** African Guide: Malawi version; **ALGEE-** assess risk of suicide, listen non judgmentally, give advice and information; **ASQ-** Attitudes and Skills Questionnaires; **BV-** Bullying Victimization; **CA-** critical appraisal; **CB-** Codebook; **CDI-** children depression inventory**;** **CMH-** chronic mental health; **CPES-** Children's pessimistic explanatory style; **DES-** data extraction sheet; **DV-** Dependent variable; **FGD-** Focus group discussion; **GBS-** gatekeeper behavior scale; **HSC-** Hopelessness scale for children; **IR-** independent reviews; **LOE-** Level of evidence; **LS-** Likert scale; **KDSQ-** Knowledge of Deliberate Self Harm Questionnaire; **MH-** Mental health; **MHFA-** mental health first aid; **MHKA-** mental health knowledge and attitude; **MHL-** mental health literacy; **MI-** Motivational interviewing; **OBQ-** Olweus Bully/Victim Questionnaire; **PPTA-** Pre post training assessment; **SA-** suicide attempt; **SB-** suicidal behaviors; **SDQ-** strength and difficulties questionnaire; **SH-** self harm; **SI-** suicidal ideation; **SMH-** School mental health; **SRWOR-** Self- report written open ended responses; **WEMWBS-** Warmick Edinburg Wellbeing scale; **WISE-** well-being in secondary education; **▲-** Increase; *****- Statistically significant with **p** ≤ 0.050
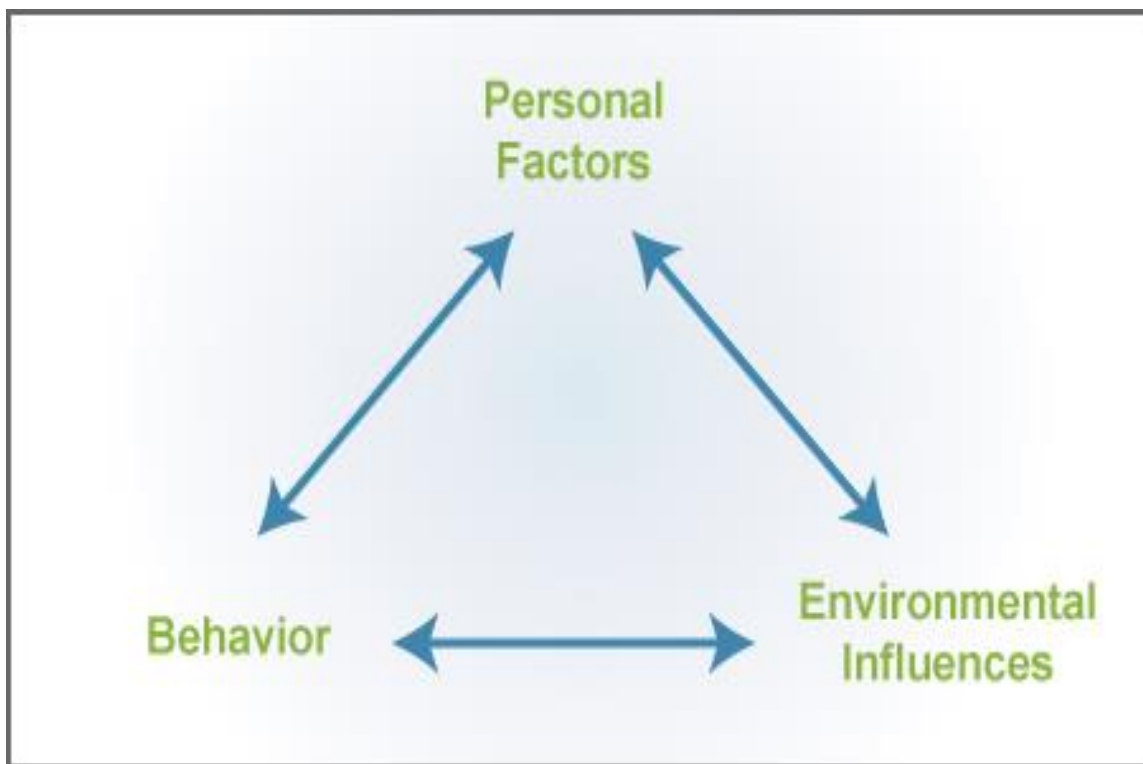
Appendix D

Figure 1

Bandura's Social Cognitive Theory

(Social and Behavioral Theories. Retrieved from http://www.esourceresearch.org/Default.aspx?TabId=734).

Appendix E

Figure 2

Rosswurm and Larrabee evidence based practice model

A Model for Evidence-Based Practice

1. Assess need for change in practice	2. Link problem intervention and outcomes	3. Synthesize best evidence	4. Design practice change	5. Implement and evaluate change in practice	6. Integrate and maintain change in practice
• Include stakeholders • Collect internal data about current practice • Compare internal data with external data • Identify problem	• Use standardized classification systems and language • Identify potential interventions and activities • Select outcomes indicators	• Search research literature related to major variables • Critique and weigh evidence • Synthesize best evidence • Assess feasibility, benefits, and risk	• Define proposed change • Identify needed resources • Plan implementation process • Define outcomes	• Pilot study demonstration • Evaluate process and outcome • Decide to adapt, adopt, or reject practice change	• Communicate recommended change to stakeholders • Present staff inservice education on change in practice • Integrate into standards of practice • Monitor process and outcomes

(Reavy, 2016)

Appendix F

Figure 3

Pre-Training Questionnaire (T0)

FORM T0

<mark>This survey is anonymous, meaning none of your identifiable information (e.g., name, birthday, social security number etc.) will be asked. **Please create a unique ID below so we can link your data collected at different time. Pick the first three letters of your mother's first name and the last 3 digits of your cell phone number. For example, if your mother's first name is Debbie and your phone number is 123-456-7890, your ID= deb890**</mark>

ID_____   **Date**: _____

Demographics:

Age (*Birth Year only*): _____

(*Mark 'X' where applicable*)

Ethnicity: _____African American   _____Caucasian

_____Native American   _____Hawaiian/Pacific Islander

_____Asian   _____Mixed Race

_____Other (*Please specify*) _____

Gender: _____Male   _____Other (please specify) _____

_____Female

Educational Background: _____Less than high school   _____ Technical

degree

_____High School   _____ College degree

_____Some College   _____ Professional/

Graduate

Years as a Mentor: _____ (*In years*)

Ever Received Mental Health Training in the past?

_____YES (*Pleases specify*) _____.

_____NO.

*In answering the following questionnaire, select the answer by **CIRCLING**.*

 Very unlikely= I am certain that it is NOT likely; **Unlikely** = I think it is unlikely but am not certain; **Likely**= I think it is likely but not certain; **Very likely**= I am certain that it IS very likely.

1.   If someone experienced excessive worry about a number of events or activities where this level of concern was not warranted, had difficulty controlling this worry and had physical symptoms such as having tense muscles and feeling fatigued, to what extent do you think it is likely they have Generalized Anxiety Disorder?

    Very unlikely   Unlikely   Likely   Very Likely

2.   To what extent do you think it is likely that the diagnosis of Agoraphobia includes anxiety about situations where escape may be difficult or embarrassing?

    Very unlikely   Unlikely   Likely   Very Likely

3.   If someone experienced a low mood for two or more weeks, had a loss of pleasure or interest in their normal activities and experienced changes in their appetite and sleep, to what extent do you think it is likely they have Major Depressive Disorder?

    Very unlikely   Unlikely   Likely   Very Likely

4.   To what extent do you think it is likely that Personality Disorders are a category of mental illness?

    Very unlikely   Unlikely   Likely   Very Likely

5.   To what extent do you think it is likely that the diagnosis of Bipolar Disorder includes experiencing periods of elevated (i.e., high), and periods of depressed (i.e., low) mood?

    Very unlikely   Unlikely   Likely   Very Likely

*In answering the following questionnaire, select the answer by **CIRCLING**.*

Agree=4; **Rather agree**= 3; **Rather disagree**=2; **Disagree**=1; **Don't know**=0

6.   People with severe mental illness have to take medication for the rest of their lives

        Agree   Rather agree   Rather disagree   Disagree   Don't know

7.   People with severe mental illness are not able to acquire new skills.

        Agree   Rather agree   Rather disagree   Disagree   Don't know

8.   People with severe mental illness are failures

        Agree   Rather agree   Rather disagree   Disagree   Don't know

9.   Severe mental illness is caused by bad luck

        Agree   Rather agree   Rather disagree   Disagree   Don't know

10.   People with severe mental illness are dangerous

        Agree   Rather agree   Rather disagree   Disagree   Don't know

*In answering the following questionnaire, select the answer by **CIRCLING**.*

Strongly agree=4; **Agree**=3; **Disagree**= 2; **Strongly disagree**=1

11.   I feel confident in my ability to discuss my concern with a student exhibiting signs of psychological

        distress.

        Strongly agree   Agree   Disagree   Strongly disagree

12.   I feel confident in my ability to recommend mental health support services to a student exhibiting signs

        of psychological distress.

        Strongly agree   Agree   Disagree   Strongly disagree

13.   I feel confident in my ability to help a suicidal student for mental health support

        Strongly agree   Agree   Disagree   Strongly disagree

14.   I feel confident that I know where to refer a student for mental health support.

Strongly agree   Agree   Disagree   Strongly disagree

Appendix G

Figure 4

Immediate Post- Training Questionnaire

FORM T1

This survey is anonymous, meaning none of your identifiable information (e.g., name, birthday, social security number etc.) will be asked. **Please create a unique ID below so we can link your data collected at different time. Pick the first three letters of your mother's first name and the last 3 digits of your cell phone number. For example, if your mother's first name is Debbie and your phone number is 123-456-7890, your ID= deb890**
ID: _____

Please tell us what you think of this presentation by checking the boxes that you think best applies.

Evaluation outcome	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
The content presented was appropriate to address mentor's understanding of mental health.					
My knowledge about mental health and mental illness have improved.					
I am more comfortable in identifying signs and symptoms of mental distress.					
I am confident in being able to identify students who may have a mental health problem.					
I have better understanding about how to help student access appropriate mental health care in my community.					
I am more comfortable in supporting students who may have a mental health problem.					

What was the **most** useful learning that you obtained through the presentation?

_____

Do you think all mentors at the club should have the opportunity to access the training for knowledge and awareness?

_____

Thank you for your time. We appreciate your invaluable input

Appendix H

Figure 5

Two weeks post training questionnaire

FORM T2

This survey is anonymous, meaning none of your identifiable information (e.g., name, birthday, social security number etc.) will be asked. **Please create a unique ID below so we can link your data collected at different time. Pick the first three letters of your mother's first name and the last 3 digits of your cell phone number. For example, if your mother's first name is Debbie and your phone number is 123-456-7890, your ID= deb890**

ID: _____   **DATE:** _____

In answering the following questionnaire, select the answer by CIRCLING.

Very unlikely= I am certain that it is NOT likely; **Unlikely** = I think it is unlikely but am not certain; **Likely**= I think it is likely but not certain; **Very likely**= I am certain that it IS very likely.

15.   If someone experienced excessive worry about a number of events or activities where this level of concern was not warranted, had difficulty controlling this worry and had physical symptoms such as having tense muscles and feeling fatigued, to what extent do you think it is likely they have Generalized Anxiety Disorder?

        Very unlikely   Unlikely   Likely   Very Likely

16.   To what extent do you think it is likely that the diagnosis of Agoraphobia includes anxiety about situations where escape may be difficult or embarrassing?

        Very unlikely   Unlikely   Likely   Very Likely

17.   If someone experienced a low mood for two or more weeks, had a loss of pleasure or interest in their

normal activities and experienced changes in their appetite and sleep to what extent do you think it is likely they

have Major Depressive Disorder?

        Very unlikely   Unlikely   Likely   Very Likely

18.   To what extent do you think it is likely that Personality Disorders are a category of mental illness?

        Very unlikely   Unlikely   Likely   Very Likely

19.   To what extent do you think it is likely that the diagnosis of Bipolar Disorder includes experiencing

        periods of elevated (i.e., high), and periods of depressed (i.e., low) mood?

        Very unlikely   Unlikely   Likely   Very Likely

*In answering the following questionnaire, select the answer by **CIRCLING**.*

 Agree=4; **Rather agree**= 3; **Rather disagree**=2; **Disagree**=1; **Don't know**=0

20.   People with severe mental illness have to take medication for the rest of their lives

        Agree   Rather agree   Rather disagree   Disagree   Don't know

21.   People with severe mental illness are not able to acquire new skills.

        Agree   Rather agree   Rather disagree   Disagree   Don't know

22.   People with severe mental illness are failures

        Agree   Rather agree   Rather disagree   Disagree   Don't know

23.   Severe mental illness is caused by bad luck

        Agree   Rather agree   Rather disagree   Disagree   Don't know

24.   People with severe mental illness are dangerous

        Agree   Rather agree   Rather disagree   Disagree   Don't know

*In answering the following questionnaire, select the answer by **CIRCLING**.*

Strongly agree=4; **Agree**=3; **Disagree**= 2; **Strongly disagree**=1

25.   I feel confident in my ability to discuss my concern with a student exhibiting signs of psychological

distress.

Strongly agree   Agree   Disagree   Strongly disagree

26.   I feel confident in my ability to recommend mental health support services to a student exhibiting signs

        of psychological distress.

Strongly agree   Agree   Disagree   Strongly disagree

27.   I feel confident in my ability to help a suicidal student for mental health support

Strongly agree   Agree   Disagree   Strongly disagree

28.   I feel confident that I know where to refer a student for mental health support.

Strongly agree   Agree   Disagree   Strongly disagree

Appendix I

Table 3

Descriptive statistics of variables over time

Variable	Participants	Minimum	Maximum	Mean	Std. Deviation
T0 knowledge score	11	14.00	19.00	15.7273	1.79393
T1 knowledge score	11	15.00	20.00	17.0000	1.78885
T2 knowledge score	7	13.00	19.00	16.2857	2.36039
T0 attitude score	11	5.00	10.00	7.0909	1.92117
T1 attitude score	11	5.00	9.00	6.0909	1.22103
T2 attitude score	7	3.00	7.00	5.7143	1.38013
T0 self-efficacy score	11	7.00	21.00	11.9091	3.59039
T1 self-efficacy score	11	11.00	16.00	12.3636	1.28629
T2 self-efficacy score	7	11.00	13.00	11.8571	.69007

Appendix J

Knowledge score and effect size over time

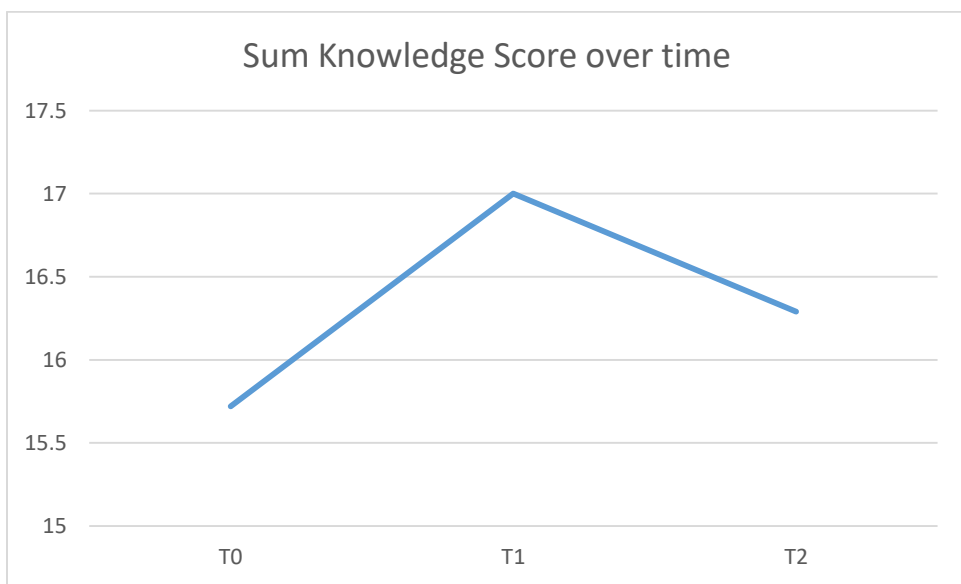Figure 6

Sum knowledge score over time

Table 4

Cohen's effect size on knowledge

	mean (pre-post)	SD	Effect Size	Effect
Effect size for T0-T1 knowledge	1.27	1.42	0.890	large
Effect size for T1-T2 knowledge	0.43	1.51	0.280	small
Effect size for T0-T2 knowledge	0.14	1.77	0.080	very small

Appendix K

Attitude score and effect size over time
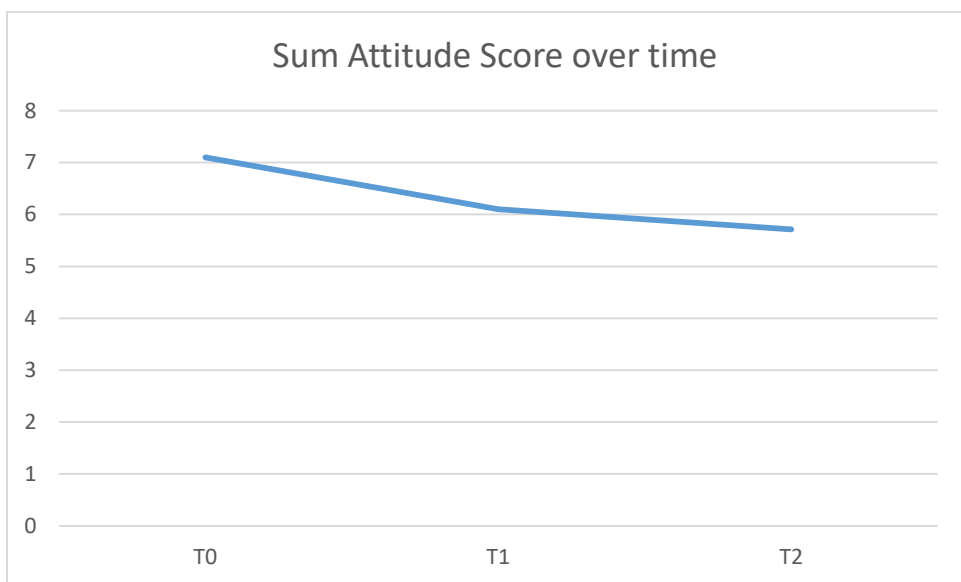
Figure 7

Sum attitude score over time

Table 5

Cohen's effect size on attitude

	mean (pre-post)	SD	Effect Size	Effect
Effect size for T0-T1 ATTITUDE	1	1.34	0.75	medium
Effect size for T1-T2 ATTITUDE	0	1.15	0	none
Effect size for T0-T2 ATTITUDE	0.71	1.11	0.64	medium

Appendix L

Self-efficacy score and effect size over time
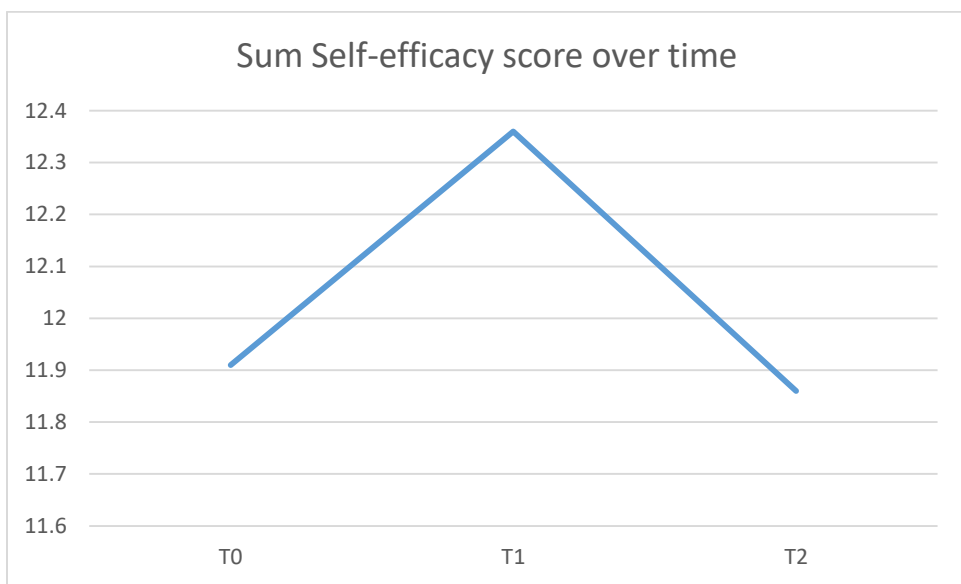
Figure 8

Sum self-efficacy score over time

Table 6

Cohen's effect size on self-efficacy

	mean (pre-post)	SD	Effect Size	Effect
Effect size for T0-T1 Self-efficacy	0.45	3.59	0.13	very small
Effect size for T1-T2 Self-efficacy	0.14	0.38	0.37	small
Effect size for T0-T2 Self-efficacy	1.29	2.06	0.63	medium