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Prevalence and Barriers of Mental Health Screening Tool Use of Adolescents in Truckee, CA

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nursing

By

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ABSTRACT

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Youth suicide is a serious public health issue. Suicide is the third leading cause of death for youths between the ages of 10 and 24. Rural mountain communities of the intermountain west have youth suicide rates that are nearly twice the national average. Screening for mental health issues in adolescents with a validated mental health screening tool by primary care providers is recommended by the American Academy of Pediatrics (AAP, 2012) and is one strategy to identify adolescents with mental health issues and identify adolescents who are at risk of suicide. However, research indicates that screening of adolescents in primary care for mental health issues is low.

The purpose of this research was to survey primary care providers in the rural mountain community of Truckee, California to assess the prevalence of screening adolescents with mental health screening tools, and in cases where screening with a tool was not taking place, to attempt to identify barriers to use.

A researcher developed questionnaire was used to assess the prevalence and barriers to use of mental health screening of adolescents by primary care providers. Results showed that screening using a mental health screening tool is at a 25% level. Definitive barriers to use were not able to be identified; however, certain themes were identified as possible barriers with respect to attitudes about mental health screening tools.

Knowledge in the under screening for mental health issues in adolescents by primary care providers can prompt primary care providers to explore ways to ameliorate under screening through practice change and policy implementation. Furthermore, awareness that barriers may exist to using mental health screening tools may help primary care providers to explore their own reasons for not screening adolescents for mental health issues using a mental health screening tool.

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CHAPTER I

INTRODUCTION

Background

Youth suicide is a serious public health issue that negatively affects communities throughout the United States. According to the Centers Disease Control and Prevention (CDC) (2012) suicide is the third leading cause of death for youths between the ages of 10 and 24. In a nationwide survey of students in grades 9th through 12th, approximately 16% admitted to seriously contemplating suicide. Additionally, of these surveyed students, 13% admitted to creating a plan to take their life, while 7.8 % had actually attempted suicide on one or more occasions during the 12 month period preceding the survey (Moolenaar et al., 2011). In 2011 the estimated number of students in grades 9 through 12 was 14.5 million (National Institutes of Health, 2014). This equates to an estimated 1.9 million adolescents in grades 9 through 12 who have admitted to creating a plan to take their life and an estimated 1.1 million adolescents who have attempted suicide.

Rural communities are often disproportionally affected by youth suicide as compared to urban communities (Hirsch, 2006). Moreover, western mountain states have the highest rates of suicide (Rural Youth Suicide Prevention Workgroup, 2008). According to the Robert Wood Johnson Foundation (2013), researchers have been studying the so-called "suicide belt" of the intermountain West. This region in comprised of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Wyoming. In 8 out of 10 of these states the rate of suicide is nearly twice the national average (Suicide Trends and Prevention in Nevada, 2004). Researchers who study the

"suicide belt" have many theories as to the etiology of the causes of the higher rates. Some of the most frequently proposed reasons are: Community disorganization, social isolation, acquaintance or friend who has committed suicide, family violence, access to firearms, and lack of access to mental health providers (Rural Suicide Prevention [Fact Sheet], 2003).

Factors contributing to community disorganization are described in social disorganization theory (Shaw, Clifford, McKay, & Henry, 1942). The authors of this theory point to three main characteristics that impact the stability of a community: Economic disadvantage, racial and ethnic heterogeneity, and residential mobility. According to Barkan, Rocque, and Houle (2013), residential mobility plays a large role in the higher rate of suicide in the American West. Communities where there are higher rates of population change (e.g. new residents, temporary residents), such as the west, these communities have weaker social ties and weaker social institutions which negatively impacts social integration. This residential instability creates social instability, which in turn, contributes to higher rates of suicide. The community under investigation for this study is a community where residential instability exists.

The higher rates of suicide in the west have been studies for decades (Barkan, Rocque, & Houle, 2013), and while exact causes of higher rates of suicide in the western mountain states are not clear, what is clear is that screening for depression and suicide risk by primary care providers (PCPs) is an integral component to decreasing rates of youth suicide (Horowitz, Ballard, & Pao, 2009).

One rural mountain community that is located in the Sierra Nevada Mountain range 32 miles south-west of Reno, Nevada is the town of Truckee, California with a

population of 16,212 (Town of Truckee, 2011). The community of Truckee experienced two youth suicides in early 2013. Furthermore, in the two preceding years, there were three additional suicides committed by teens that lived in Truckee. As a result of the loss of these youths, the Tahoe Truckee Unified School District (TTUSD), the Tahoe Truckee Community Foundation (TTCF), the Community Collaborative of Tahoe Truckee (CCTT), and Placer and Nevada Counties formed a Youth Suicide Prevention Task Force to address this serious community health problem. The Task Force is in the process of developing strategies to reduce rates of youth suicide through collaborative efforts with community members and experts in the field of mental health such as the California Mental Health Services Authority (CalMHSA). One strategy that has been suggested is that mental health screening of youths be conducted within the school setting; however, as of yet, screening by primary care providers has not been listed as a strategy. Worth mentioning here is that this Youth Suicide Task Force is relatively new in its inception. The Task Force meets quarterly and is ongoing in building strategies to combat youth suicide, so screening by primary care providers may be part of the strategy in the future (Community Response to Teen Suicides in Truckee, 2013).

Suicide and the Effect on the Community

For every suicide a conservative estimate is that six to eight other people are directly affected (McIntosh & Drapeau, 2010). The ripple effect goes beyond those intimately involved with the victim. School, neighborhood, and church communities can experience the negative effects after suicide (Berman, Jobes, & Silverman, 2006). These survivors experience many complicated emotions such as shock, anger, guilt, and depression (CDC, 2010). Disturbingly, for adolescents who are already feeling

depressed, and perhaps even suicidal, these adolescents may feel they can relate to the victim and feel they have permission to commit suicide as well (Berman et al., 2006).

Primary Care and Suicide Prevention

For many patients primary care offices are the most accessible medical setting in a community (Gardner et al., 2010). On average adolescents present to primary care offices 2 to 3 times per year. Adolescents with mental health problems are more likely than adolescents without mental health problems to be frequent users of primary care services (Stein, Zitner, & Jensen, 2006). Many adolescents that visit primary care providers present with ongoing somatic complaints for which practitioners are unable to find an etiology. According to McDowell, Lineberry, and Bostwick (2011), 45% of people regardless of age saw their primary care provider in the month preceding their suicide. Of significance is a finding that when asked about risk taking behaviors, including suicidal ideation, youths are more comfortable talking to primary care providers than other specialists (Gardner et al. 2010).

Recommendations for Mental Health Screening

The American Academy of Pediatrics (AAP) (as cited in The American Academy of Pediatrics Task Force on Mental Health, 2010), recommends that children be routinely screened for mental health issues. The American Academy of Family Physicians (AAFP) (2010) recommends screening for major depressive disorder (MDD) in adolescents years 12 to18 years of age. According to the AAFP, "MDD among youth is a disabling condition that is associated with serious long-term morbidities and risk of suicide" (p. 178). The U.S. Preventative Services Task Force (USPSTF) (2010) recommends that adolescents ages 12 to 18 be screened for MDD when there are resources available to

ensure proper diagnosis, care and follow-up. Additionally, Healthy People 2020, which is managed by the Office of Disease Prevention and Health Promotion (ODPHP) within the U.S. Department of Health and Human Services (HHS), has identified mental health as a leading health indicator (LHI) and therefore, made one of its goals to "reduce the proportion of adolescents aged 12 to 17 who experience major depressive episodes (MDEs) (HealthyPeople.gov, 2013). Additionally, under the mental health LHI, Healthy People 2020 has set a goal to reduce suicide attempts by adolescents by 10%. It is during these years of life that a number of public health and or social/emotional problems start, one of which is suicide risk (HealthyPeople.gov, 2013).

Despite these recommendations, screening for mental health in primary care settings is low (Phillips et al., 2011). According to a report on national health and statistics funded by the CDC, family practice providers are screening their patients at approximately a 2% level, whereas, internal medicine providers are screening their patients at approximately a 4% level (Cherry, Hing, Woodwell, & Rechtsteiner, 2008).

Mental Health Screening Tools

A variety of mental health screening tools are available for use in the primary care setting. The AAP has recommended that pediatricians perform mental health screening using validated measures (e.g. a tool) (AAP 2012). The USPSTF (2010) states that sufficient evidence is available referencing that screening tools accurately identify MDD in adolescents. Providers can access a toolkit from the AAP website that compiles a variety of the mental health screening tools, identifying appropriate age group use, the number of items and format, administration and scoring time, and training.

Mental health screening tools are not designed to diagnose any particular mental health disorder. The purpose of these screening tools is to identify patients in need of further assessment. Most importantly, a mental health-screening tool can identify if a person is a risk for suicide, which can assist the practitioner in making the appropriate plan of care and referral to the emergency department for patients in need of immediate intervention.

Problem Statement

Youth suicide is the third leading cause of death in the United States. Rural communities are disproportionately affected by this serious public health problem as compared to urban communities; with western and mountain communities having the highest rates of suicide. Screening for mental health problems with a tool by primary care providers in our adolescents is an appropriate intervention. Despite recommendations, screening for mental health in primary care settings remains low.

Purpose Statement

The purpose of this study was to survey primary care providers in the rural mountain community of Truckee, California to assess the prevalence of use of a mental health screening tool use in their practices. In addition, for providers who were not using mental health screening tools in their practices, possible barriers to their use were identified.

Theoretical Framework

The theoretical framework that guided this study was The Theory of Planned Behavior (TPB) formulated in 1985 by Icek Ajzen. This theory provides a "framework for understanding people's behavior and its psychological determinants" (Polit & Beck,

2012, p. 127). Behavior is determined by intentions, which are influenced by attitudes, subjective norms, and perceived self-control. This theory is typically used to explain patient behavior; however, TPB can also be used to explain practitioner behavior. For the purposes of this study, this researcher believed that the TPB could provide understanding about barriers to using mental health screenings tools for adolescents by primary care provider in Truckee, California. For example, were there positive or negative attitudes about mental health screening tools by primary care providers? Were other colleagues in the area using mental health screening tools? Was the use of mental health screening tools worth the effort and time?

Chapter Summary

This chapter identified youth suicide as being a serious public health issue that disproportionally affects rural communities, of which western and mountain communities are of greatest risk. In addition, this chapter discussed the use of mental health screening tools by primary care providers (PCPs) as being an effective strategy for identifying youths at risk of suicide. This researcher provided a problem statement and a purpose statement to guide this study. Additionally, this chapter provided a theoretical framework for this study.

CHAPTER II

LITERATURE REVIEW

For the purposes of providing relevant background literature on this topic, a search was conducted by examining the databases of Cochrane Library, CINAHL, Pub Med, and PsycINFO. This search yielded copious amounts of literature discussing the efficacy and recommendation of use of mental health screening tools by primary care providers in both urban and rural settings. The search was limited to articles and research published in peer-reviewed journals.

Research Related Studies

In a randomized clinical trial (RCT) conducted in Aarhus, Denmark, Christensen et al., (2005) assessed the benefit of mental health screening in primary care. The county of Aarhus' rural and urban population at the time of the study was 600,000. Of the 431 General Practitioners (GPs) serving this population, 38 (8.8%) chose to participate in the RCT. Screening was conducted on 1,785 patients aged 18 to 65 years of age using a one page screening questionnaire (SQ). These patients were screened prior to consultation with the GP, and were asked if the reason for the visit was physical or psychological or both. The SQ included rating scales from the SCL-90R somatization subscale (SCL-SOM) (Derogatis & Cleary, 1977), the Whitney- 7 scale (Fink et al., 1999), the anxiety and depression subscale SCL-8 (Fink et al., 1999) (Ware Jr. & Sherbourne, 1992) and the alcohol abuse scale known as the CAGE questionnaire (Ewing, 1984), and the SF-36 (Ware Jr & Sherbourne, 1992). The patients were then seen by the GPs for evaluation with the GPs being blinded as to which patients had screened positive for mental health issues. Findings suggest that assessment with mental health screening tools improves

recognition and care of patients with mental health issues; however, the authors suggest that further research be conducted to assess health outcomes for patients who are identified as having mental health issues suggesting that mere screening does not necessarily improve health outcomes. Worth considering when interpreting this study, is that there may be differences in the way that office visits are conducted in Denmark versus the United States. In Denmark the medical model of healthcare delivery is a socialist system, whereas in the United States the medical model of healthcare delivery is a for profit system, thus office visits may differ in time, resources, etc.

In a follow-up study evaluating the feasibility and usefulness of the Pediatric Symptom Checklist (PSC) (Jellinek et al., 1988) for recognition of psychosocial dysfunction in children, researchers (Jellinek et al. 1999) had parents (*n* 21,000) of children ages 4 to 15 years old, in two large primary care networks that employ 395 primary care providers in 44 states complete the PSC screening tool. There was a 97% return rate of the screening tool. Conclusions to this large scale study found that the PSC is effective in recognition of psychosocial dysfunction in children across groups and locales.

In a mixed methods design, Fothergill et al., (2013) surveyed 120 parents of children ages 4 to 10, and 16 primary care providers (PCPs). The aim of the study was to evaluate how parents and PCPs gauge the helpfulness and acceptability of electronic mental health screening tools in three communities in Baltimore, Maryland (urban), South Royalton and Bradford, Vermont (rural) and Cooperstown, New York (rural). Conclusions were that a pre-visit electronic screen is acceptable and a practical strategy to help with problem identification. The authors noted several limitations of the study: the

ability of technology to carry out an electronic screen, the availability of staff to assist with the technology, and time allotted to parents to complete the screening tool. In addition, the authors identified that primary care practices may not have the available resources to respond to positive screens.

In an observational study by Gardner et al. (2010), patients aged 11 to 20 seen by primary care providers (PCPs) were asked to complete a screening tool in the waiting room on wireless tablets. Questions were related to depression, injury risk behaviors, and suicidal thought. Results indicated nearly 1 out of 6 patients who visited the primary care offices responded 'yes' to having suicidal thoughts in the month preceding the questionnaire. Furthermore, the researchers offer that when asked, adolescents will disclose suicidal thoughts despite being made aware that the PCP will review the responses. In these cases the PCP had the opportunity to successfully triage the patient to the appropriate level of care. Limitations were identified as: the researchers did not assess whether interventions with positive screened youths had an effect on reducing further suicidal thoughts, suicidal patients who were contracted with other medical facilities were not represented, and since this study was performed in a setting where providers had immediate access to triage services and a behavioral health network, the conclusions of this study cannot be extrapolated to primary care offices that do not have access to such services.

In a qualitative study conducted in the United Kingdom. Dowrick et al., (2009) conducted open-ended, in-depth interviews with patients *(n* 24) and doctors *(n* 34) to gain an understanding of opinions related to the introduction of standardized measures for depression severity. Results indicated that doctors tended to prefer their own clinical

judgment over questionnaires, whereas patients preferred to have a score as an objective measure of their depression severity. Additionally, patients felt more confident in the accuracy of their diagnosis due to the extra time and effort on the part of the doctor to administer the questionnaire. Limitations of this study were identified as recruitment bias and possible misinterpretation of the speaker's words when using thematic analysis of the transcripts.

In a qualitative study conducted by Saver, Van-Nguyen, Keppel, and Doescher (2007) at the University of Washington Medical Center in Seattle, 15 patients who already had a diagnosis of depression were interviewed by researchers in semi-structured interviews. One important finding from this study was that the diagnosis of depression by primary care providers was frequently missed. The researchers offer some key areas where depression identification and care can be improved and include: "screening for depression, patient education about current understanding of depression and treatment options, improving provider attitudes and knowledge about depression and its treatment where there are gaps, and increasing the collaborative nature of decision making about treatment options" (pp.31-32). Multiple limitations were identified: sample size, recall of participants may not have been accurate, budgetary shortfall, required manual written recordings of interviews, participants were in active treatment for depression and most had chronic or recurrent depression, and the researchers acknowledge there is no way to measure if identifying barriers will have impact on improving outcomes for patients with depression.

Yarnall, Pollack, Ostbye, Krause, and Michener (2003) examined the amount of time required for primary care physicians to adhere to all of the USPSTF

recommendations related to preventative screening. The researchers calculated the time by using available published times and estimate times to complete each recommended preventive screening. Findings identified that for primary care providers to fully comply with USPSTF recommendations related to preventative screenings; it would take an estimated 7.4 hours per work day. The conclusion to this study is that time is a barrier for primary care providers to performing USPSTF recommended screenings.

In a cross-sectional study conducted by Murray, Barnes, Ireland, and Kohen (2006) in the Minneapolis-St. Paul metro area, researchers surveyed 268 primary care providers regarding attitudes, practices, and barriers to emotional behavioral screening. The most common barriers identified were; lack of time (93%), lack of training in use of mental health screening tools (88%), lack of access to mental health providers (79%), and lack of adequate staff (77%). Limitations to this study were low response rate, and primarily female pediatricians who had graduated from U.S. medical schools, therefore limiting generalizability.

Chapter Summary

This chapter provided a summary of research related to the efficacy of using mental health screening tools in primary care settings. In addition, this chapter discussed some of the barriers to mental health screening and the use of mental health screening tools by primary care providers. While there are limitations to each of the studies discussed, the information provided in this chapter validates the need to evaluate whether primary care providers in the rural mountain community of Truckee, California are using mental health screening tools, and if not exploring barriers to their use.

CHAPTER III

METHODOLOGY

The purpose of this study was to determine the prevalence of use of a mental health screening tool for adolescents by primary care providers in in the rural mountain town of Truckee, California located in the Sierra Mountains approximately 32 miles south-west of Reno with a population of 16,212. In addition, this study attempted to identify barriers to using a mental health screening tool.

Design of the Study

This study was a non-experimental, descriptive, study exploring the use of a mental health screening tool for adolescents by primary care providers in a rural California community. Data was obtained utilizing a researcher developed survey (Appendix B).

Research Questions

The main questions that guided this study were:

1. Are primary care providers using mental health screening tools in their practices for adolescents?
2. If not, what are barriers to using mental health screening tools?

Sample

A convenience sample of primary care providers in the rural mountain community of Truckee, California was selected for this study. The inclusion criteria was: any practicing primary care provider including; medical doctor (MD), nurse practitioner (NP), doctor of osteopathic medicine (DO), or physician assistant (PA). There were 22 primary care providers in Truckee, California who meet the inclusion criteria of this study.

Human Subjects Protection

Approval for this study was sought from and approved by the Institutional Review Board of the University of Nevada-Reno. Participants were contacted and provided information pertaining to the study, contact information for the researcher, the researcher's committee chair, and the IRB at the University of Nevada-Reno.

Data Generation and Analysis Procedures

Recruitment

In order to obtain a convenience sample, the researcher phoned the 22 eligible participants. Subjects were informed that if they did not choose to participate in the study there would be no consequence to this decision. Participants were informed that anonymity would be maintained and there would be no follow-up contact after the completion of the study.

Of the 22 eligible participants, 20 completed the study. Of those participants, 16 chose to take part in the survey via a telephone call with the researcher and 4 participants chose to take part in the survey via in-person interview with the researcher.

Research Instruments

A researcher developed questionnaire was used for this research (Appendix B). The questionnaire was designed in two parts. The first part was to ascertain the use of a mental health screening tool in his or her practice. If the participant answered "no" or "sometimes", then a series of seven follow-up questions was posed in order to identify possible barriers to using a mental health screening tool.

Data Analysis

The data collected from the researcher developed questionnaire were analyzed utilizing descriptive statistics. Thematic analysis was utilized to identify commonalities in participant's answers.

Chapter Summary

This chapter provides an overview of the research design that was utilized for this study, which included the research questions that guided the study, information on sampling, instrumentation, protection of human subjects, along with collection and analysis of data. Results are discussed in Chapter IV.

CHAPTER IV

SURVEY RESULTS

The purpose of this study was to determine the prevalence of use of a mental health screening tool by primary care providers in the rural mountain town of Truckee, California. In addition, this study was aimed at identifying possible barriers to use of a mental health screening tool. This chapter reports the results identified in this study.

Sample Description

The total convenience sample generated 20 completed surveys out of a possible 22, which was 90.9% of the possible number of primary care providers who were willing to complete the survey. See Table 1 for further demographic information.

Table 1

Description of the sample

Variable	**Frequency (n)**	**Percentage (%)**
Degree		
	4	
NP	13	20.0
MD	3	65.0
PA		15.0
Gender		
	8	40.0
Male	12	60.0
Female		

Data Results

Each participant was asked a primary question related to use of a mental health screening tool for adolescents within their practices. If the participant answered “no” or

"sometimes," then a series of seven follow-up questions was posed in order to identify possible barriers related to the use of a mental health screening tool. The following are the results obtained from those questions.

Research Questions

The research questions that guided this study are addressed with the results of the survey:

1. Are primary care providers using mental health screening tools in their practices for adolescents?
2. If not, what are barriers to using mental health screening tools?

Mental Health Screening

Of the 20 subjects that completed the survey, 15 answered "no" to question 1 on the researcher developed questionnaire. The remaining 5 subjects answered "yes" to question 1. See Table 2. This equates to 75% of the sample who do not use a screening tool to assess mental health of adolescents within their practice.

Table 2

Prevalence

Question 1	**Frequency (n)**	**Percentage (%)**
Yes	5	25.0
No	15	75.0

Of significance for question 1 was that for the primary care providers that answered "yes" (n 5) to the using a mental health screening tool, all of them reported that this was a group decision. These practitioners are in a group practice and using a mental health screening tool for adolescents is a practice policy.

Of the 15 primary care providers that answered "no" to question 1, 7 providers reported that they do not see adolescents in their practices. Six reported that they do see adolescents and they do screen for mental health issues; however, they do not use a mental health screening tool. Instead they simply ask about depression and suicidal ideation then refer to a mental health professional or appropriate resources where needed for further evaluation. The remaining 2 providers reported that the reason they do not use a mental health screening tool is because they only see adolescents as a consultation from the regular primary providers for issues not related to mental health.

Question 2 on the questionnaire was "If you answered "yes" when did you start using a mental health screening tool for adolescents and which health screening tool do you use?" There were 5 subjects who answered "yes' to question 2. All of the 5 subjects reported that they use the Pediatric Symptoms Checklist (PSC) (Jellinek et al. 1999). As to when these subjects started using the PSC, the subjects gave an approximation of the start date. See Table 3 and Table 4.

Table 3

Question 2: Tool used

Tool used	**Frequency (n)**
PSC	5
Other tool	0

Table 4

Question 2: Start date

Start date of tool use	**Frequency (n)**
Response	
"about 4 plus years"	4
"about 3 years"	1

Barriers to the Use of Mental Health Screening Tools

For practitioners that answered "no" to question 1, a set of follow-up questions aimed at identifying barriers to use of a mental health screening tool were asked. These questions were numbered 1 through 7. Question 7 allowed for the subject to offer any other reasons for not using a mental health screening tool for adolescents. See Table 5 and 6 for responses.

Table 5

Questions 1 through 5

Question	**Response**		
	Yes	**No**	**Sometimes**
1) Is lack of time a barrier?	0	15	0
2) Is lack of appropriate resources a barrier?	0	15	0
3) Is lack of knowledge of which tool to use a barrier?	0	15	0
4) Is lack of training/education a barrier?	0	15	0
5) Do you think mental health screening tools are effective?	8	0	7

Table 6

Question 6

Question	Response		
	Yes	**No**	**I don't know**
Do you think that other primary care providers in your area are using mental health screening tools?	11	0	4

Question 7 allowed for participants to offer any other reasons for not using a mental health screening tool for adolescents. Of the 15 primary care providers that answered "no' to using a mental health screening tool for adolescents, 7 providers explained that they do not see adolescents in their practices. Six providers offered that they do see adolescents and they do screen for mental health issues, but not with a mental health screening tool. The remaining two subjects explained that they do see adolescents on occasion and that for these adolescents they are not primary care provider. These two providers explained that when they see adolescents it is usually for consultation at the request of the patient's primary care provider unrelated to mental health issues.

Overall Survey Results

Of the 20 subjects that were interviewed and asked to complete the survey, 25.0% (*n* 5) answered that they do use a mental health screening tool for adolescents in their practice. This left 75.0% *(n* 15) who answered that they do not use a mental health screening tool for adolescents in their practices.

All of the subjects using a screening tool stated that they use the Pediatric Symptoms Checklist (PSC) (Jellinek et al., 1999). Of significance here is that the

decision to use a mental health screening tool for these providers is the fact that these providers are in a group practice and mental health screening using the PSC is the practice policy.

For the subjects who answered "yes" to using a mental health screening tool for adolescents, a definitive date was not given. An approximation of anywhere from 2 to 4 years was offered. Due to the lack of a definitive start date, any discussion about whether these providers were prompted to start using a mental health screening tool for adolescents after the recent youth suicides in their community cannot be made.

For the primary care providers who do not use a mental health screening tool (*n* 15) in their practices, none identified (*n* 0) that time, lack of appropriate resources, lack of knowledge of which tool to use, lack of training/education were barriers to use.

Interestingly, for the question on the survey that asked "Do you think mental health screening tools are an effective means for identifying patients at need of further mental health evaluation," 8 providers answered "yes," none answered "no," and 7 answered "sometimes." Conclusions that can be postulated from this question are that those answering "yes" do think that mental health screening tools are an effective means for identifying patients at need for further mental health evaluation. This information tells us that for these providers, belief in the effectiveness of mental health screeing tools is not a barrier to use. For the practitioners who answered "sometimes," having a weak belief in the benefit of using a tool for assessing mental health certainly contributes to the lack of use and can be identified as a barrier.

Question 6 under the barriers portion of the survey, asked "Do you think that other primary care providers in your area are using mental health screening tools?"

Eleven answered “yes,” none answered “no” and 4 answered “I don’t know.” This equates to more than 70% who think that other primary care providers in their area are using mental health screening tools. In reality, 55% of the practitioners surveyed screen for mental health issues in adolescents, but only 45% of that total percentage utilize a specific tool. This information identifies that there is a belief that others are screening, but the actual numbers indicate a large number of adolescents are not screened during office visits.

Lastly, question 7 under the barriers section of the survey asked the providers who do not use a mental health screening tool to list other reasons for not using a mental health screening tool. Of the 15 providers who answered “no,” 7 of these providers simply do not see adolescents in their practice and two see adolescents, but not as the primary care provider. Rather these two providers see adolescents after a referral for a consultation from the patient’s usual primary care provider for an issue unrelated to mental health. For the seven providers who do not see adolescents in their practices, information regarding whether they see adolescents within the hospital setting was not asked. The remaining 6 primary care providers offered that they do see adolescents and they do screen for mental health issues just not with a mental health screening tool, but rather by simply asking questions related to depression and suicidal ideation then refer to a mental health professional or appropriate resource as needed. For the seven providers who do not see adolescents, no barriers were found for this group; however, further questioning about if any of these providers see adolescents in the hospital setting needs to be asked . For the two providers who only see adolescents after a referral from the usual primary care providers, further questions need to be asked to make any conclusions about

barriers. For the six primary care providers who do see adolescents and screen for mental health just not with a mental health screening tool, further information needs to be asked as to why these providers do not use a mental health screening tool before any conclusions can be drawn about barriers for this subset.

Chapter Summary

This chapter discussed the results of the researcher developed questionnaire. This survey was aimed at discovering prevalence and barriers to use of a mental health screening tool by primary care providers in the rural mountain community of Truckee, California. Of the 22 eligible participants, 20 took part in the survey. This equated to 90.9% of eligible participants who were willing to take the survey. Results were that 25% of the subjects answered "yes" to using and mental health screening tool in their practices, whereas the remaining 75% of subjects answered "no." Barriers to use were discussed and definitive conclusions to barriers were not able to be identified.

CHAPTER V

DISCUSSION

The questions that guided this study were: Are primary care providers in Truckee, California using mental health screening tools in their practices? And if not, what are barriers to using mental health screening tools? A review of the literature showed that screening for mental health in primary care is low. As such, adolescents who present to primary care providers may not be identified as needing further evaluation and treatment for mental health issues where needed. The literature also revealed that recognition of mental health issues is improved by using a mental health screening tool as recommended by the AAP. In addition, a review of the literature found that barriers to use of mental health screening tool exist. The most frequently cited barriers were, lack of time, lack of training in use of mental health screening tools, lack of access to mental health providers, and lack of adequate staff.

Findings and the Existing Literature

Consistent with the literature was the finding that screening adolescents for mental health issues with a mental health screening tool is low; (25%) in Truckee, California. For those primary care providers who are screening for mental health issues, five reported that they use a mental health screening tool. Six primary care providers reported that they do screen for mental health; however, they do not use a tool. Instead they simply ask about mental health and refer where needed. The AAP (2012) recommends using a validated and reliable tool for screening. This researcher was not able to find consistent data which discussed screening for mental health without a tool as being a reliable means of screening for mental health issues. The literature did reveal that

for patients who were screened using an informal mental health screen by a primary care provider versus a formal questionnaire about mental health issues, the patients preferred when the primary care provider administered a formal questionnaire. Patients reported that they felt more confident in the accuracy of identifying mental health issues (Dowrick et al., 2009).

Inconsistent with the literature was data identifying time, lack of training in use of mental health screening tools, lack of access to mental health providers, and lack of adequate staff as a barrier to mental health screening to use (Murray et al., 2006). For those primary care providers in this study who answered "no" to using a mental health screening tool for adolescents, these were not identified the barriers, nor were any other possible barriers offered.

As cited earlier, it is recommended that a mental health screening tool be used to identify adolescents with mental health issues. This study asked subjective information about the belief in the efficacy of mental health screening tools for identifying adolescents with mental health issues, the majority of subjects who answered "yes" indicating that belief in efficacy in mental health screening tools exists. For those answering "sometimes" further evaluation of doubts needs to be explored.

Finally, the APA (2012) recommends that children be routinely screened for mental health issues. While there is mental health screening of adolescents being conducted (55% of the time) within this community, there remains a significant number of adolescents under or not being screening.

Nursing Implications

This study is able to contribute the following implications to nursing: Primary care providers are often the first health professional to see adolescent patients who have mental health issues (Gardner et al., 2010). Knowledge that recognition of mental health issues is improved by way of a mental health screening tool is valuable information when making practice and policy decisions. Information about suicidal ideation gleaned from a mental health screening tools can be the opportunity to stop an adolescent from committing suicide. Recognition that barriers to using a mental health screening tool can negatively affect health outcomes for adolescents with mental health issues. This recognition can prompt practitioners to take measures to ameliorate barriers where present.

This study identified that a mere 25% of practitioners in the community of Truckee, California are screening adolescent using a mental health screening tool; therefore, large numbers of Truckee adolescents are not being screened using a mental health screening tool. This under screening introduces the chance that primary care providers in the community are missing the recognition of mental health issues in adolescents. In addition, this study found that the majority practitioners in the community believe that other practitioners in the area are screening adolescents for mental health issues using a tool. An implication here could be that beliefs by primary care providers in this community of mental health screening tools as being an effective means to identify adolescents with mental health issues are weak, despite literature supporting mental health tools as effective means. This suggests that education and or knowledge of mental health screening tool use and its efficacy in lacking in the

community. In addition, this finding could imply that these primary care providers believe that other primary care providers in the community are "handling" the screening and therefore, it is not necessary for them to screen. Lastly, the primary care providers in this study did not offer any specific barriers to using a mental health screening tool for identification of mental health issues in adolescents. The implication to this finding is that primary care providers in the community do not see their lack of knowledge in the efficacy of mental health screening tool use as a barrier.

Limitations/Considerations

Although the response rate was 90.9% for the eligible participants, the results of this study are limited and must be interpreted cautiously considering the sample size; the subjects were also limited to one geographical location within one rural, mountain community; therefore, the results of this study cannot be generalized. This research study was a self-select, self-report study. This method of collecting data is a versatile method, but can introduce bias by way of the subject wanting to appear in a positive way (Polit & Beck, 2012), which might limit the subject's willingness to report barriers to use of a mental health screening tool. The instrument used to collect the data was a researcher developed questionnaire and was not able to identify barriers reported in the literature or other possible barriers to utilization of a mental health screening tool for adolescents.

Recommendations for Further Research

It is this researcher's hope that this study will inspire dialogue among practitioners. Additional studies are needed to assess the use of mental health screening tools for adolescents. This study did not address if screening with a mental health tool of adolescents occurs at every visit or only at well-child exams. Additional research would

be helpful for determining if identification of mental health issues is improved with screening at every visit to a primary care provider. Another recommendation would be to do a comparison of Truckee, California to other rural mountain communities to discover if the suicide rate is above norm for comparable communities. Yet another study for consideration is to conduct a follow-up study of primary care providers in a few years' time to determine if efforts by the Suicide Prevention Task Force have influenced primary care providers to increase screening of adolescents for mental health issues in Truckee, California. In addition, a recommendation for further research would be to conduct more in-depth open-ended interviews with the primary care providers who do not screen adolescents for mental health issues to explore barriers in more depth. Lastly, this researcher believes that the information gleaned from this study would be important information to share with the primary care providers in the community and with the community members of the Suicide Prevention Task Force.

Chapter Summary

This chapter provided discussion and interpretation of the results of this study as it related to existing literature. Consistencies to the literature were that prevalence of screening of adolescents with a mental health screening tool by primary care providers. Inconsistencies in relation to the literature exist with regard to barriers. The study did not find any definitive barriers to use of mental health screening tools. Included in this chapter were nursing implications, limitations, considerations, and recommendations for further research.

APPENDIX A

INTRODUCTION LETTER

Dear Primary Care Provider,

My name is Anna Ellis and I am currently a graduate student at the University of Nevada, Reno. I am in the process of obtaining my Masters of Science degree in the Family Nurse Practitioner program. My research topic is "Prevalence and Barriers of Mental Health Screening of Adolescents in Truckee, California." Your participation in my research would be highly appreciated and valued.

You are receiving a researcher developed questionnaire containing 7 questions along with a self-addressed stamped envelope for convenient return. The total time to complete this questionnaire is approximately 5 minutes. If you choose to participate in this study, by completing the questionnaire you will giving your consent to participate. No further information will be required to obtain consent. If you would prefer to do a phone interview to answer the questions, my contact information is included below.

Participation in this study is voluntary, and there are no consequences or risks associated for not participating. In order to maintain your confidentiality, there will be no way for the researcher to identify who has completed the questionnaire as there will be no identifiers on either the questionnaire or the self-addressed stamped envelope. In addition, I will not contact you for any follow-up after the survey is completed and returned.

Should you choose to participate, please return the survey in the self-addressed stamped envelope within 30 days.

For any questions regarding this study feel free to contact me at (775) 560-7871 or via email at annaellis8@gmail.com . You may also contact my thesis chair Stephanie DeBoor, Ph.D, RN, CCRN at deboors2@unr.edu or 775-682-7156. You may ask about your rights as a research subject or you may report (anonymously if you so choose) any comments, concerns, or complaints to the University of Nevada, Reno Social Behavioral/Biomedical Institutional Review Board, telephone number (775) 327-2368, or by addressing a letter to the Chair of the Board, c/o UNR Office of Research Integrity, 218 Ross Hall / 331, University of Nevada, Reno, Reno, Nevada, 89557.

Thank you very much for your time and for your consideration in participating in this study.

Sincerely,

Anna Ellis, BSN, RN

APPENDIX B

MENTAL HEALTH SCREENING USE QUESTIONAIRRE

Do you use a mental health screening tool for adolescents in your practice?

Yes No Sometimes

If you answered "yes," when did you start using a mental health screening tool for adolescents and which mental health screening tool do you use?

_____

If you answered "no" or "sometimes", please answer the following questions:

Which of the following are barriers to use of a mental health screening tool?

Is lack of time a barrier to use of a mental health screening tool?

Yes No Sometimes

Is lack of appropriate resources in cases of a positive screen a barrier to using a mental health screening tool?

Yes No Sometimes

Is lack of knowledge of which mental health screening tool to use a barrier?

Yes No Sometimes

Is lack of training/education in how to administer a mental health screen a barrier?

Yes No Sometimes

Do you think that mental health screening tools are an effective means for identifying patients at need of further mental health evaluation?

Yes No Sometimes

Do you think that other primary care providers in your area are using mental health screening tools?

Yes No I don't know.

APPENDIX C

University of Nevada, Reno

Research Integrity Office
218 Ross Hall / 331, Reno, Nevada 89557
775.327.2368 / 775.327.2369 fax
www.unr.edu/research-integrity

DATE: February 7, 2014

TO: Stephanie DeBoor, PhD, RN, CCRN
Anna Ellis, BSN, RN
FROM: Social Behavioral Education Institutional Review Board

PROJECT TITLE: Prevalence and barriers of mental health screening of adolescents in Truckee, California
REFERENCE #: 2014E065
SUBMISSION TYPE: New protocol

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: February 7, 2014

REVIEW CATEGORY: Exemption category # 2

The UNR Institutional Review Board has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations. Please note, the federal government has identified certain categories of research involving human subjects that qualify for exemption from federal regulations. The IRB is authorized by the federal government to determine whether studies thought by the principal investigator (PI) to be exempt from federal regulations actually qualify for exemption criteria. Only the IRB has authority to make a determination that a study is exempt from federal regulations and from IRB review and approval. The above-referenced protocol was reviewed and the research deemed eligible to proceed in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46.101 paragraph [b]).

APPROVED DOCUMENTS: Protocol 02/07/14, cover letter, survey 02/07/14, Survey, undated

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Valerie Smith at 775.327.2368. Please include your project title and reference number in all correspondence with this committee.

Sincerely,

Nancy Moody, JD MA
Director, Research Integrity Office

REFERENCES

American Academy of Family Physicians (AAFP). (2010, July 15th). Screening and treatment for major depressive disorder in children and adolescents: Recommendation statement. *American Family Physician*, *82*(2), 178-179. Retrieved from www.aafp.org/afp/2010/0715/p178.html

American Academy of Pediatrics (AAP). (2012). Mental health screening and assessment tools for primary care. Retrieved from http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Documents/MH_ScreeningChart.pdf

Barkan, S. E., Rocque, M., & Houle, J. (2013, June 1st). State and regional suicide rates: a new look at an old puzzle. *Sociological Perspectives*, *56*(2), 287-297.

Berman, A. L., Jobes, A. D., & Silverman, M. M. (2006). *Adolescent suicide: Assessment and intervention* (2nd ed.). Washington, DC: American Psychological Association.

Centers for Disease Control and Prevention (CDC). (2012, August). Injury center: Violence prevention. Retrieved from http://cdc.gov/violenceprevention/pub/youth_suicide.html

Centers for Disease Control and Prevention (CDC). (2010). *Understanding Suicide: Fact Sheet* [Fact Sheet]. Retrieved from www.cdc.gov/violenceprevention.gov.

Cherry, D. K., Hing, E., Woodwell, D. A., & Rechtsteiner, E. A. (2008). *National Ambulatory Medical Care Survey: 2006 Summary* [National Health Statistics Reports]. Retrieved from www.cdc.gov: http://www.cdc.gov/nchs/data/nhsr/nhsr003.pdf

Christensen, K. S., Toft, T., Frostholm, L., Ornbol, E., Fink, P., & Olesen, F. (2005, May

16). Screening for common mental disorders: Who will benefit? Results from a randomized clinical trial. *Family Practice-an international journal*. *22*: 428-434. http://dx.doi.org/10.1093/fampra/cmi032

Community Response to Teen Suicides in Truckee. (2013, April). *Health and Human Services Agency Newsletter*, 3-4. Retrieved from www.mynevadacounty.com/nc/hhsa/Pages/Health-and-Human-Services-Agency-Newsletter-Issue-19-April-2013.aspx

Derogatis, L. R., & Cleary, P. A. (1977). Confirmation of the dimensional structure of the SCL-90: A study on construct validation. *Journal of Clinical Psychology*, *33*, 981-989.

Digest of Education Statistics*: 2011* [National Education Statistics]. (2012). Retrieved from https://nces.ed.gov/programs/digest/d11/ch_1.asp

Dowrick, C., Leydon, G. M., McBride, A., Howe, A., Burgess, H., Clarke, P., Kendrick, T. (2009). Patients' and doctors 'views on depression severity questionnaires incentivized in UK quality and outcomes framework: qualitative study. *British Medical Journal*, *338*, 1-6. http://dx.doi.org/10.1136/bmj.b663

Ewing, J. (1984). Detecting alcoholism: The Cage questionnaire. *Journal of the American Medical Association*, *252*, 1905-1907.

Fink, P., Ewald, H., Jensen, J., Sorensen, L., Engberg, M., & Holm, M. (1999). Screening for somatization and hypochondriasis in primary care and neurological in-patients: A seven-item scale for hypochondriasis and somatization. *Journal of Psychosomatic Research*, *46*, 261-273.

Fink, P., Oernboel, E., Hansen, M. S., Sondergaard, L., & De Jonge, P. (2004). Detecting

mental health disorders in general hospitals by the SCL-8 scale. *Journal of Psychosomatic Research, 56,* 371-375.

Fothergill, K. E., Gadomski, A., Solomon, B. S., Olsen, A., Gaffney, C. A., DosReis, S., & Wissow, L. S. (20*13*, July-August). Assessing the impact of a web-based comprehensive somatic and mental health screening tool in pediatric primary care. *Academic Pediatrics,* 13(4), 340-347.

Gardner, W., Klima, J., Chisolm, D., Feehan, H., Bridge, J., Campo, J., Kelleher, K. (2010, April 12th). Screening, triage, and referral of patients who report suicidal thought during a primary care visit. *Pediatrics*, *125*(5), 945-952. http://dx.doi.org/10.1542/peds.2009-1964

Healthy People 2020. Retrieved from http://www.healthypeople.gov

Hirsch, J. K. (2006). A review of the literature on rural suicide: Risk and protective factors, incidence, and prevention. *Crisis*, *27*(4), 189-199. http://dx.doi.org/10.1027/0227-5910.27.4.189

Horowitz, L. M., Ballard, E. D., & Pao, M. (2009, October 21st). Suicide screening in schools, primary care and emergency departments. *Current Opinion Pediatrics, 5,* 620-627.

Jellinek, M. S., Murphy, J. M., Robinson, J., Feins, A., Lamb, S., & Fenton, T. (1988, February). Pediatric symptom checklist: Screening school-age children for psychosocial dysfunction. *The Journal of Pediatrics*, *112*(2), 201-209.

Jellinek, M. S., Murphy, M., Little, M., Pagano, M. E., Comer, D., & Kelleher, K. J. (1999, March). Use of the pediatric symptom checklist to screen for psychosocial problems in pediatric primary care: A national feasibility study. *Archives of*

Pediatrics & Adolescent Medicine, *153*, 254-260. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/10086402

McDowell, A. K., Lineberry, T. W., & Bostwick, M. (2011, August). Practical suicide-risk management for the busy primary care physician. *Mayo Clinic Proceedings*, *86*(8), 792-800. http://dx.doi.org/10.4065/mcp.2011.0076

McIntosh, J. L., & Drapeau, C. W. (2010). *U.S.A. suicide: 2010 official final data* [Suicide Data Page]. Retrieved from American Association of Suicidology: http://www.suicidology.org/c/document_library/get_file?folderId=262&name=DLFE-636.pdf

Moolenaar, R. L., Casey, C. G., Rutledge, T. F., Johnson, D. C., Williams, D., Boyd, M. F., Spriggs, S. R. (2011). *Youth risk behavior surveillance*. Retrieved from Centers for Disease Control and Prevention: http://www.cdc.gov/mmwr/pdf/ss/ss6104.pdf

Murray, K. E., Barnes, A. J., Ireland, M., & Kohen, D. P. (2006). *Emotional-behavioral screening by primary care practitioners: Attitudes, practices, and barriers*. Retrieved from www.nashp.org: www.nashp.org/sites/default/files/abcd/abcd.mn.embehscreeningfinaldraft.pdf

National Institutes of Health. (2014) National Suicide Rate Map. Retrieved from http://www.nimh.nih.gov/statistics/4NAT_Map.shtml

Phillips, R. L., Miller, B. F., Petterson, S. M., & Teevan, B. (2011, November 1). Better integration of mental healthcare improves depression screening and treatment in primary care. *American Family Physician, 84*(9), 980. Retrieved from http://www.aafp.org/afp/2011/1101/p980.html

Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.

Rural Suicide Prevention [Fact Sheet]. (2003). Retrieved from http://www3.marshfieldclinic.org/proxy///mcrf-centers-nfmc-resources-childresources-ss-suicidesafety.1.pdf

Rural Youth Suicide Prevention Workgroup. (2008). *Preventing youth suicide in rural America: Recommendations to states*. Retrieved from http://www.sprc.org/sites/sprc.org/files/library/ruralyouth.pdf

Saver, B., Van-Nguyen, V., Keppel, G., & Doescher, M. (2007, January-February). A qualitative study of depression in primary care: Missed opportunities for diagnosis and education. *Journal of the American Board of Family Medicine, 20*(1), 28-35. http://dx.doi.org/10.3122/jabfm.2007.01.060026

Shaw, Clifford, R., McKay, & Henry, D. (1942). *Juvenile delinquency and urban area: a study of rates of delinquents in relation to differential characteristics of local community in american cities*. Chicago IL: The University of Chicago Press.

Solving the Riddle of the U.S. 'Suicide Belt'. (2013, June 12). *Robert Wood Johnson Online Newsroom*. Retrieved from http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2013/06/solving-the-riddle-of-the-u-s--suicide-belt.html

Stein, R., Zitner, L., & Jensen, P. (2006). Interventions for adolescent depression in primary care. *Pediatrics, 118*(2), 669-682.

Suicide Trends and Prevention in Nevada [Issue brief]. (2004). Retrieved from http://cdclv.unlv.edu//healthnv/suicide.html

The American Academy of Pediatrics Task Force on Mental Health. (2010, March 24th). *Pediatrics, 125*. http://dx.doi.org/10.1542/peds.2010-0788C

Town of Truckee. (2011). Truckee population and housing estimates. Retrieved from http://www.townoftruckee.com/index.aspx?page+748

U.S. Preventative Services Task Force (2010, July 15). Screening and treatment of major depressive disorder in children and adolescents: Recommendation statement. *American Family Physician*, *82*(2), 178-179.

Ware Jr, J. E., & Sherbourne, C. D. (1992). Conceptual framework and item selection. *Medical Care*, *30*(6), 473-483.

Yarnall, K. S., Pollack, K. I., Ostbye, T., Krause, K. M., & Michener, J. L. (2003, April). Primary Care: Is there enough time for prevention. *American Journal of Public Health*, *93*(4), 635-641. Retrieved from www.ncbi.nlm.nih.gov/pmc/articles/PMC1447803