

FAMILY NURSE PRACTITIONERS' USE OF COGNITIVE BEHAVIORAL
THERAPY TREATMENT FOR DEPRESSION IN ADOLESCENTS

by

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As members of the DNP Project Committee, we certify that we have read the DNP Project prepared by Erica K. Shimkus entitled “Family Nurse Practitioners’ Use of Cognitive Behavioral Therapy Treatment for Depression in Adolescents” and recommend that it be accepted as fulfilling the DNP Project requirement for the Degree of Doctor of Nursing Practice.

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ABSTRACT

Background: Cognitive behavioral therapy (CBT) is an effective treatment modality for adolescents suffering from depression. Yet, it is often under-utilized among family nurse practitioners (FNPs) in the primary care setting. Known barriers exist within the realm of providers' lack of use of CBT in the primary setting, however, there is little research specifically on FNPs usage of the modality.

Purpose: This paper seeks to understand FNPs' use of CBT in the primary care setting to treat adolescents with depression.

Method and Sampling: A qualitative design was used to understand FNPs' use of CBT for adolescents suffering from depression. A faculty member and I recruited FNP participants through email. Ten FNPs currently working in the primary care setting with experience ranging from one to ten years participated in the study. Two focus group interviews were conducted in order to have a deeper understanding of the use of CBT in practice to treat adolescent depression. The interviews were audio taped and analyzed to reveal emerging themes.

Results: After analyzing the audio recordings two common themes emerged: Unpreparedness and role conflict. Subthemes emerged within the area of unpreparedness that included knowledge regarding screening for depression in the adolescent population, utilization of clinical practice guidelines, available community resources and referrals, and the application of CBT in the treatment of adolescent depression. The theme of role conflict was associated with time constraints within the allotted time frame per patient and the conflict of providing mental health services when feeling as though their primary training is that of a family practice provider.

Conclusion: The findings showed that the lack of use of CBT is multifactorial with knowledge being the greatest inhibiting factor. CBT is a recommended, first-line treatment option within the clinical practice guidelines for the treatment of adolescent depression. However, FNPs are not currently utilizing CBT in their practice to treat adolescent depression. There is much to be learned about adolescent depression in its entirety prior to incorporating CBT into practice.

INTRODUCTION

Depression among adolescents in the United States (US) often remains undiagnosed and under-treated. Approximately 9-20% of adolescents age 12-18 suffer from depression with a higher prevalence in females (Centers for Disease Control and Prevention, 2012). Despite an increase in incidence in adolescents, less than 25% are receiving treatment and many are on extensive waiting lists for mental health providers (Lusk & Melnyk, 2013). Although evidence-based treatments exist, very few adolescents are actually receiving the appropriate treatment. It is estimated that 20% of adolescents experience at least one episode of depression during their youth (Richardson & Katzenellenbogen, 2005). Additionally, 1 in 13 adolescents have depression symptoms at any given time making it more common than asthma (Richardson & Katzenellenbogen, 2005). Properly identifying and treating depression early decreases the adverse effects. Unfortunately, morbidity and mortality increase when depression goes untreated.

Depression is a significant concern among adolescents; unfortunately, a majority of patients with depression are not being identified or treated in the primary care setting. Often, by the time a patient is referred to a mental health provider, the patient has been struggling with depression for at least two years or more (Avenevoli, Swendsen, He, Burstein, & Merikangas, 2015). This leads to higher levels of morbidity and mortality in those suffering from untreated depression. Family Nurse Practitioners (FNPs) working in the primary care setting have the unique ability to identify depression in adolescents and begin treatment using Cognitive Behavioral Therapy (CBT) without having to refer patients to mental health professions (Dell, 2012). The primary care setting is a comprehensive model of care and is convenient and accessible to adolescents. Parents and children often feel comfortable expressing their health

concerns with health providers of whom they have established relationships. It is also an established place of trust and dependability, making the setting ideal for treating patients with depression through CBT.

Cognitive behavioral therapy is an established, evidence-based recommendation in the treatment of adolescent depression. It has been proven more effective than antidepressant medications and has very little risk to adolescent patients (Siddique, Chung, Brown, & Miranda, 2012). The goal of CBT is to teach adolescents to recognize and modify responses between emotions, thoughts, and behaviors in order to relieve emotional distress and symptoms of depression (Jarrett, Vittengl, Clark, & Thase, 2011). Federal, organizational, and professional initiatives have been created to support the use and integration of mental health interventions, like CBT, into the primary care setting (Lusk & Melynck, 2013). Unfortunately, most primary care providers feel barriers prohibit them from providing recommended treatment. These barriers have been identified as insufficient training, lack of mental health referrals and resources, poor insurance coverage for mental health services, inadequate time in-office, and lack of treatment options (Richardson, Lewis, Casey-Goldstein, McCauley, & Katon, 2007).

Background and Significance

Depression refers to a wide range of mental health problems characterized by loss of interest and enjoyment in ordinary experiences low mood, and a variety of emotional, physical, and social impairments (National Institute for Health and Clinical Excellence, 2010).

Adolescents suffering from depression often have anhedonia, low energy levels, difficulty with concentration and motivation, changes in appetite and sleep, and somatic complaints such as headache and stomachache (Cox et al., 2014). Parents report that their adolescent-aged children

suffering from depression are frequently irritable, angry or hostile, have persistent boredom, are socially isolated from friends and family, exhibit low self-esteem and guilt, and experience feelings of hopelessness (American Academy of Child Psychiatry, 2013).

Untreated depression in the adolescent population places significant burden on the patient, family, and healthcare system. The significance of untreated depression for the adolescent carries life-long consequences. Adolescents with untreated depression are more likely to suffer impairments in almost all aspects of their lives including social, academic, and family functioning (Jaycox et al., 2009). These authors found that adolescents have an increased incidence of anxiety, substance abuse, aggressive behaviors, hyperactivity, and risk for suicide when depression is left untreated (Jaycox et al., 2009). Long-term consequences of untreated depression are associated with higher rates of obesity, heart disease, strokes, sleep disorders and various other health conditions (Klemas & Dowling, 2015). Even for those that do not meet the criteria for major depressive disorder (MDD), the subsyndromal symptoms of depression play a role in developing MDD later in life (Avenevoli et al., 2015).

When adolescent depression goes untreated, caregivers often report strains on parenting. Parents express feelings of self-doubt, which consequently leads to a negative impact on their objectivity in their parental role. They also report an increase in loss of productivity at work, including absenteeism and tardiness (Jaycox et al., 2009).

Untreated depression also leads to an increase in healthcare costs and utilization of healthcare services. Depression accounts for more than 80 billion dollars in annual US medical expenditures and is associated with a two-fold increase in healthcare cost by patients (Klemas & Dowling, 2015). Of this increase, 40% is related to direct costs of treating symptoms of

depression; the remaining 60% percent is attributed to the related physical ramifications of untreated depression such as somatic complaints (Klemas & Dowling, 2015). Patients with untreated depression frequently present to their primary care provider somatic complaints. Complaints such as abdominal pain, headaches, and general myalgia often require extensive work up and do not lead to a medical diagnosis. Once again leading to increased utilization of healthcare resources and spending.

Local Problem

Primary care providers (PCPs) are often on the frontline of screening and treating depression in adolescents due to the national shortage of trained mental health professionals in the United States. It is estimated that primary care providers see 70% of adolescent patients, placing providers in a unique position to identify and begin treatment (Fallucco, Conlon, Gale, Constantino, & Glowinski, 2012). In Arizona alone, approximately 73,000 children live with mental illness (National Alliance of Mental Illness, 2010). During the 2006-2007 school year, 69% of adolescents living with mental health issues and receiving special education services dropped out of high school (National Alliance of Mental Illness, 2010). According to the National Alliance of Mental Illness (NAMI), Arizona only spent \$963.3 million, just 3.8% of the total spending in 2006, on mental health agency services. Furthermore, the report shows 1,737 children were incarcerated in 2006; of these children, over 70% experience mental illness and 20% suffer from severe mental health conditions. This demonstrates that Arizona mental health services inadequately meet the needs of adolescents. In Arizona, a total of 95 areas have been designated as Mental Health Care Health Professional Shortages (HPSA), equating to a 24.14% need for mental health professionals (National Alliance of Mental Illness, 2010). Because there

is a shortage of mental health providers in Arizona, it is imperative that PCPs be equipped with the knowledge and resources to be first-line responders in the identification, diagnosis, and treatment of adolescents with depression.

PROBLEM STATEMENT

Despite availability of clinical practice guidelines and recommendations of CBT as an effective, evidence-based treatment option for depression in adolescents, there remains a disproportionate number of youth that are untreated for a condition that is easily treated. As such, our youth are suffering from the devastating consequences of depression, including suicide.

Intended Project Goal

The purpose of the project is to describe the use of CBT among family nurse practitioners (FNPs) in the primary care setting. Growing evidence supports the use and efficacy of brief cognitive behavioral therapies within the primary care setting; however, adolescents continue to be undertreated for depression. The goal is to describe the use of CBT in primary care, thereby gaining a deeper understanding as to why disparities still exist in providing effective treatment. Understanding the factors that contribute to the lack of wide spread use of CBT in the primary care setting will allow for future studies to address these issues. In the long-term, adolescents will benefit from receiving timely, accessible, evidence-based CBT in the primary care setting.

The main stakeholders in this project are FNPs and adolescent patients. FNPs have a commitment and ethical obligation to treat these patients with current, evidence-based approaches. CBT is a recommended treatment within the evidence-based guidelines for adolescent depression. Evidence-based practice is defined as the integration of clinical expertise, patient preference, and values, with the most current, systematic research (Institute of Medicine

Roundtable on Evidence-Based Medicine, 2009). The role of the FNP is to be able to access and interpret relevant and appropriate research in order to provide timely, cost-effective, research-driven healthcare. CBT has the strongest level of evidence to support its efficacy in the treatment of depression for adolescents (Lusk & Melynck, 2013).

Adolescents are by far the greatest stakeholders and stand to benefit the most from this project. Untreated depression leads to impairment in all aspects of a child's life and has life-long detrimental consequences when left untreated. PCPs fall short in delivering evidence-based care to these patients, leaving them at risk to suffer from a multitude of negative financial, social, and health effects of undiagnosed depression.

Concepts

Concepts that pertain to the project include:

- 1) Cognitive behavioral therapy (CBT): A short-term, goal oriented psychotherapy aimed at changing patterns of behavior and thinking (Martin, n.d.). It provides a hands-on, practical approach to change the way people feel and act. The process emphasizes personal meaning of how thoughts and feelings shape one's actions. These patterns begin in childhood, making CBT a valuable therapy in treating depression in adolescents. The adolescent period is a formidable time when creating new pathways and neuronal connections can lead to positive thinking and problem solving skills to combat depression (Melnick, 2014). It is recommended as a first-line stand-alone therapy or in conjunction with an anti-depressant medication in current clinical practice guidelines for the treatment of depression in adolescences.

- 2) Family Nurse Practitioners (FNPs): For the purpose of this study, FNPs constitutes those individuals licensed within the state of Arizona who hold a Master's degree or higher in nursing, currently practicing in a primary care setting, defined as the first point of entry into the healthcare system which provides health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of acute and chronic illnesses within an out-patient office setting.
- 3) Adolescents: Individuals between the ages of 13-18 years residing within Arizona.
- 4) Depression: Diagnosed according to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) criteria.

THEORETICAL FRAMEWORK

Description

The theory that will be utilized to guide this project is the Cognitive Behavioral Theory (CBT). The CBT framework represents an integration of cognitive, behavioral, and developmental/social theories of human behavior and psychopathology (Benjamin et al., 2011). It has evolved over time from systematic clinical observations and experimental testing to the present model that incorporates a cognitive triad: thoughts, feelings, and behaviors (Beck, Rush, Shaw, & Emery, 1979). The general assumptions of the theory state that perceiving and experiencing are an active process: a person's thoughts are a fusion of internal and external data; how a person assesses a situation is seen through their thoughts and visual images; these thoughts are a person's stream of consciousness which reflect how the person views himself, his

place in the world, his past and future; alterations in this thinking affect the person's behavioral patterns; through CBT a person can become aware of these distorted thoughts and behaviors, leading to clinical improvement (Beck et al., 1979).

This less formal, structured therapy is interactive between the patient and provider and focuses on the "here and now" issues. The psychoanalytical portion of therapy that addresses how specific thoughts and feelings came to be is not explored in CBT. Instead it seeks to understand patient's automatic assumptions, thoughts, inferences, and conclusions about oneself. In doing this, the patient and provider can create hypotheses and then test their validity in a systematic way. See Figure 1 for CBT model.

The behavioral component of CBT requires a sequences of tasks to be performed outside of the therapeutic sessions to assist the patient in testing assumptions that are associated with maladaptive behaviors (Beck et al., 1979). The behavioral exercises help the patient move to constructive activity and stop negative thinking on the spot. Over time, the patient begins to integrate the therapeutic techniques into their own thinking; thus, the process becomes a natural way of thinking.

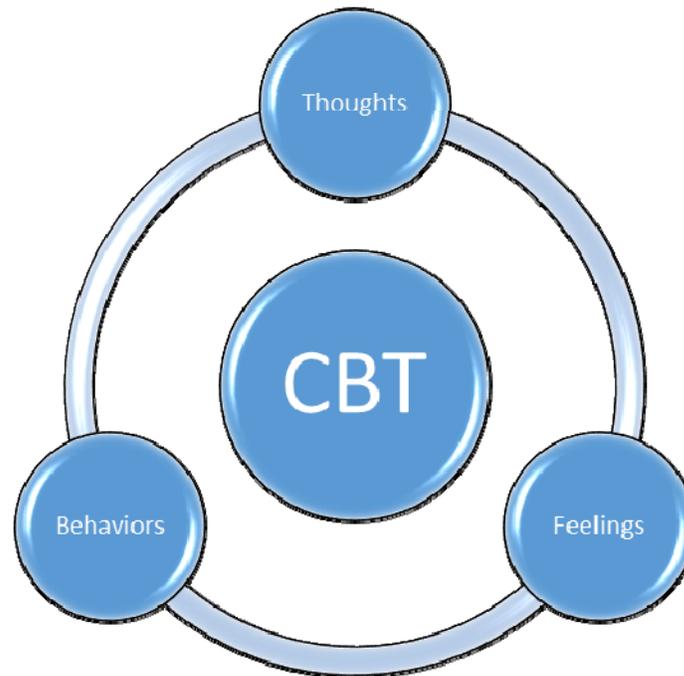


FIGURE 1. Cognitive Behavioral Therapy Model.

REVIEW OF LITERATURE

A review of current literature supports CBT as an effective modality in the treatment of adolescent depression. Dr. Aaron Beck, a psychiatrist, pioneered CBT in the 1960's while working at the University of Pennsylvania. The origin of CBT dates back to Stoic philosophers who believed behavior and thoughts could be changed using logic to discard negative beliefs and destructive emotions (Beck et al., 1979). Beck concluded that thoughts were not as unconscious as Freud had theorized and that certain types of thinking were more detrimental and caused emotional distress. A merger of cognitive and behavioral theories utilizing treatments from both concepts became popularized by Beck. Today, cognitive behavioral therapies are more than therapy; they encompass all cognitive psychotherapies including therapies that are a blend of cognitive and behavioral therapy.

Cognitive behavioral therapy is conducted in a face-to-face interaction between provider and client in sessions lasting from 30-60 minutes. CBT is most effective when conducted over 6-18 sessions, with a one-week gap in between sessions. Progress is measured through cognition and behavior and attainment of specific goals created by the patient and provider (Beck et al., 1979). Homework is used between sessions to reinforce changes and indicates compliance and dedication to the therapy. The sessions taper in frequency over the last few weeks with “booster therapy” sessions recommended at the patient’s discretion after termination of formal therapy. Booster sessions are effective in reiterating the cognitive and behavioral interventions that have been learned. CBT is an interactive process driven by the patient; the provider is not seen as an authoritative figure (Beck et al., 1979).

Cognitive Behavioral Therapy Use in Adolescents

The literature reveals that the use of CBT has similar effectiveness as selective serotonin reuptake inhibitors, but it provides sustained benefits for depressed adolescents over a longer period of time. Various studies have shown that pharmacological agents are initially more effective, but by one-year post initiation of therapy, CBT was superior to medication (Asarnow et al., 2009; Gartlehner et al., 2015; Siddique et al., 2012). This can be due to the quick onset of medication versus the slower, building foundation of coping skills and negative reframing. Patients receiving psychological intervention, such as CBT, showed fewer depressive symptoms in the long-term. Current trials in adults shows using CBT in the continuation phase of treatment to be successful in preventing relapse with benefits lasting up to 4 to 6 years. According to Kennard, Emslie, Mayes, and Hughes (2006), two pilot studies evaluating CBT therapy in the continuation phase for adolescent depression significantly lowered relapse rates compared to

historical controls. Continuation treatments varied based on visit frequency, treatment length, and treatment format. It should be noted that relatively few studies report on remission as an outcome when studying CBT. Patients treated with CBT or anti-depressant medication remain at risk for relapse post remissive period. Even those who remain on antidepressant therapy are at risk for reoccurrence. However, CBT is safe and poses relatively no risks to adolescent patients. Alternatively, little is known about the long-term side effects of antidepressant use in children. As of 2006, no studies had been conducted on the maintenance treatment on medication in adolescents (Kennard et al., 2006). The Food and Drug Administration (FDA) recommends close monitoring of adolescents on antidepressants for adverse effects such as increase suicidal tendencies, agitation, aggression, and mania. A systematic review by Cox et al. (2014), found that rates of suicide amongst adolescents were higher in the antidepressant medication group compared to the psychological group.

Education of Cognitive Behavioral Therapy for FNPs

There is a large gap in literature regarding the education of CBT among FNPs. A thorough search of PsycInfo, CINAHL, and PubMed did not identify any specific education of CBT or the use of it by FNPs within their practice. Recent changes set forth by the American Association of Nurse Practitioners (AANP) has improved the population health competency to include an emphasis and utility of CBT in the treatment certain mental health conditions (Personal communication, L. Martin-Plank, November 12, 2016).

Cognitive Behavioral Therapy Use in Primary Care

Current clinical practice guidelines recommend active support in the form of CBT or the use of Selective Serotonin Reuptake Inhibitors (SSRIs) in the treatment of mild depression in

adolescents, and CBT is recommended as a first-line treatment in the primary care setting (Radovic et al., 2014). There is strong evidence to support the use CBT in the primary care setting in order to increase access to timely, evidence-based treatment and to improve outcomes in depressed adolescents (Asarnow et al., 2009; Cape, Whittington, Buszewicz, Wallace, & Underwood, 2010; Lusk & Melnyk, 2013; Mignogna et al., 2014). Utilization and implementation of CBT in the primary care setting has been shown to be both feasible and successful. Usual care of depression provided in this setting generally consists of pharmacological agents, counseling and referral to specialists. Acute treatment with medication is effective in the short-term, but often times the effects are not maintained. Results from a meta-analysis by Bortolotti, Menchetti, Bellini, Montaguti, and Berardi (2008) showed that psychological interventions in the primary care setting are more effective than usual treatment in both the long and short term, thus highlighting the need for CBT within this setting. Piloted programs have been conducted with great success using CBT in the primary care setting; however, widespread use has not been adopted (Borschuk, Jones, Parker, & Crewe, 2015; Lusk & Melnyk, 2013; Mignogna et al., 2014). These programs have been modeled around brief 15-30 minute sessions within the primary care setting. The CBT programs have been most successful when multiple sessions are utilized spanning over 6-8 weeks. Additionally, providers have had success with reimbursement. Current procedural terminology (CPT) codes are code sets used by providers to report services furnished in the ambulatory setting. Reimbursement under the CPT billing code 99214 provides compensation for these services rendered in the primary care setting.

Prevention

In recent years there has been a trending shift from disease management to prevention of mental health issues with a proactive focus on maximizing protective factors and reducing risk factors (Gladstone, Beardslee, & O'Connor, 2011). Specific risk factors for developing depression have been identified as female gender, low self-esteem, negative body image, little social support, and ineffective coping skills. The number one indicator, above all else, is a parent with a depressive disorder. Non-specific indicators for depression include poverty, exposure to violence, family instability, social isolation, and child maltreatment. Not all adolescents that are exposed to risk factors develop depression. Protective factors, and those that exhibit resilience, have a lower incidence of depression. Adolescents with strong family relationships, social support, strong, positive parental influences, coping abilities, and skill in emotional regulation are less likely to develop depression. A review of the current literature finds the most effective strategies to prevent adolescent depression are through the use of CBT, interpersonal approaches, and family-based interventions (Gladstone et al., 2011). Prevention programs using CBT have been found to be most beneficial in the prevention of adolescent depression. The importance of prevention stems from the evidence that, despite treatment, adolescents generally have residual symptoms and relapse is common. The longer the depressive episode, the more difficult it is to reach a resolution of symptoms, making prevention key. Teaching adolescents how to gain control over negative thoughts, resolve conflict, and alter maladaptive thought processes through the use of CBT has showed sustained results in preventing depression. There is an increasing focus on not just managing symptoms of depression, but increasing the overall well-being of the adolescent through the use of cognitive behavioral therapies (Emslie, 2012).

Screening

Though the concept of screening is neither novel nor difficult, creating a comprehensive mental health plan for this age is not as easy due to identified barriers. While some providers identified red flags during screening, others reported uncertainty of signs and symptoms, which attributed to variations in screening and treatment practices (Iliffe et al., 2012; Kramer, Iliffe, Gledhill, & Garralda, 2012). PCPs are more adept at identifying and reacting to those patients that present with severe psychological conditions than mild cases of depressive symptoms. PCPs are also more likely to spend a greater amount of time in consultation with adults rather than pediatric patients due to feeling more comfortable and confident in caring for adults. Admittedly, they are reluctant to screen for or identify depression in adolescents when they feel inadequate to treat the condition.

Barriers

Barriers to providing treatment including CBT and medication are often cited in the literature. PCPs felt they had inadequate training, both clinically and didactically, in prescribing antidepressant medications and providing CBT to this age group (Fallucco et al., 2012; Radovic et al., 2014). Because of the lack of education and training, many admitted they lacked the confidence in being able to appropriately treat adolescents with CBT. Currently, limited education is provided in advanced nursing programs training FNPs. However, Zuckerbrot and Jensen (2006) found that specific educational interventions and training are seminal for practicing FNPs and produce beneficial results in the identification and management through the use of CBT for depression in adolescents in this setting.

Additionally, lack of mental health resources and referrals is a barrier to screening and treatment. This included a lack of collaborative care amongst primary care providers and mental health professionals (Ozer et al., 2009; Richardson et al., 2007). Others felt that community resources (i.e., counselors) were of low quality with little experience and high turnover. Furthermore, access to mental health professionals are characterized by long wait times for appointments and a lack of qualified mental health providers specializing in pediatrics (Radovic et al., 2014).

Inadequate time during routine office visits is another obstacle for using CBT, with many fearing that the screening and treatment process would take too long. Scheduling appropriate office time allotments provided to be difficult, but promising results by Mignogna et al. (2014) found that comprehensive strategies improved the likelihood of successful adoption of CBT into allotted office visit time constraint. Providers were often concerned about the increased time they spent treating patients with depression in the primary care setting, which prohibited them from seeing more patients throughout the day (Wren, Foy, & Ibeziako, 2012). Numerous providers are compensated based on volume as opposed to time spent with patients. Insurance coverage often dictates the number of sessions allotted per patient for mental health treatment. Additionally, a large number of people lacked mental health insurance.

Limitations of the Literature Review

Weaknesses of studies are focused on internal and external validity of the research. Concerns prevalent in the studies with respect to internal validity are detailed herein. For many of the studies, only those that were interested in the topic participated in the studies. Some studies used self-report instead of patient report. Patient report appears to be a more accurate

reflection of provider's practices (Fallucco et al., 2012). Maturation has to do with the passage of time changing results for participants rather than the independent variable being tested. History plays a component in both provider's attitudes toward screening and patient's report of depression at the time of screening. Studies that take place over a period of time are at risk for this type of internal validity. Testing and instrumentation was a threat to the internal validity of studies that used a pre-test/post-test method. Research has shown that the mere act of collecting data changes behaviors and attitudes (Polit & Beck, 2012). Also, various screening tools were used; this was not a literature review to determine the best method to screen for depression; thus, variations could exist within screening tools.

The greatest factor in external validity of the studies examined is the ability to generalize results over variations in people, conditions, and settings (Mitchell, 2012). The majority of studies took place within specific communities and populations over varying periods of time. Additionally, low participation in studies made the results speculative at best as to how the results generalize to larger communities.

Some studies had a low statistical power due to insufficient sample size. Statistical power is also increased with controlling for confounding variables and having accurate measuring tools (Polit & Beck, 2012). Few studies in the evaluation table mentioned controlling for variables that can greatly affect adolescents with depression.

Gaps

The gaps in the literature highlight areas where additional research is needed. Little research exists regarding FNPs use of CBT within the primary care setting. Barriers to use are well documented in the literature; however, understanding the use of CBT plays an important

role in incorporating evidence-based recommendations into practice and has not been explored. See Appendix A for the full evidence appraisal table.

METHODOLOGY

The project is a descriptive, qualitative design intended to better understand the use of CBT as a modality to treat adolescent depression among FNPs in the primary care setting. Data collection occurred through a focus group format. Focus groups have become increasingly popular in the study of health and healthcare related problems to gain a deeper understanding of informants world (Munhall, 2010). According to Munhall (2010), semi-structured interviews are less formal starting with a vague question in mind and following the conversation with greater understanding as the topic becomes focused. What participants say is just as important as how they say it and how they interact with others in the group setting (Munhall, 2010). The advantage of the group format is the ability to obtain viewpoints from multiple people in a short amount of time. The group format also allows for the potential of a deeper discussion on the topic due to group dynamics and reactions to what is being said by others.

Ethical Considerations

The project proposal was submitted to the Institutional Review Board (IRB) for formal review. This was to ensure biased opinions of the student did not conflict with ethical dimensions within the study. The IRB served as an external reviewing body that objectively determined the risks and benefits to participants. Because the project involved minimal risk to participants, the project was given the status of exempt. See Appendix B for the IRB approval letter. I also completed online training of ethical conduct in research studies through Collaborative Institutional Training Initiative.

Informed consent, confidentiality, and secure data storage are ethical elements to consider within a qualitative study (Merriam, 2009). For this study, a disclosure form was utilized in lieu of informed consent. See Appendix C for the disclosure statement. Confidentiality was maintained throughout the study by using first names only of participants. An anonymous form was used to collect demographic information at the end of each focus group. See Appendix D for demographic questionnaire. At the beginning of each session, participants were informed of the purpose of the study and the intended use of results, people, other than myself, who have access to the audio files and data collected, and an agreement of my confidentiality, as well as a request that the group maintains confidentiality (Krueger & Casey, 2000).

Data collected throughout the interview process was managed through proper labeling of audio files and the use of first names only within journal entries. The information was properly secured in a safe location, and computer files were password protected (Seidman, 2006). Upon completion of the project audio files, journal notebooks, and computer files will be destroyed.

Inclusion Criteria

Participation criteria for the project included being a licensed, practicing FNP working within the primary care setting who provides care to adolescent patients. FNPs were prepared at either the Master or Doctoral level, and had been working in the field for a minimum of one year.

Setting

A meeting room at a public library in a large metropolitan area was used to ensure privacy and to minimize interruptions. Focus group sessions were scheduled at times and on days that were most convenient for participants.

Participant Recruitment

Convenience sampling, commonly known as volunteer sampling within a qualitative study design, was utilized for the purpose of this project. Convenience sampling is economical, easy, and efficient. This method is used for its ease in locating potential participants (Baker et al., 2013). A faculty member from the University of Arizona and myself were responsible for recruiting participants. This consisted of a small, non-random group of FNPs. An email created by myself informing potential participants who agreed to be contacted of the project and its purpose was sent out via email. Participants interested in the project replied to the email. An online scheduling poll (Doodle) was then created to schedule the time of the focus group interviews.

Data Collection

Two separate focus groups consisting of five participants each, for a total of 10 participants, were conducted. I served as the moderator for the discussions. My role was structured with a list of topics and/or questions to cover during each session. Care was taken to solicit input from all participants. Each session followed the same format and used the pre-approved questions. Both sessions began with a brief introduction, including the format of the interview and purpose of the study. Sample questions used during the interviews included: Are you familiar with CBT? What are your thoughts on utilizing CBT as a treatment modality for adolescent depression? Have you received formal training CBT? Do you currently utilize CBT in your practice? What concerns do you have regarding its use in practice? Would you be interested in learning more about CBT? See Appendix E for a full list of questions. Additional questions were necessary in order to solicit additional information regarding adolescent depression. At the

end of each focus group session, a summary of the discussion was provided to participants and the opportunity was provided to participants to clarify any misunderstanding and confirm my understanding.

A digital audio recorder was used to record each focus group and notes were taken by myself in a journal. Notes consisted of the date and time of each session and attempts to capture non-verbal expressions of participants such as body language and gestures. Participants were identified by their first name only during the interviews. This allowed me to capture who was speaking during the data analysis process of the audio recordings. After project is completed in its entirety, the journal and audio recording will be destroyed.

Data Analysis

Qualitative data analysis can be challenging due to a lack of universal rules and an absence of standards. Integrity in creating high quality evidence is of the utmost importance in qualitative research. Lincoln and Guba (1985) created a framework of quality criteria. The main objective in the framework is creating trustworthiness (Lincoln & Guba, 1985). Trustworthiness is the parallel standard for qualitative research as validity and reliability are for quantitative research. Four main concepts have been identified as a means to establishing trustworthiness: credibility, confirmability, dependability and transferability (Lincoln & Guba, 1985).

Credibility refers to the level of truth and confidence in the data collected and reported (Lincoln & Guba, 1985). Two aspects of credibility identified by Lincoln and Guba (1985) are the manner in which the study was conducted in order to create believability and the steps taken to demonstrate credibility in the findings. In this project, audio recordings were transcribed verbatim and read multiple times in order get a sense of themes and subthemes. A password

encrypted Excel spreadsheet was created with questions and participants answers. Data was broken down based on questions asked throughout the interview relevant to the purpose of the study (Merriam, 2009). This was difficult at times to identify who was speaking as well as participants' distance from the microphone, which made it difficult to hear. In order to minimize these issues, I described interactions in the form of journal entries as a means to interpreting the findings and then incorporated this information into the synthesized data. The integration of journal entries and synthesized data allowed for scrutiny of themes in relation to interactions, emotional content, and verbal words. Through careful analysis of the data recurring similarities and themes were identified regarding the use of CBT as a treatment modality for adolescent depression in the primary care setting. Additionally, the committee chair reviewed the audio tapes and synthesized data in order to confirm findings.

Confirmability was achieved throughout the study by utilizing an audio recorder during focus group interviews. This ensured the data represented the information the participant provided via transcription (Lincoln & Guba, 1985). Credibility was achieved by using participants voices via quotations and not my biases, motivations, and perceptions. Additionally, at the end of each session, I summarized the notes I had taken with participants allowing them the opportunity to clarify sentiments and statements made. Credibility cannot be achieved without dependability. Dependability was accomplished through a detailed description of each process involved during the study, transcribed audio, and meticulous notes. An in-depth discussion of participants' thoughts regarding the use of CBT in the primary care setting to treat adolescent depression attempted to achieve transferability.

Colaizzi (1978) steps for analyzing qualitative research were used for this project. Once the interviews were complete audio recordings were transcribed verbatim and read multiple times while incorporating journal notes in order to capture sentiments and thoughts as well as get a sense of the interviews as a whole. Throughout this process I found it easiest to organize the data through the creation of an Excel spreadsheet. This allowed me to identify questions asked with participants' responses. The transcribed spread sheets were then analyzed and significant statements were extracted. Statements were further analyzed for meanings. Statements were then compared against each other to identify clusters, patterns, and themes. Through the use of Colaizzi's method of data analysis major themes were identified. One step in the Colaizzi method that was omitted was returning to interview participants for validation of results. However, at the end of the interviews sentiments were validated with participants to ensure understanding of the content as a whole.

FINDINGS

Two focus group interviews were conducted consisting of five participants in each interview for a total of ten participants. From the initial question regarding the use of CBT and its use in the primary care setting of adolescent depression I determined there was a substantial lack of knowledge. At this point, I decided to take a step back and began asking questions with adolescent depression as a starting point including screening, clinical practice guidelines, and then CBT. The dynamics between the two groups varied significantly providing for a richer, more in-depth discussion to occur in the second group. The findings from the focus group interviews can be divided into two major themes based on participants' statements and

responses: comfort level and role conflict. The themes are central to understanding the use of CBT in the treatment of adolescent depression in the primary care setting among FNPs.

Demographics

Participants were from the Greater Phoenix metropolitan area. Sixty percent were female (n=6) and 40% male (n=4). Of the participants 60% had a DNP degree; 40% were Master's prepared FNPs. Participants' years in practice ranged from 1-10 years. Eighty percent of participants report seeing less than 15 adolescent patients per week; 40% saw 0-5 and another 40% see 5-15. Only one participant saw more than 20 adolescent patients per week. Of the participants, 50% worked in an urban setting, followed by 40% in medically underserved settings, and 10% in a rural setting.

Comfort Level

Screening

Comfort level was a recurring theme throughout the interviews. This was identified as a lack of education and training of participants on adolescent depression as whole, not just in the use of CBT. Of participants interviewed 90% felt that adolescent depression is both under-recognized and under-treated. Recognition, and ultimately treatment, of adolescent depression begins with routine screening; however, only one participant interviewed indicated that they routinely screen for adolescent depression regardless of the presenting complaint. The majority of participants felt a lack of confidence in using screening tools. This was expressed in one participant's comments,

“Yeah, I'm probably most knowledgeable with the quick PHQ2 scale. I don't know. I'd have to gather further resources if the adolescent answered yes to these two questions.”

Another participant responded,

“Yeah, and I would say I am not knowledgeable. I would definitely have to look it up if I was faced with that situation.”

Another participant hesitated,

“I’d say kind of across the board the answer is probably no. I feel like the general consensus is that we kind of open up a can of worms that most providers aren’t prepared to handle. It’s really related to being under prepared to treat the problem if it was identified. I’d say overall across the board probably not.”

These sentiments clearly indicate that participants struggle to feel comfortable with routine screening of adolescent depression.

Clinical Practice Guidelines

While the varying response and frequency of screening may present a challenge in treatment of adolescent depression, it is likely indicative of a much larger knowledge gap. From the interviews of the participants, current knowledge level and associated confidence and competency in the use of clinical practice guidelines represent a significant challenge in treatment of adolescent depression. Of the 10 participants interviewed, only one participant expressed a high level knowledge in applying current guidelines for treatment of adolescent depression while no participants self-assessed a high level of comfort in applying the current guidelines for treatment. This is evident in the participant’s remark,

“I feel comfortable, but not extremely so. I would definitely need to take some time to read through them, and create a plan for my patients.”

“I’m just not comfortable in applying the guidelines. It’s not like you just choose some antibiotic and the patient gets automatically better. I mean I don’t know about you guys, but there’s much more involved to it.”

Based upon interviews with the 10 participants, all participants evaluated themselves as having a low or moderate knowledge level of applying current guidelines for treatment of adolescents with depression. The standard of care for treating depression among participants was referral to outpatient mental health professionals and not initiating treatment in the primary setting. A common response from participants to this included,

“I currently refer all children that I suspect after screening that have a high PHQ-9 or even a different screening tool, and I have access to child psychiatrists and it’s just as simple as a referral. That’s currently what I’m doing at the moment.”

And yet another reiterated similar feelings,

“I would say I’m somewhat comfortable, but the guidelines in hand, I’d still, again, referring them a specialist would be my preference.”

The link between comfort level and competency in applying current guidelines for treatment of adolescent depression is further explored in statements from the participants. In reference to comfort levels to treat adolescent depression, one participant stated,

“I’m gonna be honest and say not comfortable at all. I would prefer to send the child to a psychiatrist if medication were necessary.”

Another participant stated,

“No. No, that would be something for the psychiatry person. That’s their specialty, so I refer out.”

Resources and Referrals

The relatively low knowledge levels expressed by the participants appears to result in referrals to other community resources rather than treatment in the primary care setting. When the participants were asked about referrals of adolescents with depression for treatment to other community resources, 90% responded that they occasionally or routinely referred the patients to outside treatment. This is not necessarily a negative response if FNPs feel inadequately trained to treat adolescent depression. However, frustration was a common emotion associated with the lack of available community referral sources and barriers to accessing adolescent mental health providers.

“... I know some that are further away, but generally people aren't willing to drive that far.”

“Yes, they have little idea of where to turn when referred to a mental health provider. Many times they go through their insurance to see if anyone nearby is covered.”

“Yes, I often find that patients and families have difficulty locating mental health providers that can see and treat the adolescent in a timely matter.”

“Yes, in mental health in general there are certainly not enough resources.”

Cognitive Behavioral Therapy

When the participants were asked if they had received training on CBT as a part of their formal education, not one of the participants indicated such. Not surprisingly, 100% of the participants indicated that they do not use CBT as a treatment modality for adolescents with depression.

Despite the lack of formal training and/or use of CBT as a treatment modality, the participants overwhelmingly expressed willingness for both training on CBT and its use in a primary care setting. Ninety percent of participants interviewed expressed willingness for training on CBT and 70% expressed a willingness to use CBT as a treatment modality in a primary care setting.

“Yeah, I would, of course. Something I could learn and get a grasp of and have the understanding and knowledge, I would definitely be willing to treat adolescent patients that way.”

One participant stated,

“I mean yeah, for me, if I had the education and comfort level, at a minimum, I have something to provide to my patients.”

Another responded,

“Yes, if I had the appropriate training and could see the proven benefits...I would choose this over medication any day.”

Not all respondents agreed with the above sentiment with one stating,

“No... CBT is something that requires more time beyond a 15-minute visit. It is better suited for a psychiatric or other mental health provider and in a 30 minute to 1 hour session.”

Further, from interviews with the participants, 80% were not aware that CBT is reimbursed in the primary care setting and 90% did not understand how to code for CBT in order to be reimbursed for the service provided. The lack of knowledge with respect to reimbursement and

coding may or may not be a contributing factor to the low utilization rate of CBT as a treatment modality for adolescents with depression.

Role Conflict

Role conflict was a common theme among participants. The role of providing mental health services was limited by time constraints and volume of adolescent patients seen. When the participants were asked about what prohibits them from treating adolescents with depression as recommended by clinical practice guidelines, one participant noted,

“Time... I generally have to focus on the chief complaints which typically do not involve mental health concerns.”

Another stated,

“... I think it'd be very time-intensive. I mean usually appointments with mental health providers are an hour each. We just don't have that much time, I think, in the primary care setting.”

And yet another affirmed,

“I tend to think it would be very labor and time intensive. The other thing I didn't get to say is I just don't know if the exam room is the appropriate— I just don't think it's the right place to complete CBT.”

Other participants echoed the feeling that CBT is effective, but when conducted by a mental health provider. One participant had felt that mental health providers are better equipped and have more time allotted to provide CBT to adolescents,

“There's just always other constraints. Like you said, I just don't see how the family provider can have time to conduct cognitive behavioral therapy in the clinic. If they

really need cognitive behavioral therapy, my job would be to try to find them the resources who are trained to provide that therapy.”

Volume of adolescent patients seen in the primary care clinic appeared to be a factor in both comfort level and the role of providing CBT. Sentiments to this fact included:

“To me, it’s just limited adolescent patients. I don’t feel I see enough in my clinic.”

“I haven’t treated enough adolescents to feel confident in it, and just the lack of access to the guidelines and my understanding of them.”

“I don’t feel I see enough adolescent patients at my clinic.”

DISCUSSION

The issue of adolescent depression and its treatment in the primary care setting is more complex than I originally thought. I was under the impression that with the tools needed, FNPs could start combating adolescent depression and improving the lives of children using CBT in the primary care setting. What I failed to understand was the lack of fundamental knowledge regarding adolescent depression as a whole. The interviews lead me to believe that although CBT is a highly effective and underutilized treatment modality in the primary care setting for adolescent depression, providers are not at the level of understanding to be open and willing to incorporate it into their current practice.

FNPs almost unanimously agree that depression in adolescents is both unrecognized and undertreated. Throughout the course of the interviews it was evident that FNPs did not possess the skill or comfort level in identify or beginning treatment for adolescent depression. Furthermore, they lack the basic understanding and availability of valid screening tools for assessing depression in the adolescent population. There was a general lack of understanding

regarding which screening tools were applicable for the adolescent population. An overwhelming 80% do not routinely screen for depression leaving many missed opportunities for recognition and treatment. For those that do screen annually, there is a knowledge deficit in how to interpret the results of a screening and how to proceed from that point if the result is positive. These findings are consistent with what was identified in the review of literature, which included variations in comfort level and timing of routine screening for depression in this age group.

Comfort level of participants' knowledge appears to be the major limiting factor in effectively treating adolescents with depression. Knowledge was the most common theme running within and throughout the interviews. The knowledge gap appears to have roots in the formal education programs provided to FNPs. All participants admitted that they received no formal training on adolescent recognition or treatment options for depression within their education. These sentiments echoed what was discovered during the review of current literature: providers are not receiving thorough didactic education in the academic setting. There appeared to be an overall interest in the subject, but also one that was met with hesitation and scope of practice boundaries. Participants felt their gap in knowledge inhibited them from providing safe care to these patients. They felt adolescent patients would receive better care from a mental health provider.

To begin, FNPs have limited knowledge and comfort on clinical practice guidelines for treating depression. There is a lack of awareness of the guidelines' existence to an inability on how to apply them to depressed adolescents. At the present time, based on lack of knowledge, most FNPs would prefer to defer treatment to a mental health provider. Ninety percent routinely or occasionally refer adolescent patients to outside mental health providers. This is the most

appropriate course of treatment when the recommendations fall beyond the education, scope, or comfort level of a FNP. In this regard, it is not surprising that with the gap in knowledge and training, FNPs rely more heavily on specialist to treat adolescent depression. Based on this information, this would be in the best interest of the patient. These findings were in-line with what was identified within the literature. Pilot programs of use of CBT have been successful in the primary care setting, but widespread use has yet to be adopted. Within the literature review there was no evidence speaking to the degree of knowledge on current clinical practice guidelines of providers. The majority of treatment found in both the group interviews and review of literature was referral to a mental health provider for treatment of depression in adolescents.

To build upon the knowledge deficit, none of the participants had received formal education on CBT within their formal education as a FNP. Two participants were unfamiliar with the treatment modality all together. There was an overwhelming desire among participants for additional education regarding CBT and its use to treat adolescent depression in the primary care setting. However, not all participants were interested in using it as a treatment modality in their individual practice. Twenty percent felt they wanted the education in order to better inform patients about treatment options, but not ones that they would provide necessarily. Seventy percent felt that with additional training and education they could incorporate CBT into their current practice.

There was a general lack of awareness of the ability to bill and code for using CBT in the primary care setting. This did not have any bearing on participants' current use of CBT within their practice. All agreed that with simple education, this can be an easy fix and beneficial to the practice as it can be billed under the CPT code 99214.

Number of patients was a concern noted throughout the interviews. The FNPs on average see between 0-15 pediatric patients per week. The participants felt they did not see enough patients on average to be comfortable treating adolescent depression. Additionally, they felt they would not have the volume of patients necessary to reach full competency and comfort with using CBT. None of the literature reviewed mentioned volume of adolescent patients as a barrier to treating these patients. This was a new finding from this study, and is significant for this reason. This may in fact be a reason contributing to the lack of use of CBT in the treatment of adolescent depression.

Time was an issue that was mentioned on multiple occasions. Time constraints limited opportunities for screening, identification, and treatment including CBT. Time was a factor in having the ability to adequately screen and identify patients with depression. All participants stated they had limited time to cover the chief complaint of the appointment, let alone delve into the psychiatric issues the patient may be experiencing. As much as participants welcomed the idea of learning about CBT and incorporating it into their practice, time constraints were a barrier to its utilization. Participants felt that even in a 30-minute appointment, being an inexperienced practitioner conducting CBT would be an unrealistic expectation. This was a concern mentioned time and time again in the literature as a barrier to using CBT in the primary care setting. This study reaffirmed those findings that time continues to be a constraint in the primary care setting.

Overall, the focus group interviews shed light on the lack of knowledge on adolescent depression. Though the focus of the interview was CBT, the conversation often led back to a common theme: lack of knowledge on all aspects of adolescent depression including

identification, screening, clinical practice guidelines, and use of CBT. These findings are constant with the current literature with regards to the lack of use of CBT in the primary care setting as a treatment option for adolescent depression.

In retrospective reflection, it was noted that the content from second focus group was richer and provided more depth than the first group interview. I believe this to be multifactorial. First, the initial group interview was with participants that were not familiar with my project or me. I lacked the ability to engage the group as a novice interviewer. Second, the subsequent group interview consisted of participants that were colleagues of one another and myself. Additionally, this group was familiar with my project. I believe this changed the group dynamics in a way that I was unaware of at the beginning of the interview process.

Implications for Advance Practice Nursing

Family nurse practitioners are in a position to improve patient outcomes for adolescents suffering from depression with additional education and training. The fact that there is a willingness to learn holds great promise. There are multiple avenues that could be pursued to increase the knowledge base of FNPs in the use of CBT. Although changing advanced nursing curriculum is a great undertaking, there is also overwhelming evidence that is both needed and necessary to improve the lives and future of depressed adolescents. As it stands, there is a grave lack of mental health providers to adequately care for and support these patients. Increasing access to evidenced based treatment options, including CBT, provided by FNPs would increase access for many of these patients. Providing education within the didactic coursework of an FNP program would increase knowledge, comfort, and competency in using the skill.

The focus group interview provided a forum to highlight a need that is otherwise often overlooked due to the busy demands of the day-to-day job. Hopefully with enlightenment comes the desire to pursue additional education in areas that are lacking. Not only do we have a commitment to our patients to seek out and keep abreast of current evidenced-based recommendations, we also have a professional commitment to provide these resources to fellow FNPs. State and national conferences can be an optimal place to provide education on adolescent depression and provide instructional courses on CBT that can be incorporated into the primary care practice setting.

Screening for depression is a secondary preventative measure that falls well within the range of essential practices of the FNP. I was discouraged to learn that CBT was not a well-known treatment option available to FNPs; I was even more disheartened to learn that adolescent patients are not being screened for depression on a routine basis. FNPs excel at providing secondary preventative healthcare, however, there exists an opportunity for improvement in screening for depression in the adolescent population. Even if CBT is not realized in the primary care setting, patients should be identified in order to reduce the impact of the disease. Early identification of depression and referral to appropriate treatment for adolescents can improve short term and long-term outcomes. At a minimum, FNPs should have sound knowledge on commonly utilized screening tools available for depression of all ages.

Adequate time appears to be a concern for most FNPs and providers of primary care due to external constraints on time related to demand for service. However, it is important to understand when the direction of a visit must change based on the patient's complaint. Depression can affect all aspects of a child's life. Consciously choosing not to address a mental

health concern during an office visit can lead to devastating consequences for an adolescent. Screening tools provide a conversation starter between provider and patient/caregiver regarding depression.

Limitations

There are inherent limitations to conducting qualitative research. Critiquing qualitative research requires examining what meaning can be made of the findings (Russell, Gregory, Ploeg, DiCenso, & Guyatt, 2005). Every attempt was made to adhere to the framework described by Lincoln and Guba (1985) to produce trustworthy qualitative research. Determining whether the results are ambiguous or create meaning can be subjective based on the researcher. Bias on my part was minimized by staying neutral throughout the interviews, and asking questions that were impartial and did not persuade participants one way or another. Careful effort was made to reflect participants' voices and conditions of the inquiry in order to minimize bias, motivation, or perspective on behalf of myself. A limitation of the study is the fact that I am a novice to qualitative research. I have never conducted research in this capacity, including a group interview format. Additionally, I have never served as a moderator over a group interview, therefore, my ability to elicit more insightful interactions was limiting.

Another limitation noted in the study was the sample of participants was drawn from a small geographical area making it difficult to generalize findings across other areas outside the greater Phoenix Metropolitan region.

A significant limitation of the focus group interviews was the inability to exclusively discuss CBT as a treatment option for adolescent depression in the primary care setting. Because participants felt that the use of CBT encompassed depression and lack of knowledge in its

entirety, it took away from the focus of CBT. However, that being said, a deeper understanding became known regarding treating adolescent depression in the primary setting.

CONCLUSION

In conclusion, this study used a focus group interview approach to explore FNPs use of CBT in the treatment of adolescent depression. The findings showed that its lack of use is multifactorial with knowledge being the greatest inhibiting factor. CBT is a recommended, first-line treatment option within the clinical practice guidelines for the treatment of adolescent depression. Though CBT may not be a realistic expectation of FNPs based on limited knowledge, this paper has addressed other areas in which improvements can be made. With education on screening, identification, and use of current practice guidelines, FNPs may eventually be able to incorporate CBT into their practice with confidence and ease.

APPENDIX A:
EVIDENCE APPRAISAL TABLE

Evidence Appraisal Table

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Mignogna et al., 2014) Implementing brief cognitive behavioral therapy in primary care: A pilot study	Descriptive/ Qualitative	Implementation strategy conducted as part of a multisite randomized controlled trial examining a brief cognitive-behavioral therapy versus usual care for medically ill patients in primary care, using a hybrid (type II) effectiveness/ implementation design.	9; five PC-MHI staff clinicians who typically provide psychotherapy; Three postdoctoral psychology fellows and one predoctoral psychology intern consented to participate; one PC-MHI clinicians who did not routinely provide psychotherapy	(1) modular-based online clinician training, (2) treatment fidelity auditing with expert feedback, and (3) internal and external facilitation to provide ongoing consultation and support of practice.	Results suggest that a comprehensive implementation strategy to improve clinician adoption of a brief cognitive-behavioral therapy in primary care is feasible and effective for reaching high levels of adoption and fidelity.
(Asarnow et al., 2009) Long term benefits of short term quality improvement interventions for depressed youths in primary care	Quantitative	Random assignment to either usual care (N=211) or 6-month quality improvement intervention (N=207); the main effect was to decrease severe depressive symptoms at six months	(N) 418 youth between the ages of 13-21	The primary outcome variable was severe depression, defined on the basis of CES-D score: a score <24 was classified as a response, where >24 was classified as a non-response.	The quality improvement intervention, relative to enhanced treatment as usual, lowered the likelihood of severe depression at 6 months; a similar trend at 18 months was not statistically significant.

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Fallucco et al., 2012) Use of a standardized patient paradigm to enhance proficiency in risk assessment for adolescent depression and suicide	Quantitative Hypothesis: participation in this skills-based intervention would result in: (a) improved PCP ADSRA confidence and knowledge and (b) more frequent screening for depression and suicide risk factors when compared with an untrained sample of PCPs.	A confidence and knowledge questionnaire tracked ADSRA confidence and knowledge: (1) at baseline on the intervention day, (2) immediately post intervention on the intervention day, and (3) 5–10 months post intervention	46 Providers (44 peds, 2 FP), 37 women. Average length in practice was 18 years	PCPs were asked to rate their confidence in: (1) interpreting depression screening tools, (2) diagnosing depression, (3) assessment of suicide risk, (4) initiating treatment with an SSRI, (5) providing supportive counseling, and (6) monitoring treatment response. Confidence was rated using a 5-point Likert scale (where 1 = very low, 2 = low, 3 = moderate, 4 = high, and 5 = very high) ADSRA quiz included three clinical vignettes with questions testing: (1) initial steps in the evaluation of a depressed adolescent, (2) assessment of adolescent suicide risk in different clinical scenarios, and (3) appropriate SSRI titration for adolescent depression.	Provider training increased the likelihood that PCPs would screen for depression in adolescents; confidence and knowledge increased post assessment barriers to screening included insufficient provider training

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Avenevoli et al., 2015) Major Depression in the National Comorbidity Survey-Adolescent Supplement: Prevalence, Correlates, and Treatment	Qualitative	Face to face survey administered by professional interview staff of the Institute for Social Research at the University of Michigan. Additionally, one parent or surrogate of each participating adolescent was also asked to complete a self-administered questionnaire Data are from the National Comorbidity Survey–Adolescent Supplement (NCS-A), that assesses DSM-IV disorders using the Composite International Diagnostic Interview (CIDI) Version 3.0. One parent or surrogate of each participating adolescent was also asked to complete a self-administered questionnaire	N: 10,123 adolescents ages 13-18 throughout the US	Measures included: sociodemographics, variables, diagnostic assessment, DSM-diagnosis. Clinical features including role impairment, 12-month suicidality, 12 month treatment,	Lifetime and 12-month prevalence of MDD were 11.0% and 7.5%, prevalence of MDD increased significantly across adolescence, with markedly greater increases among females than among males. Most cases of MDD were associated with psychiatric comorbidity and severe role impairment, and a substantial minority reported suicidality. The prevalence of severe MDD was about one-fourth of that of all MDD cases; estimates of impairment and clinical correlates were of 2- to 5-fold greater magnitude for severe versus mild/moderate depression, with markedly higher rates for suicidal thoughts and behaviors. Treatment in any form was received by the majority of adolescents with 12-month DSM-IV MDD (60.4%), but only a minority received treatment that was disorder-specific or from the mental health sector.

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Radovic et al., 2014) Primary Care Providers' Initial Treatment Decisions and Antidepressant Prescribing for Adolescent Depression	Quantitative	Cross sectional survey of PCPs regarding initial treatment options for adolescents with depression	PCPs (N: 58) included pediatricians (MD/DO), pediatric nurse practitioners (CRNP) and physician assistants (PA) employed by a large pediatric practice network (serving about 46,000 adolescents) in the greater Pittsburgh, Pennsylvania area.	93-item paper survey: PCP reports of initial treatment decisions in response to two vignettes describing depressed adolescents with either moderate or severe symptoms. Measured PCP depression knowledge, attitudes toward addressing psychosocial concerns, demographics, and practice characteristics	PCPs working within an integrated behavioral health system with ready access to mental health professionals almost unanimously recommended therapy for both moderate and severe adolescent depression, but were often reluctant to prescribe an antidepressant, regardless of depression severity
(T. Gladstone et al., 2014) Understanding adolescent response to a technology-based depression prevention program	Quantitative	Aims to examine intervention variables that predict favorable changes in depressive symptoms at 6-to 8-week follow-up in at-risk adolescents who participated in an experimental primary care, Internet-based prevention program	83 adolescents from primary care clinics ages 14-21; 56.2% female with 41% non-white	Participants completed self-report measures, met with a physician, and then completed a 14-module Internet intervention targeting the prevention of depression.	Facilitator to treatment. Linear regression models indicated that several intervention factors (duration on website in days, the strength of the relationship with the physician, perceptions of ease of use, and the perceived relevance of the material presented) were significantly associated with greater reductions in depressive symptoms from baseline to follow-up
(Kramer et al., 2012) Recognizing and responding to adolescent depression in general practice: Developing and implementing the Therapeutic Identification of Depression in Young people (TIDY) programme	Qualitative	The paper describes the development and implementation of a program for primary care providers to assess for and intervene adolescents with depression	31 PCPs based in West London	Participants were provided two 1-hour training sessions on the TIDY programme and how to effectively implement the program into their practice in the treatment of adolescents with depression. Participants were then asked to implement the training into practice over a one year period to ascertain feasibility, utility, and acceptability.	PCPs were uncertain about the significance of signs and symptoms which accounted for the variation in screening and treating; Community and practice based intervention are more useful in teaching than didactic, which implies that training should be easily adapted into the workplace setting

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Richardson et al., 2007) Pediatric primary care providers and adolescent depression: A qualitative study of barriers to treatment and the effect of the black box warning.	Qualitative Study	Focused group interviews were conducted to encourage individuals to share personal history with treating depression; global questions were used to stimulate conversation	35 pediatric primary care providers (32 physicians, and 3 NPs) from five rural and four urban practices	Interviews last 45-60 minutes. Qualitative data analysis software, ATLAS.ti was used to code text passages and facilitate comparison within and across interviews. Frequently encountered themes were grouped and studied for patterns and discordance to incorporate the richness of data collected into the final model	PCPs report many barriers to treating depression, including inadequate referral resources, poor insurance coverage for mental health services, and inadequate time and training to diagnose or provide patient education
(Taliaferro et al., 2013) Depression screening and management among adolescents in primary care: factors associated with best practice	Quantitative	Online survey of primary care providers in Minnesota	260 family medicine physicians, 127 pediatricians, 96 family nurse practitioners, and 54 pediatric nurse practitioners	Analyses involved bivariate tests and linear regressions. More likely to identify lack of professional training as a barrier (57% vs 41%; $P < .01$), as were nurse practitioners compared with physicians (55% vs 43%; $P < .05$). Compared with physicians, nurse practitioners were significantly less likely to strongly believe that they are responsible for managing depressed adolescents (46% vs 26%; $P < .01$), and they felt less sure that they could effectively manage these youth in their practice settings (50% vs 32%; $P < .01$).	Enhancing clinicians' competence to address depression and developing post screening protocols could help providers implement universal screening in primary care

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
<p>(Mojtabai, 2011) Does depression screening have an effect on the diagnosis and treatment of mood disorders in general medical settings?: An instrumental variable analysis of the national ambulatory medical care survey.</p>	<p>Quantitative</p>	<p>Data was drawn from three consecutive years of the National Ambulatory Medical Care Survey (NAMCS) from 2005 to 2007, which assessed depression screening in each visit</p>	<p>Sample was limited to visits to physicians other than psychiatrists by patients aged 6 years and older (n =73,712 visits).</p>	<p>Visits in which a depression screening was used were compared with non-screened visits with regard to characteristics of patients and practice setting using contingency tables and adjusted Wald tests. Five sets of probit analyses were conducted in which the association of depression screening with depression diagnosis and antidepressant treatment was assessed. The dependent variables in these five sets of analyses were the following: (a) diagnosis of mood disorders overall, (b) prescription of antidepressants overall, (c) prescription of antidepressants with a mood disorder diagnosis, (d) prescription of antidepressants without a mood disorder diagnosis, and (e) a diagnosis of mood disorder without an antidepressant prescription</p>	<p>Preliminary evidence suggests that the use of screening measures may help improve the match between diagnosis and treatment of mood disorders in usual medical settings.</p>

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Ozer et al., 2009) Are adolescents being screened for emotional distress in primary care?	Quantitative	Two large data sets were utilized to assess provider's rates of screening of emotional distress in adolescents	899 adolescents, ages 13 to 17, taken from 86 different providers 15 to 17 years (52.6%) with 47.4% falling into the 13- to 14-year-old age group	Secondary data collection from the California Health Interview Survey measured provider behavior regarding screening for emotional distress; The specific measure used for this analysis was the question: "Did your doctor talk to you about getting help if you feel sad or depressed?" Rates of screening for emotional distress by primary care providers were calculated on the basis of adolescent patient self-report	One-third of teens (34%) reported that their doctor talked to them about getting help if they felt sad or depressed. Cross tabulations using chi-square statistics revealed that younger teens, ages 13 to 14 years, were significantly less likely to report the discussion (30.6%) than older teens, ages 15 to 17 years (37.0%) ($p < .05$).
(Borner, Braunstein, St Victor, & Pollack, 2010) Evaluation of a 2-Question Screening Tool for Detecting Depression in Adolescents in Primary Care	Quantitative	Adolescents were recruited over a 6-month time period from outpatient clinics associated with a New York Hospital and administered the Patient Health Questionnaire (PHQ) -2, the Children's Depression Inventory (CDI) and the Beck Depression Inventory (BDI)	85 adolescents ages 13-17; 22 males, 63 females, 57 African American, 19 Hispanics, 4 Caucasian, 1 Asian	PHQ-2 was administered by the researcher, the CDI and BDI were both explained and then completed independently to the participant	Results indicated a significant relationship between the second question of the PHQ-2 and the two established measures of depression. Discriminant function analysis revealed that classification of adolescents as depressed or not depressed on the basis of their responses to second question resulted in correct classification of 73% of adolescents with a sensitivity of 0.48 and specificity of 0.60. The use of both questions resulted in lower classification accuracy (67%) but a higher sensitivity of 0.85 and a slightly lower specificity of 0.51 than either question alone.

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Raphel, 2009) New recommendations on screening and treatment for major depressive disorder in children and adolescents	Overview of the latest recommendations by the US Preventative Task Force and clinical considerations and clinical implications				For adolescents aged 12–18, the new recommendation calls for screening for major depression, but only when systems for diagnosis, treatment, and follow-up are present; Implications of these recommendations for nursing practice is that non-mental health nurses such as family nurse practitioners and pediatric nurse practitioners now have evidence to support routine adolescent depression screening in their practice
(Ferrin, Gledhill, Kramer, & Elena Garralda, 2009) Factors influencing primary care attendance in adolescents with high levels of depressive symptoms	Quantitative	Adolescents attending the practice for a PCP consultation in a suburb of London were asked to complete study questionnaires.	184 adolescents ages 14-17	Questionnaires included The Mood and Feelings Questionnaire (MFQ) [1], a well-validated and reliable 32-item self-report instrument used to screen for depressive disorder in this age group, Child Somatization Inventory (CSI), a well-standardized instrument that describes the frequency and intensity of 35 psychophysiological symptoms over the previous 2 weeks	Adolescent males are more likely to have physical complaints associated with depression; females are more likely to express concern over mental health due to a higher belief that GPs are interested in their concern

Author/Article	Qual/Quan	Design	Sample (N)	Data Collection	Findings
(Dumont & Olson, 2012) Primary care, depression, and anxiety: exploring somatic and emotional predictors of mental health status in adolescents	Quantitative cross-section study	Data was collected from the Dartmouth Healthy Teens Screener- the personal digital assistant (PDA) that screens physical, mental and social health risks in the primary cares settings; it also includes a validated 2-question depression and anxiety screen	Adolescents ages 11-21 (n=2535)	From the screenings, items that potentially are associated with increased likelihood of a positive screen for depression or anxiety were determined 2 questions about familial and peer psychosocial support were asked. The assets and psychosocial support questions together constitute the protective factors, shielding the adolescents from depression and anxiety	4.8% of adolescents in the study population had positive PHQ-2 screens and 6.3% had positive GAD-2 screens. Predictors for a positive screen of depression included substance use (adjusted odds ratio [AOR], 2.05); stress (AOR, 3.59); anger (AOR, 1.94); and worries about family alcohol and drug use (AOR, 2.69). Among protective factors, that is, those that reduce the risk of depression, age (AOR, 0.87 for younger patients); having parents who listen (AOR, 0.34); and having more assets (AOR,0.65) were significant
(Gledhill & Garralda, 2013) Sub-syndromal depression in adolescents attending primary care: frequency, clinical features and 6 months outcome	Quantitative	To document frequency, characteristics and 6 month outcome of sub-syndromal depression amongst adolescent presenting to primary care providers	274 participants ages 13-18	Mood and Feeling Questionnaire was completed at initial visit and at 6-month f/u; those that screened positive were interviewed	Subsyndromal depression was estimated at 25% (sub-syndromal depression was defined as high levels of depressive symptoms in the absence of depressive disorder); at f/u 57% had persistent depressive symptoms, and 12% developed a depressive disorder

APPENDIX B:
IRB APPROVAL LETTER



Research

Office for Research & Discovery

Human Subjects
Protection Program

1618 E. Helen St.
P.O.Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
<http://rgw.arizona.edu/compliance/home>

Date: August 03, 2016
Principal Investigator: Erica K Shimkus

Protocol Number: 1607745416
Protocol Title: Family Nurse Practitioners' Use Of Cognitive Behavioral Therapy: A Treatment For Depression In Adolescents

Level of Review: Exempt
Determination: Approved

Documents Reviewed Concurrently:

Data Collection Tools: *Demographic Questionnaire.docx*
 Data Collection Tools: *Focus Group Questions.docx*
 HSPP Forms/Correspondence: *E. Shimkus Appendix F Consent Waiver.docx*
 HSPP Forms/Correspondence: *F107 Form Verification of Human Subjects Training.doc*
 HSPP Forms/Correspondence: *Shimkus F200 IRB Form 0728-2016 Revised.doc*
 HSPP Forms/Correspondence: *Signature page.pdf*
 Informed Consent/PHI Forms: *E. Shimkus Disclosure Statement v2016-08-02.docx*
 Informed Consent/PHI Forms: *E. Shimkus Disclosure Statement v2016-08-02.pdf*
 Participant Material: *E. Shimkus Email -Reminder.docx*
 Participant Material: *E. Shimkus- Email- Scheduled Time.docx*
 Recruitment Material: *E. Shimkus Recruitment Email.docx*

This submission meets the criteria for exemption under 45 CFR 46.101(b). This project has been reviewed and approved by an IRB Chair or designee.

- The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
- All research procedures should be conducted according to the approved protocol and the policies and guidance of the IRB.
- Exempt projects do not have a continuing review requirement.
- Amendments to exempt projects that change the nature of the project should be submitted to the Human Subjects Protection Program (HSPP) for a new determination. See the Guidance on Exempt Research information on changes that affect the determination of exemption. Please contact the HSPP to consult on whether the proposed changes need further review.
- You should report any unanticipated problems involving risks to the participants or others to the IRB.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HSPP Office. If subjects will be consented, the approved consent(s) are attached to the approval notification from the HSPP Office.

APPENDIX C:
DISCLOSURE STATEMENT

Disclosure Statement

Family Nurse Practitioners' Use Of Cognitive Behavioral Therapy: A Treatment For Depression In Adolescents

Erica Shimkus, BSN, RN, DNP Candidate

The purpose of the project is to describe the use of cognitive behavioral therapy among family nurse practitioners in the primary care setting. If you choose to participate in this study, you will be asked to attend one focus group session and openly discuss your thoughts, use of and experience utilizing cognitive behavioral therapy as a treatment modality for adolescent depression. The focus group session will last approximately 1 hour and include 4-5 participants. Each discussion will take place at a date, time, and place to accommodate participants' schedules as much as possible. You will be notified via email of your scheduled focus group session, reminded two days prior to the session, and may only participate in your assigned session.

Each focus group session will occur in a private meeting room at the Chandler Public Library, Sunset Branch. The interviews will be recorded using a digital audio recorder and will be transcribed into a word format for analysis. The principal investigator will also take handwritten notes during the session. You will be asked to complete an anonymous demographic questionnaire to collect information about your gender, age, ethnicity, years of experience as a family nurse practitioner, and current setting (rural, urban, medically underserved). Your participation is voluntary, and you may refuse or discontinue to take part in this study at any time. By agreeing to participate in this interview you agree to have your responses used for research purposes. During the focus group interview, you can choose to not answer any of the questions that the researcher poses. During the research project's data collection, analysis, and dissemination, your name and personal information will not be disclosed. You will be given a pseudonym in the interview transcription to ensure anonymity. Your responses will be kept confidential and all data collected will be destroyed once reviewed and analyzed by the principal investigator and her advisor, if necessary.

Your participation in this study may provide no benefit to you. The University of Arizona has no funds to pay if injury occurs as result of participation in this study. However, there are no notable, foreseeable risks to you associated with this study.

By participating, you do not give up any personal or legal rights you may have as a participant in this study. An Institutional Review Board at the University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints, you may contact the Human Subjects Protection Program at 520-621-3515 or online at <http://rgw.arizona.edu/compliance/human-subjects-protection-program>. For questions or concerns about the study you may contact **Erica Shimkus, RN, BSN, DNP candidate** at ericashimkus@email.arizona.edu or 602-740-0757

APPENDIX D:
DEMOGRAPHIC QUESTIONNAIRE

1. How many years have you been a nurse?
2. How many years been a FNP?
3. Do you have your MSN or DNP?
4. Do you work in a rural or urban setting? Medically underserved?
5. On average, how many adolescent patients do you see in a week?

APPENDIX E:
FOCUS GROUP INTERVIEW QUESTIONS

Do you feel depression is under-recognized in the adolescent population?

Would you agree or disagree that depression is under-treated in the adolescent population?

How would you describe your knowledge of the current guidelines for treating adolescents with depression in the primary care setting?

Based upon your current knowledge, how comfortable are you utilizing the recommended guidelines for the treatment of adolescent depression in your practice?

Outside of the current guidelines, do you feel adequate in your ability to treat depression in the adolescent population?

How knowledgeable are you with screening tools and how to utilize them effectively?

Do you feel confident in your ability to screen for adolescent depression?

Do you routinely screen all adolescent patients for depression regardless of the presenting complaint?

Have you received training for cognitive behavioral therapies (CBT) as part of your formal education?

Do you currently use CBT as a treatment modality for adolescents with depression?

If YES, do you believe that CBT is too time intensive in the primary care setting?

If YES, do you believe that CBT is feasible and effective in the treatment of adolescent depression?

Are you aware that CBT is reimbursed in the primary care setting?

Do you understand how to code for CBT in order to be reimbursed for the service provided?

What prohibits you from treating adolescents with depression as recommended by clinical practice guidelines?

During patient appointments, do you discuss barriers to implementing a plan or adhering to treatment recommendations for adolescents with depression?

Are you aware of resources available in your community for mental health providers to treat adolescent depression?

Do you find that patients and parents often report that there are limited resources in the community to treat adolescent depression?

Do you routinely refer adolescents with depression for treatment to other community resources?

Would you be willing to treat adolescent patients with depression using CBT in the primary care setting?

Would you be interested in additional training in the use of CBT as a treatment modality for adolescents with depression?

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