

**TRAUMA INFORMED MINDFULNESS TO MITIGATE DEPRESSION IN
ADULTS WITH ADVERSE CHILDHOOD EXPERIENCES:
A NURSE-DRIVEN INITIATIVE**

by

Susan L. Weaver

A brief submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

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Approved: _____
Elizabeth Speakman, Ed.D., RN, ANEF, FNAP, FAAN
Senior Associate Dean of Nursing

Approved: _____
Kathleen Matt, Ph.D.
Dean of the College of Health Sciences

Approved: _____
Louis F. Rossi, Ph.D.
Vice Provost for Graduate and Professional Education and
Dean of the Graduate College

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Nursing Practice.

Signed:

Catherine Heilferty, Ph.D., RN
Professor in Charge of Project Brief

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Nursing Practice.

Signed:

Susan Sheehy, Ph.D., RN
Project Committee Member

I certify that I have read this dissertation and that in my opinion it meets the academic and professional standard required by the University as a dissertation for the degree of Doctor of Nursing Practice.

Signed:

Jennifer Graber, Ed.D., APRN, PMHCNS-BC
Project Committee Member and
Interim Director of Graduate Program

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TABLE OF CONTENTS

ABSTRACT	vii
Chapter	
1 INTRODUCTION	1
1.1 Background	3
1.2 Significance and Statistics	5
1.3 Problem Statement and PICOT	5
1.4 Theoretical Framework	6
2 REVIEW OF THE LITERATURE	9
2.1 Search	9
2.2 Review and Synthesis of Literature	11
2.3 Project Recommendation	22
2.4 Project Purpose and Aims	23
3 METHODS	24
3.1 Setting	24
3.2 Participants	24
3.3 Stakeholder Analysis	25
3.4 Implementation Plan	27
3.5 SWOT Analysis	28
3.6 Work Breakdown Analysis	32
3.7 Project Timeline	32
3.8 Ethical Considerations	33
3.9 Data Collection and Analysis	34
3.10 Project Outcomes	35
3.11 Project Evaluation	36
3.12 Project Budget	37
3.13 Project Close Out	37
3.14 Dissemination Plan	37

4	RESULTS	39
4.1	Introduction	39
4.2	Consent.....	40
4.3	Data Analysis and Statistics	40
4.4	Limitations to Data Collection	43
4.5	Conclusion.....	44
5	DATA INTERPRETATION AND CONCLUSION	45
5.1	Discussion	45
5.2	Project Limitations	47
5.3	Sustainability of the Practice Change.....	48
5.4	Significance of the Project	49
5.5	Implications for Advanced Practice	50
5.6	Conclusion.....	51
	REFERENCES	53
Appendix		
A	PRISMA ONE DIAGRAM	58
B	PRISMA TWO DIAGRAM	59
C	JOHNS HOPKINS LITERATURE REVIEW TABLE.....	60
D	STAKEHOLDER ASSESSMENT TOOL	66
E	ACES SCREENING TOOL	67
F	FOLLOW UP SURVEY TOOL	68
G	SWOT ANALYSIS	69
H	WORK BREAKDOWN STRUCTURE.....	70
I	OUTCOMES MEASUREMENT	72
J	INFORMED CONSENT	73
K	DEMOGRAPHICS	79
L	STUDY DEMOGRAPHICS.....	80
M	FREQUENCY AND TYPES OF ACES	81
N	EFFECT ON HEALTH	84

ABSTRACT

Adverse childhood experiences (ACEs) are a significant health concern in the United States and have a direct impact on both physical and mental health and that lasts well into adulthood. Evidence shows that there is a strong correlation between exposure to ACEs, specifically a cumulative number of ACEs, and mental health challenges such as depression in adults. An evidence-based approach such as screening for ACEs in adults with depression can help guide an approach to care that is sensitive to this early trauma, avoiding interventions that may be re-traumatizing, and may improve the consequences of this trauma, even into adulthood. In addition, implementing mindfulness interventions, as an adjunct to counseling and other behavioral interventions, has been shown to be useful to manage symptoms of depression.

This DNP evidence-based practice project was guided by Bandura's Social Cognitive Theory, which emphasizes hope and self-efficacy. The project purpose was to explore whether the use of a mindfulness app called Insight Timer® and a survey/questionnaire on adverse childhood experiences (ACEs) are helpful in the adjunctive treatment of depression in adults. Data collection included a convenience sample of 20 adults with depression in a private-practice, mental health counseling center, who consented to participate in the project. Of those 20 adults, 18 completed ACEs screening and 13 completed the follow-up survey on the use of the mindfulness app. Data analysis indicates that 100% of the participants reported ACEs, and that those

ACEs impacted their health. The participants shared that the app helped to reduce their levels of anxiety, help them stay grounded, helped manage their emotions and helped with sleep.

Keywords: Adverse Childhood Experiences, Depression, Mindfulness

Chapter 1

INTRODUCTION

Childhood trauma is a significant health concern in the United States which has a direct impact on both physical and mental health in children, adolescents, and adults (*Robert Wood Johnson Foundation, 2020*). In 1998, the first results of the Adverse Childhood Experiences (ACEs) study, based at Kaiser Permanente's San Diego Health Appraisal Clinic, were published (Felitti et al., 1998). This study's purpose was to evaluate the impact of childhood traumatic experiences, such as abuse and household dysfunction, and its long-term effects on adult physical and mental health. The study also evaluated the cumulative effects of this early adversity (Felitti et al., 1998). Adverse childhood experiences include incidents such as violence, physical and sexual abuse, and neglect that occur between the ages of 0-17 years. The study concluded these early stressful experiences are linked to mental illness and other chronic, possibly life-limiting conditions and diseases, later in life (Felitti et al., 1998). Research shows that there is a strong correlation between exposure to ACEs, specifically a cumulative number of ACEs, and mental health challenges such as depression. Those who repeatedly and chronically experience adversity in childhood may suffer from traumatic toxic stress (TTS), which disrupts a person's ability to process information, make decisions, and regulate emotions (Oral et al., 2015). This TTS may last into adulthood. Cumulative ACEs are strongly

correlated with mental health challenges in adults. The risk for depression increases 4.5 times in those with exposure to four or more ACEs (Oral et al., 2016).

Considering the negative outcomes that exposure to early trauma and ACEs have on both physical and mental health of adults, it is critical to apply evidence-based approaches to reduce the impact of this trauma. Screening for ACEs in adults with depression will help to guide care in a trauma informed approach. Trauma-informed-care (TIC) is a comprehensive approach to care for adults who have experienced these early life traumas (Oral et al., 2016). This approach to care takes into consideration that many systems that serve adults may be unaware of traumatic events these adults have experienced, and this may lead to re-traumatizing the adult or not providing appropriate interventions (Oral et al., 2016). Early intervention, through a trauma-informed-care approach following exposure to trauma and ACEs, may reduce the short- and long-term consequences of ACEs, even in adulthood (Oral et al., 2016).

Mindfulness has been found to be a useful adjunct to behavioral interventions and counseling to manage symptoms such as depression. Mindfulness is described as “paying attention, on purpose, in the present and non-judgmentally” (Perry-Parrish et al., 2016, p. 172). Mindfulness enhances a person’s ability to be curiously aware of what is happening in the moment, both internally and externally, and facilitates the regulation of emotions and coping reactions associated with stress (Perry-Parrish et al., 2016). There are multiple studies that support the use of mindfulness as an adjunct to therapy for adults with depression. In a study that looked at the use of a mindfulness app in five hundred adults with depression who were asked to utilize a mindfulness app for one month, there were

statistically significant decreases in depression, anxiety, and stress, and increases in self-efficacy (Moberg et al., 2019). Study results indicate that mobile apps and interventions may play a significant role for those coping with mental illness, as an adjunct to in-person therapy (Moberg et al., 2019).

1.1 Background

The Centers for Disease Control (CDC) defines ACEs as traumatic events that occur in childhood that may include physical, sexual, or emotional abuse, neglect, or violence. The trauma may involve not only abuse and neglect of the child, but also occurs from the effects of family mental illness, substance abuse, suicide by a family member, divorce, parental separation, and witnessed violence in the community (*Centers for Disease Control, 2020*). These potential traumatic events were first described in the CDC-Kaiser Permanente ACEs study in the 1990s and have been well studied and documented since. The ACE study described the link between early trauma in children and the associated mental and physical long-term impacts on health and chronic illness (Bouillier & Blair, 2018). The original ACE study demonstrated how common ACEs are, with over 64% of respondents reporting at least one ACE, and 12.5% of respondents reported experiencing more than four ACEs (Bouillier & Blair, 2018). These results are significant, showing that children who had accumulated multiple ACEs (four or more) are four to twelve times more at risk for many health risk factors such as smoking, drug abuse, alcoholism, depression, and suicide attempt (Felitti et al., 1998). As lifestyle factors and health behaviors are linked to the leading causes of morbidity and mortality in

the United States, these early childhood events and their associated risk factors unquestionably impact morbidity and mortality rates and correlate to chronic illness in adulthood (Felitti et al., 1998).

The accumulation of ACEs and the impact it has on children and adults, and long-term health outcomes has led to the development of a comprehensive approach to care termed trauma-informed-care (Oral et al., 2016). The Substance Abuse and Mental Health Services Administration (SAMHSA) describes TIC as “a program that realizes the impact of trauma and understands there are potential paths to recovery, recognizes the signs and symptoms of trauma in clients and responds by integrating trauma knowledge into practices, procedures and policies that do not cause re-traumatization” (Oral et al., 2016, pg. 231). Trauma-informed care is important because not all systems that care for adults are aware of adult’s early trauma, which may either lead to inappropriate referrals, lack of treatment, or re-traumatization. An important component of TIC is screening to identify trauma, assessment of the impact of trauma, and the provision of trauma treatment services for those who have experienced ACEs (Oral et al., 2016).

These early traumatic, stressful experiences are linked to mental illness and other chronic, possibly life limiting, conditions and diseases later in life (Felitti et al., 1998). The impact of multiple exposures to ACEs has a direct effect on high rates of depression and anxiety. In the United States, in 2019, approximately 18.5% of adults had symptoms of depression that ranged from mild to severe (Villarroel et al., 2022). The criterion for depression comes from the *Diagnostic and Statistical Manual of Mental Disorders*, DSM-V-TR, (Association, 2022) and includes: depressed mood (feeling sad, or

hopeless), loss of interest in activities, weight loss or gain, insomnia or hypersomnia, psychomotor agitation, fatigue, feelings of worthlessness, inability to concentrate, and recurrent thoughts of death (Park & Zarate, 2019). The severity of depression ranges from mild (few symptoms) to severe (excessive symptoms) (Park & Zarate, 2019).

1.2 Significance and Statistics

The financial impact of ACEs is significant with the estimated total annual economic burden of ACEs to be \$745 billion dollars in North America (Bellis et al., 2019). Research shows that as many as 66% of Americans are exposed to at least one ACE and an additional 12% have been exposed to more than four types of ACEs (Bouillier & Blair, 2018). ACEs contribute to 40% of the depression rate in North America (Bellis et al., 2019). On the national level, one in five adults suffer from depressive symptoms (Villarroel et al., 2022).

1.3 Problem Statement and PICOT

The use of evidence-based practice (EBP) can help to meet the quadruple aim of healthcare, which is to improve outcomes for patients, guide clinicians' practice, reduce overall healthcare costs, and positively contribute to the wellbeing of healthcare professionals (Stefannacci, 2018). An instrumental approach to EBP consists of developing a clear problem statement and using the PICOT format to structure clinical questions to help clinicians find the right evidence and drive the clinical question.

PICOT stands for Problem (P), Intervention (I), Comparison (C), Outcome (O), and Time

(T). This methodology is widely utilized as a consistent framework for yielding the most relevant information from a search (Melnyk, 2019).

This project addresses the problem that adults who have experienced adverse childhood experiences (ACEs) have high rates of depression. To guide this evidence-based practice project, the PICOT is: For adults, in counseling for depression, with past adverse childhood experiences (P), does provision of mindfulness resources and trauma screening (I), lead to post-intervention self-reported satisfaction and increased awareness of trauma informed care (O) over a 4-week period (T)?

1.4 Theoretical Framework

Theoretical frameworks are interrelated constructs and statements that can help to predict, describe, or explain some phenomenon (Melnyk & Fineout-Overholt, 2019). Social Cognitive Theory (SCT), which began as the Social Learning Theory, was developed by Albert Bandura in the 1960s. SCT examines how the interaction of personal experiences, the actions of others, and the environment, can influence personal health behaviors. This theory focuses on the impact of social influence on both internal and external thoughts. SCT is based upon the idea that one can change their behavior if they have social supports that offer them hope, self-efficacy, and opportunity to witness desired behaviors in others (LaMorte, 2019). The theory considers a person's past experiences and how these experiences impact their expectations and whether they will or will not engage in certain behaviors. The goal of this theory is to explain how an

individual learns to regulate and control their behavior to achieve behavior goals that can be maintained over time (LaMorte, 2019).

The constructs and components of the SCT can be appropriately applied to both minimize the effects of childhood trauma and improve depression in adults. According to LaMorte, the constructs include:

1. Reciprocal Determinism: the relationship between an individual with learned experiences, their external environment, and their behavior regarding how they respond to the environment in achieving their goals. It is a back and forth, reciprocal, interactive relationship.
2. Behavioral Capability: possessing the skills and knowledge to perform the desired behavior.
3. Observational Learning: being able to see desired behaviors in others and to replicate those desired actions or behaviors.
4. Reinforcements: having positive or negative responses to the desired behavior, whether internally or in the environment. If the individual gets positive reinforcement, they are more likely to continue the desired behavior. Negative reinforcement may lead to not following through with those desired behaviors.
5. Expectations: positive or negative expectations of an outcome. If the individual believes or expects the outcome to be a positive one, they are more likely to perform the desired behavior. However, if they expect to have a negative outcome, they will not perform the desired behavior.
6. Self-Efficacy: This construct was a later addition to SCT. It refers to an individual's confidence and belief that they are capable of a desired behavior.

Applying the principles of SCT to those who have experienced abuse and demonstrating what appropriate relationships look like, may result in breaking the cycle of the abused becoming the abuser. In relation to SCT and depression in adults, emotional wellbeing can be closely tied to the adult's self-efficacy, and their ability to achieve their goals. Self-efficacy may directly impact resilience to adversity and

vulnerability to stress and depression (Milanovic et al., 2018). Applying mindfulness interventions for adults who have been exposed to early trauma may provide positive resources and outlets. They may learn skills, through mindfulness, that will eventually lead to improved self-efficacy, and that may be enough to help them overcome some of their adversities. This theoretical model is well suited for this population.

There is ample, strong evidence that ACEs have a significant, negative impact on both the physical and mental health of adults. The importance of providing TIC to adults who have experienced ACEs, providing them with interventions that are appropriate and not re-traumatizing, will be instrumental in decreasing the impact of this early trauma. Furthermore, it may decrease rates of depression and may eventually impact rates of morbidity, mortality, and long-term chronic illness. A mindfulness intervention for adults with ACE exposure, who are in counseling for depression, is practical and a good fit for improving the short- and long-term wellbeing of this population.

Chapter 2

REVIEW OF THE LITERATURE

A literature review was performed to facilitate the development of this evidence-based practice initiative and to identify the problem and clinical question. A thorough search of relevant articles and other documents of support relating to adverse childhood experiences (ACEs) and associated adolescent and adult depression were included. The search parameters and a discussion of the literature that was chosen for inclusion follows.

2.1 Search

Two comprehensive literature searches were performed using CINAHL, PUBMED, WorldCat, Google, and Google Scholar. The searches were limited to evidence based, peer reviewed articles published between 2015 and 2022. The exception to those dates was the search for the original article on Adverse Childhood Experiences (Felitti et al., 1998), which required a search for articles from 1998. English language was another search limitation used. Inclusion criteria for this evidence-based literature review was literature on children and adults who have had adverse childhood experiences and adolescents and adults with depression, as well as a combination of the two.

The first search included the terms and keywords “adverse childhood experiences”, “ACEs”, “childhood trauma”, “adolescents”, “teens”, “mental health”,

“depression”, “PHQ-9”, and “mindfulness”. The Boolean phrase AND was used to search for “adverse childhood experiences AND depression”, “depression AND PHQ-9 AND teens or adolescents” as well as “depression AND teens or adolescents AND mindfulness. The Boolean phrase OR was utilized to search for “adverse childhood experiences OR ACEs”. These searches resulted in 2,639 articles to be reviewed after many duplicates were removed from the results. From the original search, 109 full text articles were reviewed for eligibility and relevance to the PICOT question. Of those 109 articles, 89 articles were excluded for reasons such as: they were not within the scope of this project; the population fell outside of the age range for the population of interest; the articles included mental illness not specific to depression; or they did not add any further knowledge to the topic. Articles chosen for inclusion were related to early childhood trauma or adverse childhood events and associated depression in adolescents. The remaining articles selected included two qualitative studies and 18 articles that were either quantitative studies, clinical guidelines, systematic reviews, or expert opinion (appendix A).

Prior to project implementation, the population of this project changed from adolescents to adults with depression and ACEs. As a result of this population change, a second literature search was undertaken. At the time of the population change, nine articles from the original literature search were omitted, as they were no longer relevant to the project. This change is seen in the Prisma One diagram.

A second literature search ensued using CINAHL, Google and Google scholar. Inclusion criteria were peer reviewed articles from 2017-2022 and English language. As

most of the articles from the original search were still relevant, the second search included key words: “mindfulness”, “short term effects”, “brief mindfulness-based interventions”, “depression”, “mindfulness apps”, “ACEs”, “self-efficacy”, and “adults”. The Boolean phrase AND was used to search for “mindfulness AND short-term effects”, “brief mindfulness-based interventions AND effects”, “depression AND mindfulness apps”, “ACEs AND depression”, and “self-efficacy AND depression in adults”. The searches resulted in 529 articles to review once duplicates were removed. Of those 529 articles, 496 were not chosen as they did not fit the criteria for this project. This resulted in 33 full text articles that were reviewed and assessed for eligibility, and 28 of these were excluded because they were outside of the population being studied, they were not within the scope of this project, or they added no new information. The remaining articles that were included in this review was 5, which included one randomized control trial, three descriptive quantitative studies, and one mixed-method study (appendix B).

2.2 Review and Synthesis of Literature

The review of literature included seven quantitative studies along with one mixed method and one qualitative study. The review also included several government websites with statistics and data on both ACEs and depression. The literature review included the definition and description of ACEs, the impact of ACEs on adults as it relates to mental health and long-term chronic illness and early death, as well as the statistical and financial impact. In addition, the review examined mental health and depression in adults associated with ACEs, self-efficacy in adults with depression, and mindfulness-based

therapies. The Johns Hopkins Nursing Evidence-Based Practice Guidelines (Dang & Dearholt, 2019) and appendages were used to assess and report the level and strength of evidence. A Johns Hopkins literature review table was used to document findings (Appendix C).

The original ACE study, which identified adverse childhood experiences as a phenomenon (Felitti et al., 1998) was conducted via mailed questionnaires to Kaiser Health Plan members who completed medical evaluations at the Health Appraisal Clinic between August-November of 1995 and January-March of 1996. There was a 70% response rate; 9,508 members participated. The questionnaire included items related to abuse: psychological, physical, or sexual; household dysfunction in the form of substance abuse, mental illness, divorce or death of parent, mother treated violently; and criminal behavior in household. The information from the questionnaire and the members' Health Appraisal Clinics questionnaire were utilized to identify ten risk factors that influence morbidity and mortality in the United States (U.S.). Those risk factors included smoking, obesity, multiple sexual partners, history of sexually transmitted disease, alcoholism, drug abuse, parental drug abuse, depression, suicide attempts, and physical inactivity. The study also assessed the correlation between childhood trauma and diseases that are the leading causes of mortality in the U.S. The findings of this study were significant. More than half of the respondents reported at least one ACE, and one fourth of the respondents reported two or more. For those who reported four or more ACEs, there was a four-to-twelve-fold increase in health risks for alcoholism, drug use, depression, and attempted suicide. There was also a two to four-fold increase in poor self-reported

health, smoking, multiple sexual partners, and sexually transmitted diseases. The results included a 1.4-to-1.6-fold increase in physical inactivity and obesity. There was a positive correlation between the number of ACEs and the presence of adult diseases that included heart disease, fractures, cancers, lung disease, and liver disease. This study was the first of its kind to look at the impact of early childhood trauma and adversity on later life health and strongly correlates these early experiences to mental health and depression (Felitti et al., 1998). The significance of these results suggests that primary, secondary, and tertiary strategies will be needed to not only prevent ACEs, but to screen and intervene to mitigate the impact on physical and mental health.

A systematic review (Oral et al., 2016) examined ACEs and trauma informed care (TIC) and the future of healthcare. This study defined childhood adversity as negative events and circumstances outside of the child's control (Oral et al., 2016). The review examined the effect of toxic stress over time and its impact on the hypothalamic-pituitary-adrenal (HPA) axis and sympathetic nervous system and how these systems respond to chronic and toxic stress. This systematic response leads to the release of the stress hormones cortisol, epinephrine, and norepinephrine, which affects many organ systems such as the cardiovascular, respiratory, and hepatic systems. The toxic traumatic stress (TTS) of repeated trauma causes a continued increase in cortisol levels over time, which suppresses the immune system and increases the risk for infection and illness. This same systematic response may also lead to brain changes that cause remodeling of the amygdala, which eventually may generate impulsive behaviors, poor impulse control, maladaptive coping skills, and long-term negative health consequences (Oral et al.,

2016). This study demonstrates the negative impact of ACEs on many of the leading causes of death, poor mental health, and chronic health problems. Those who have four or more ACEs have an increased risk for the development of a lifestyle that is considered trauma organized, which predisposes individuals to both mental and physical illness, and increases the rates of mortality and morbidity (Oral et al., 2016). The impact of ACEs on mental health cannot be overlooked. ACEs have a negative impact on learning and behavioral problems, anxiety, depression, and suicide attempts. Those with four or more ACEs have 4.5 times increased rates of depression and 14.5 times increased rates of suicide attempts (Oral et al., 2016). This systematic review included the importance of reducing the burden of ACEs using primary, secondary, and tertiary prevention methods, and the concept of trauma-informed-care (TIC). A trauma informed approach to care is one that acknowledges the impact of trauma, identifies the manifestation of trauma, and implements knowledge of trauma into policies to avoid re-traumatization. An important aspect of this care approach is screening and early intervention to reduce the impact of adversity (Oral et al., 2016).

An integrative review by (Bouillier & Blair, 2018) described the tremendous impact of ACEs on long term health and explored interventions for prevention and ways to mitigate the impact of ACEs through interventions to promote resilience. This review included interviews with young adults from more diverse communities than the original ACE study and found that the causes of adversity in deprived areas of Philadelphia were problems with family relationships, lack of love, and children taking on responsibilities of adults. This population identified a lack of parenting skills due to their parents' own

adversity and recognized the cycle of adversity in families. Economic hardship and poverty were also identified as adversities, as there are strong links between poverty and poor mental and physical health (Bouillier & Blair, 2018). This adds a new dimension to the findings of the original study that focused on white, college educated participants. Regarding the impact of ACEs on health, this study reported a correlation between ACEs, chronic illness, and premature morbidity, which has an impact on economic productivity. Interestingly, there is evidence that suggests that six or more ACEs may cause premature death as early as 20 years earlier than in those with no ACEs (Bouillier & Blair, 2018). This study also highlighted the importance of primary prevention in reducing ACEs. It stressed the significance of early intervention, including programs that taught mindfulness and coping skills to children, families, and adults to help build resilience. Mindfulness is a program that can help teach children and adults to focus, be aware of the moment, be non-reactionary and nonjudgmental, which has demonstrated improved behavioral, mental, and physical outcomes (Bouillier & Blair, 2018).

A descriptive cross-sectional study by (Schneider et al., 2017), sought to investigate the relationship between early childhood trauma and quality of health and mental health outcomes and social networks in adulthood. The study aims were to a) identify classes of childhood ACEs, b) determine the degree to which these ACE classes were associated with mental health and health outcome in adulthood, and c) determine whether stressful or supportive social relationships impacted this association. The study used a convenience sample of 254 adults from a previous cross-sectional study investigating low back pain. Participants completed a 106-item questionnaire on ACEs,

Social network quality, current mental health and health status and sociodemographic characteristics. Four ACE classes were identified. Class one reported minimal abuse. Class II reported physical/verbal abuse of mother and child with problem drinker or alcoholic in the household. Class 3 reported physical/verbal abuse of child with mental illness in the household and class 4 reported verbal abuse of child (Schneider et al., 2017). The study found that of all the classes, class 2 was the only one that witnessed abuse of the mother and had the most compromised outcomes in adulthood, including anxiety, depression, and emotional problems that led to role limitation. The study findings corroborate the importance of strong social networks on the mental health of adults who have survived abuse. Classes 2 and 3 had fewer positive support networks and more negative support networks. Supportive social networks were inversely related to depression, anxiety, and emotional problems (Schneider et al., 2017). This study clearly demonstrates the impact ACEs have on mental health in adults, and the impact that strong social networks can have on depression and other mental health conditions. This study is supportive of Bandura's Social Cognitive Theory and the impact of strong social networks on self-efficacy.

In a descriptive study on self-efficacy in depression, (Milanovic et al., 2018) explored the difference between competence and real-world adaptive and interpersonal performance in depressed adults, and whether self-efficacy accounts for a significant portion of the discrepancies in performance in these areas, after accounting for depression symptoms. This study included 42 community dwelling participants who met the criteria for depressive disorder. For adaptive competence, the participants were assessed for

financial skills (paying for things), communication skills (scheduling appointments), planning an activity, and the ability to use a bus schedule. Interpersonal competence was measured using social skills and communication in which the participants initiated and maintained a conversation with the examiner. Self-efficacy was assessed to determine level of confidence to perform certain activities and ranged from 1 (not at all) to 5 (extremely confident). This study found that interpersonal self-efficacy plays a significant role in a depressed person's social underperformance. This aligns with Bandura's theory that just because an individual has the skills to perform, they may not have confidence in those skills (Milanovic et al., 2018). Self-efficacy also played a role in functional disability, even after accounting for depressive symptoms, as those who are sad tend to focus more on negative aspects of their experiences (Milanovic et al., 2018). This study aligns with the Social Cognitive Theory of self-efficacy and suggests that treatments for depression be focused on improving self-efficacy. Mindfulness may play a role as an adjunctive treatment to improve self-efficacy.

In a systematic review and meta-analysis, (Bellis et al., 2019) examined the life course consequences, and the associated annual costs of ACEs, across Europe and North America. The study found that ACEs were associated with 40% of cases of depression and 30% of anxiety cases in North America, and more than 25% of cases of depression and anxiety in Europe. The financial cost of ACEs was calculated using ACE-attributable leading risk factors of ill health, which were converted into ACE-attributable disability adjusted life years. Total annual costs associated with ACEs was \$748 billion in North America and \$581 billion in Europe (USD). Most of these costs were associated

with individuals with two or more ACEs (Bellis et al., 2019). This study demonstrated that there is a strong correlation between ACEs and mental health concerns such as depression and anxiety, and that this is increasing globally, and suggests that early childhood could be a critical time to address mental health. Encouragingly, just reducing the prevalence of ACEs by 10% in both regions could save as much as \$105 billion annually (Bellis et al., 2019). This reduction can occur through prevention and support for families, and by developing resilience to mitigate the impact of depression (Bellis et al., 2019).

In an exploratory study by (Burgess et al., 2021), researchers examined the effectiveness of a 5-week, abbreviated mindfulness-based cognitive therapy (MBCT) intervention for a sample of 54 individuals with mood and/or anxiety symptoms. The sample was a physician- referred, treatment-seeking, community sample. This study reported that mindfulness-based interventions are increasingly recognized as a supported approach to treating anxiety and mood disorders, are included in national guidelines for preventing relapse of depression symptoms, and there is strong evidence that demonstrates efficacy for treating symptoms of anxiety and depression (Burgess et al., 2021). This study also reported that access to mental healthcare and counseling is challenging to obtain, and in 2018 in Canada, 35% of individuals who perceived the need for mental health services had their needs unmet. Those with mild mood and anxiety disorders and those with self-perceived need for counseling were significantly predictive of requiring hospitalization for mental health problems at a 10-year follow (Burgess et al., 2021). Standard mindfulness interventions typically involve 8- week sessions and are

delivered in a formal group and present barriers to access to care. This study utilized the GAD-7 and the Beck Anxiety Inventory to measure anxiety and the Beck's Depression Inventories I and II to measure depression. In addition, well-being was measured with the Self-Compassion Scale short form, the Perceived Stress Scale, the Warwick-Edinburgh Mental Well-Being Scale, (Moberg et al., 2019) and the Sheehan Disability Scale (Burgess et al., 2021). The participants took part in 10-15 minute a day meditation practices for five weeks. The study concluded that there was a significant reduction in anxiety and worry, along with significant reductions in depression and increases in self compassion and well-being utilizing the abbreviated mindfulness sessions (Burgess et al., 2021). This study supports using even short sessions of mindfulness to improve mental health and is supportive of this evidence-based project.

In a mixed methods study by (Cerna et al., 2021), researchers sought to evaluate the effectiveness of a brief mindfulness therapy to reduce post-traumatic stress symptoms and depression in four participants who had been exposed to a recent traumatic experience. The study utilized semi-structured interviews along with measurement scales to evaluate post-traumatic stress symptoms, satisfaction with life and post-traumatic growth. This study reported that up to 90% of the general population have been exposed to some type of stressful event in their lifetime and these stressful events often lead to depressive or post-traumatic symptoms. These stressful events may lead some to develop mental health disorders, yet some may show positive growth or benefit from the event (Cerna et al., 2021). Although there have been several studies on medium-to-longer term mindfulness interventions, this study sought to investigate whether a 4-session

mindfulness-based intervention program reduced depression and post-traumatic symptoms in those exposed to a recent stressful event (Cerna et al., 2021). The results of this study demonstrated that participants reported improvement in their mental state following the mindfulness intervention with their therapist. The participants also demonstrated a decrease in depression and post-traumatic symptoms and an increase in post-traumatic growth and satisfaction with life and felt as though they were able to apply the mindfulness exercises in daily life and possibly make mindfulness a habit (Cerna et al., 2021). Although this was a small sample size, the results of this study are encouraging and align with utilizing mindfulness-based resources as an adjunct to care for those with depression and early childhood adversity.

A qualitative study on risking existence, the experience and handling of depression (Bygstad-Landro & Giske, 2017), was reviewed and analyzed. The aim of this study was to obtain insight into how those with depression experience and manage life. A classical grounded theory was used to identify the participants main concerns and what strategies they used to handle those concerns. Eighteen in-depth interviews were conducted on those with moderate depression. The main concern was identified as *longing for belonging* and managing their depression as handled through a process called *risking existence*. Risking existence involves several phases the person must go through while being vulnerable and disclosing themselves to others. The first phase, *ungraspable processing*, is described as a time of being lonely, exhausted, and on the verge of collapse. The second phase, *giving clues*, involves allowing others to interfere with their loneliness. The third phase, *daring dependence*, involves feelings of hope and

confidence, and allowing others in on a deeper level. The final stage is *courage to be* in which the individual starts to value themselves and embrace who they are, to love and be loved, and to be able to make decisions (Bygstad-Landro & Giske, 2017). This study helps shed light on how those with depression feel and experience depression and can inform those working in mental health care.

In a randomized control trial (Moberg et al., 2019), researchers sought to evaluate the effectiveness of a popular mindfulness app for the self-management of mild-to-moderate depression, stress, and anxiety. A total of 500 adults with mild-to-moderate depression or anxiety were recruited for the study from a randomized waitlist control trial of the app. The participants used the app for 1-month, with no prescribed time limit or minimum use time. Those in the waitlist group were given access to the app after 1-month. The study measured self-reported symptoms of stress, depression, anxiety, and self-efficacy. The study results indicated those with immediate access to the app and completed more thought record exercises in the app had greater decreases in stress, anxiety, and depression, than those in the waitlist group. Those who reported taking psychiatric medications, in addition to using the app, reported less benefits from the app regarding decreased stress and anxiety (Moberg et al., 2019). The results of this mindfulness app study could be impactful, in that only 43% of people with mental illness in the United States receive adequate mental health services due to lack of access, stigma, cost or time commitment (Moberg et al., 2019). Mindfulness apps may hold promise to ease the burden of this lack of access to care, and as an adjunct to other mental health services.

The literature review identifies ACEs and the impact of this adversity on adults regarding long term physical and mental health, particularly depression across the lifespan. These studies include the prevalence of ACEs, the financial impact, the correlation with depression in adults and the impact of depression in the adult. The literature strongly supports primary, secondary, and tertiary prevention, and intervention to mitigate the long-term effect of ACEs on the mental health of adults. Preventing ACEs can significantly reduce the financial burden associated with adversity. Prevention along with early interventions for depression in adults, may improve resiliency in this population. Providers can mitigate the long-term effects of this early trauma. An intervention that may be helpful to this population is mindfulness exercises. Providing care that is trauma informed and sensitive, may help avoid re-traumatization for these adults.

The level of evidence for these studies ranges from level I to level V, with level I studies providing the strongest evidence.

2.3 Project Recommendation

Screening for past ACEs in adults who are in counseling for depression is recommended. This screening helps to ensure a TIC approach is taken by the mental health provider, to provide appropriate care and resources and to avoid re-traumatization. The additional intervention of mindfulness exercises, over a 4-week period, may improve coping, increase resiliency, and mitigate the effects of depression. Following the mindfulness intervention, a survey on the perceived benefits of the mindfulness

intervention, should be completed by the participants in the project. The recommendations are supported through the evidence identified in literature search and review.

2.4 Project Purpose and Aims

The purpose of this project was to explore whether the use of a mindfulness app and a survey/questionnaire on adverse childhood experiences (ACEs), were helpful in the adjunctive treatment of depression in adults.

The aims of this project were to:

1. Determine if adults with depression have had adverse childhood experiences to ensure a trauma informed approach to care.
2. Determine if a mindfulness app (Insight Timer ®), in addition to current therapy, was a useful adjunct to care.

Chapter 3

METHODS

3.1 Setting

The setting for this project was a private practice, mental health counseling center in southeastern PA. The practice is owned by the site mentor, who is a certified mental health counselor and psychotherapist. The site mentor sees adult patients with depression, trauma, anxiety, addiction, and other mental health disorders, and does not currently use the ACEs screening tool. There are three other mental health providers in the practice, who did not participate in the project. The site mentor currently provides counseling to at least 50 clients a week. All clients in the practice, who have depression, were invited to participate in this project. This setting was ideal for this project as the site mentor focuses on evidence-based approaches to care, counsels those with current trauma and depression, sees many clients each week and typically follows these clients on a weekly basis.

3.2 Participants

The participants for this project were adults who were in counseling with the site mentor and who met the DSM-V-TR criteria for mild to moderate depression. That criterion includes a depressed mood, feeling sad or hopeless, having no interest in

activities, changes in weight, sleeping difficulties, agitation, fatigue, problems concentrating, and recurrent thoughts of death (Park & Zarate, 2019). The site mentor anticipated that between 10-20 English speaking participants would be available for the project within the first month of implementation. The site mentor currently has no non-English speaking clients. Any client who met the above criteria for depression was invited to participate. Participants who screen negative for ACEs would still be included in the project.

3.3 Stakeholder Analysis

Stakeholder involvement and awareness of the evidence-based project are critical to the success of evidence translation (Williams & Dudley-Brown, 2021). Stakeholders are those individuals who will influence the project, as well as those who may be affected by the project, primarily at the project site (Williams & Dudley-Brown, 2021).

A stakeholder assessment should be conducted prior to implementing a practice change. This assessment identified those at the practice site that may be affected or have influence on the project. A careful stakeholder assessment can help to share project expectations, to discover and seek support for the project, and to identify any barriers to the success of the project (Williams & Dudley-Brown, 2021). The identified stakeholders are important to the outcomes of this project (Appendix D).

Stakeholders

1. Student PI: A master's prepared nurse in a Doctor of Nursing Practice program who provided leadership in the project and was responsible for developing methods, implementing the project, communicating with the

site mentor, and analyzing and disseminating the results of the project. A top priority stakeholder.

2. Site Mentor: A master's prepared certified mental health counselor and psychotherapist. This site mentor was integral in helping to develop methods, to complete the IRB proposal, to provide resources to share with the student PI, and to intervene with mental health intervention if a participant became distressed during the project. Communication with the site mentor occurred weekly, via email, text, or phone call. A top priority stakeholder.
3. Participants: Between 10-20 adults, who are in counseling with the site mentor and who met the DSM-V-TR criteria for mild to moderate depression. Once identified as having depression, the site mentor asked the clients if they were interested in participating in an evidence-based project involving mindfulness. Potential participants were given the student investigators contact information, for informed consent. Communication occurred via email. Top priority stakeholders.
4. Faculty Mentor: A doctoral prepared nurse and faculty member who provided direction for methods, assistance with IRB protocols, approval of study materials, and problem solving to the student PI. Communication during the implementation period occurred weekly, as needed, via email or Zoom®. A top priority stakeholder.
5. Other mental health providers in the practice: Were not actively involved in the project but have some influence in the practice site. They were notified and informed of the project prior to implementation by the site mentor. These providers have some influence in the practice but low stakes in the project: Handle with care stakeholders.

Communication between the Student PI, the site mentor, and faculty mentor was ongoing. Communication with the site mentor increased during implementation to weekly to share progress. Communication often occurred more frequently as needed during implementation and data collection. Communication with the faculty mentor occurred as needed for guidance and advice.

A well thought out stakeholder analysis is critical to implementing a successful practice change. Identifying and communicating with stakeholders early in the process helps to gain support and minimize any barriers to the project.

3.4 Implementation Plan

Upon approval of the Institutional Review Board (IRB), at the University of Delaware, this evidence-based project was implemented in the spring semester of 2022. The project spanned over a period of eight weeks. A project timeline was developed and implemented by the student primary investigator (PI) and the site mentor. Prior to implementation of this project, a stakeholder analysis, a SWOT analysis, and a breakdown of the work structure was completed. Study protocols were developed. The site mentor was educated on the study protocols.

Once potential participants were identified as having depression, the site mentor inquired if those clients were interested in participating in an evidence-based project involving mindfulness. It was anticipated that between 10-20 clients would consent to the project. Potential participants were given the student investigators contact information for informed consent. Communication with potential participants occurred via email. Once contacted by potential participants, the student investigator provided information on downloading and using a mindfulness app (Insight Timer®), a demographics sheet to complete (age and gender identity), and an IRB approved informed consent via DocuSign®, a secure email. Once consent was obtained, the participants were asked by the site mentor to complete an ACEs screening tool

(Appendix E), at their next counseling session. The ACE screening tool is a self-report, 10-item questionnaire on retrospective trauma prior to the age of 18, and has been found to be a reliable, valid, and economic screening tool for the assessment of ACEs (Cheong et al., 2017). This ACEs screening occurred in the presence of the mental health counselor, as this screening may cause re-traumatization. The participants were instructed by the student investigator to use Insight Timer® at least three times a week, for at least 5-10 minutes at a time, for four weeks. There are no studies to validate the reliability of Insight Timer®, although many studies support the use of mobile mindfulness apps as adjunctive therapy for adults with depression. At the end of four weeks, the participants were emailed a short survey (Appendix F) to see if they found the mindfulness app helpful, in addition to their counseling.

3.5 SWOT Analysis

During the methods planning phase and before implementing the DNP project, the project site was assessed for its readiness for the intended change. A method termed Strengths, Weaknesses, Opportunities, and Threats (SWOT), was utilized to ensure a well-planned out project with minimal surprises. A SWOT analysis can help identify the strengths and weaknesses of the project site regarding the project, the opportunities that may exist in relation to the project, and any threats that may hinder the project's success (Terhaar et al., 2021). A SWOT analysis can also be useful to identify internal attributes of an organization. Internal traits are those that are considered helpful to the organization or the project site and may have a positive influence on the outcome of the project. There

may be internal factors that are considered weaknesses and may be harmful to the project's outcome as well (Moran, 2017). There may also be external factors that either help the project or hinder the project, and these must be considered during the site analysis (Moran, 2017). The SWOT analysis provided a broad view of the situation in terms of the project and was an important tool in the project planning (Moran, 2017). The SWOT analysis diagram is in Appendix G.

Strengths

Strengths are things an organization does well, and this may include the leadership and staff at the organization (Terhaar et al., 2021). There are many strengths identified that can help to ensure a successful translation of evidence for this project. This site is owned by the site mentor, who has developed a trusting relationship with her clients. She sees her clients weekly, so has the opportunity to follow up with their progress, and to screen them for ACEs in a safe environment. She sees approximately 50 clients a week, so has access to an adequate sample size of potential participants. Most clients in this practice met the criteria for depression, so there was no need to additionally screen for depression. Many of the clients in this practice have some form of recent trauma, although currently the site mentor does not screen with an ACEs with a screening tool. The site mentor provides evidence-based approaches to mental health counseling and was open to ACE screening and mindfulness interventions as adjuncts to current standards of care and practice. The site mentor was engaged, supportive, and enthusiastic about the project.

Weaknesses

Weaknesses are areas identified by an organization where there may be needs or deficiencies (Terhaar et al., 2021). In relation to this evidence-based DNP project, a weakness identified by the site is that the practice is considerably busy, and she has limited time to spend with each client. Mental health resources are limited in southeastern PA, and her client list is long. The site mentor doesn't currently screen for ACEs, which limits the ability to provide a trauma-informed-approach to care. She currently does not offer a mindfulness app to use outside of counseling sessions, which is supported by the evidence as an adjunct to counseling.

Opportunities

Opportunities are conditions that may position the organization for success, and can be internal, such as strong leadership and engaged practitioners, or external, such as strong community resources (Terhaar et al., 2021). A noted opportunity that set this site up for success was an engaged mental health provider with strong relationships with her clients, who was willing to participate in this project and to offer mindfulness as an adjunct to care. As the site mentor has a trusting relationship with her clients, it presented an opportunity for more participants in the study than if asked to participate by a stranger, who they do not know or trust. The site mentor eagerly partnered with this DNP student to initiate an evidence-based-practice change that may improve mental health outcomes for adults in the community. An externally influenced opportunity is that there are limited resources in southeastern PA to meet the behavioral health needs of adults in the

community. Participating in this DNP project provided resources that are not currently utilized.

Threats

Threats are conditions and factors that can prevent the project from being a success. It is important to distinguish risks, which is harm that could be expected to project participants, from a threat, which is harm that could befall on the project (Terhaar et al., 2021).

Regarding this DNP project, there were several threats that were possible. First, the project had to be approved by the IRB. As human subjects are involved, informed consent was needed for participation. As the site mentor did not want to expose her client's identity to the student investigator, all communication needed to occur via phone or email and was initiated by the potential participants. This may have caused a low sample size in the study, as the clients may forget or neglect to reach out to the student investigator to consent. Finally, although an adequate sample number consented to the project, some did not complete the four- weeks of mindfulness, complete the ACEs screening, or complete the follow-up survey.

SWOT Analysis

Once threats and risks are identified, it is imperative to identify how they will be managed and handled. The project was approved by the University of Delaware IRB. Consent forms were provided, and consent obtained via email through DocuSign®. In addition, a letter of introduction was included describing the purpose and aims of this

project and given to potential participants. As ACEs screening can cause re-traumatization for some adults, all screening occurred in the presence of the site mentor during a counseling session. A SWOT analysis is a helpful tool to build on strengths, to compensate for weaknesses, to seek and exploit available opportunities and to identify and deal with threats, ensuring a successful implantation of this DNP project.

3.6 Work Breakdown Analysis

The success of this project was made more manageable by utilizing a work breakdown analysis (WBS). The WBS assists with putting the complex pieces of the project into more manageable sections of work (Terhaar et al., 2021). A work breakdown structure was created to ensure that the project work stayed on time. See appendix H.

3.7 Project Timeline

The project began in Fall 2019 with the beginning phases of the evidence-based literature review, and the development of the PICOT, purpose and project aims. Throughout the process, the student met regularly with the Faculty Advisor at the University of Delaware for guidance and support. In fall 2021, due to barriers getting the project approved for the adolescent population, the project population changed to adults with depression and adverse childhood experiences. The population change was approved by the University of Delaware faculty mentor. Once the population change was approved, a new site was found in November of 2021 and a new project protocol was submitted to the University of Delaware Institutional Review Board (IRB). The project

protocol was approved by the IRB in March 2022 and the project was approved by the DNP review committee in April 2022. The project was implemented in April 2022, and for the first four weeks, participants were identified, contacted, consented, and screened for ACEs. For the next four weeks, the study participants utilized the mindfulness intervention. After four weeks of participating in the project, the participants were surveyed for perceived benefits of using the mindfulness app as an adjunct to care. The final phase of this project, which included evaluation and dissemination plans, was completed in Summer 2022.

3.8 Ethical Considerations

The purpose of this project was to explore whether the use of a mindfulness app (Insight Timer®) and a survey/questionnaire on adverse childhood experiences (ACEs) were helpful in the adjunctive treatment of depression in adults. In this context, the project was considered evidence translation, rather than research, in that it was not seeking new knowledge, but using existing knowledge to directly benefit the study participants (Terhaar, 2021). As nursing is ranked as the most trusted of professions, it is the responsibility of DNP students involved in evidence-based practice changes, to protect that trust by ensuring that ethical guidelines are followed when implementing projects that involve human subjects (Terhaar, 2021). The ethical principles that guided this project were beneficence (doing good), non-maleficence (doing no harm), and promoting justice (ensuring that all individuals, particularly those who are vulnerable,

had an opportunity to benefit from the project). The risks, steps to reduce risks, and benefits of this project were clearly outlined to the participants in the consent form.

This project was submitted to the Institutional Review Boards (IRB) at the University of Delaware and was approved. IRBs are charged with protecting the rights and safety of those who wish to participate in a study (Terhaar, 2021). The IRB review ensured that participant selection was fair and equitable, that informed consent was acquired, confidentiality was maintained, and that there was no coercion of participants (Terhaar, 2021).

3.9 Data Collection and Analysis

The site mentor identified clients who met the criteria for mild to moderate depression and asked if they would be interested in participating in the mindfulness project. If interested, potential participants contacted the student investigator by email, and were given information on downloading and using Insight Timer®. They were asked to complete demographic information (age and gender identity) and were sent an informed consent via DocuSign®. Once the consent was signed and completed, the site mentor was notified. At the next scheduled counseling session with the site mentor, the consented participants completed an ACEs screening tool. The participants were asked to utilize the mindfulness app at least three times a week, for at least 5-10 minutes at a time for four weeks. After four weeks, the participants were emailed a follow-up survey on the perceived benefits of using the app as an adjunct to care. The project data was handled as confidentially as possible. When results of this project are published or

presented, individual names and other personally identifiable information will not be used. To minimize the risks to confidentiality, only the site mentor had access to confidential information. The student investigator did not have access to any personal health information, only the de-identified screening results. The student investigator had access to the participants' contact information, which was kept confidential and separate from the other study materials.

The confidential screening results were kept in the site mentors locked office, in an envelope. The student investigator visited the office at least weekly to collect the data, which was transposed to a spreadsheet on an encrypted, password protected, secure computer device, with regular and secured backup. Data is described using a descriptive design, numerically, and/or in percentages. Results of the evidence-based project will be reported to the University of Delaware at the completion of the DNP program and have been shared with the project site mentor. Results will be published at a later date.

3.10 Project Outcomes

Translating evidence into practice and identifying and managing patient outcomes are crucial steps in improving the quality of nursing and patient care. Outcomes help to direct nursing and practice interventions. Once those interventions are implemented, assessing and evaluating the results help determine if our interventions have made a positive impact on patient outcomes (Stanik-Hutt, 2021). In healthcare, quality of care is associated with improving health outcomes in populations and should be patient centered, equitable, and efficient. Patient related outcomes are those that impact the health status

of individuals. Clinical outcomes are associated with how effectively care was delivered. Outcomes in healthcare are utilized to show the effectiveness of treatment and are measured using metrics (Stanik-Hutt, 2021). For this evidence-based-practice project, the outcomes of interest were psychosocial and quality of life outcomes. The following outcomes were evaluated (Appendix I):

- The number of clients with depression who have had adverse childhood experiences to ensure a trauma informed approach to care and determine feasibility of screening in practice
- The frequency of use and the perceived quality of the mindfulness app (Insight Timer)

Measuring these outcomes using the above metrics, at determined frequencies throughout this project, gave the investigator insight into the impact of the project on the psychological health status of participants. The results, once analyzed and shared with key stakeholders, help determine if this evidence-based- practice change will be continued at the project site to further impact adults with depression.

3.11 Project Evaluation

This project was evaluated using the Plan-Do-Study-Act cycle. This was chosen for several reasons. This approach supports the careful application of knowledge and evidence, and opportunities for implementing practice change, reviewing data, and refining the project as needed. As this was a nurse driven project, the student PI was in a perfect position to research and evaluate the evidence, develop the project methods, communicate the aim and goals of the project at the site, and work directly with the site mentor. Once the project was implemented, the student PI reviewed and analyzed the

data, and made suggestions for changes as needed to the project. Disseminating project findings to the site and engaging the site mentor in the project helps to sustain the work long after the project is completed.

3.12 Project Budget

This project had no external funding, so any budget costs were provided by the student PI. There were time and opportunity costs for the student PI. For the original project that included adolescents, a medical English to Spanish translation of Parental Permission and Informed Consent form was obtained, and the student PI invested \$304.16. For the current project, the student utilized DocuSign® to obtain secure informed consent, which had a monthly cost of \$25. DocuSign was utilized for three months for a total cost of \$75. No statistical programs were needed for data analysis. Total costs associated with this project was \$379.16.

3.13 Project Close Out

The project concluded in Summer 2022, once the project implementation and evaluation were complete. The results of the project have been presented to the project site (for consideration of adoption) and to the University of Delaware.

3.14 Dissemination Plan

Dissemination of the project findings occurred following the project completion. The dissemination plan included the project site. The project and the findings will be

submitted to appropriate scholarly journals and may be presented at interdisciplinary professional conferences and meetings. An abstract for a poster presentation has been drafted and will be submitted at the end of July 2022, for an upcoming psych-mental health nursing conference.

Chapter 4

RESULTS

This chapter includes the results of the data collection and of the project implementation. Results of this evidence-based practice change were collected over an 8-week implementation period in Spring 2022. The project was completed at a private-practice, mental health counseling center in southeastern PA.

4.1 Introduction

This EBP project has important findings for adults with depression and adverse childhood experiences (ACEs). The data reflects the findings on the number of ACEs, and the impact of those ACEs on adults with depression that participated in the project. Additionally, the data includes the findings of the impact of using a mindfulness app, as an adjunct to counseling, for adults with depression and ACEs. Demographic information was collected for each participant. The project mentor sees more than 50 clients each week, who have depression and a history of trauma. Each client completed the screening for ACEs during a counseling session, in case of re-traumatization. Clients who met the criteria for participation were invited to participate in the project and to try the mindfulness app for four weeks. The site mentor provided reminders to complete the follow-up survey, if needed.

4.2 Consent

All participants in this project were asked to participate in the informed consent process to ensure human subject protection. The informed consent form (Appendix J) was approved by the University of Delaware Institutional Review Board (IRB). The consent forms were emailed to participants via DocuSign®, a secure, safe, email system used to electronically sign documents. The consents were emailed to participants after they contacted the student investigator and were given information on the project and offered an opportunity to ask questions. DocuSign® was set up to automatically resend the consent every two days, until it was completed. Once signed, both the participants and the student investigator were sent copies of the signed document.

4.3 Data Analysis and Statistics

During project implementation, 20 participants consented to participate in the project. Of those who consented, 18 completed the demographics form and the ACEs survey with their counselor. Thirteen participants (72%) completed all aspects of the project and were included in the final data collection with follow-up survey (n=13). Demographic information was collected on all participants and the variables included age and gender identity (Appendix K). The demographics form was emailed to each participant at the beginning of implementation and collected on 18 of the 20 participants. Participant ages ranged from 25 to 68 years of age. Three men and 10 women participated in all aspects of the study. Demographics are displayed in Appendix L.

The project purpose was to explore whether the use of a mindfulness app called Insight Timer® and a survey/questionnaire on adverse childhood experiences (ACEs) are helpful in the adjunctive treatment of depression in adults. The first aim of the project was to determine if adults with depression have had adverse childhood experiences to ensure a trauma informed approach to care. This screening was completed once, by the site mentor, after the participants consented to participate and took place during a counseling session. The measure for this was the ACEs screening tool. The total ACE score was the total number of “Yes” answers on the questionnaire. Eighteen of the 20 participants who consented, completed the ACEs screening tool. That data is included in the results. All participants in the study reported having ACEs. The ACEs scores ranged from 1 to as many as 9. Two participants (11%) reported one ACE, two participants (11%) reported three ACEs, five participants (28%) reported four ACEs, two participants (11%) reported five ACEs, two participants (11%) reported six ACEs, one participant (6%) reported seven ACEs, two participants (11%) reported eight ACEs, and two participants (11%) reported nine ACEs. The types and frequency of ACEs reported by participants is illustrated in Appendix M.

In addition, the ACEs tool measured: Do you believe that these experiences have affected your health? Responses to this measure were: Not much, some, or a lot. Five percent (5%) of participants reported “not much”, 28% reported “some”, and 67% reported “a lot”. See results in Appendix N.

The second aim of this project was to determine if the use of a mindfulness app called Insight Timer®, in addition to current therapy, could be a useful adjunct to care.

These measures included the data collected from the follow up survey sent to participants, by the student investigator, once, approximately four weeks after obtaining consent and ACE screening. Thirteen participants completed this survey. One hundred percent (100%) of the participants reported the app was easy to use. When asked how many times a week they used the app, 7.5% reported twice a week, 15% reported two to three times a week, 70% reported three to five times a week, and 7.5% reported six times a week. For the survey question “How many weeks did you use the app for?”, 7.5% of the participants reported using the app for one to two weeks, 7.5% used it for two to three weeks, 23% used it for three to four weeks, and 62% of the participants used the app for four weeks or longer. When asked, “In what way was this app helpful to you?”, 86% reported “relieved feelings of anxiety”, 46% reported “helped manage feelings”, 30% reported feeling “less sad”, 30% reported it “helped with sleep”, and one participant stated it “helped with nothing”.

Some other feedback was that it helped them feel grounded and helped to “snap them out of a funk”. When asked “are there other ways this app was helpful?”, the feedback was:

- “It gave me hope, hope that I could do something to help myself” (participant 1).
- “It helped with my ADD” (participant 2).
- “Helped if someone was pissing me off” (participant 4).
- “It was a good way to start the day, got me grounded and centered, helped keep things in perspective” (participant 10).
- “It motivated me to be in a good mood, and helped me realize I am not alone with my struggles” (participant 12).

When asked “Were there certain app features you preferred?”, the feedback included:

- “Timed sessions” (participant 1).
- “Mood check and check in” (participant 3).
- “Short sessions” (participant 9).

Eighty-five percent (85%) of the participants stated they would “recommend use to others”. Some of the other resources the participants reported using, besides the app, included exercise, nutrition, walking, cognitive behavioral therapy (CBT), and eye movement desensitization and reprocessing (EMDR).

4.4 Limitations to Data Collection

There are several limitations to collecting the data. The consent process involved emailing participants information on the study and sending the consent electronically via DocuSign®. It often took several email reminders for the participant to complete the consent process. Once consent was obtained, the site mentor completed the ACEs screening during an office visit and two participants chose to opt out of that screening, which decreased the number of participants to 18. It was challenging to collect the follow up surveys via email, and several of these were collected during an office visit with the site mentor. Finally, five participants were lost through attrition and did not follow through with using the app after consenting and screening for ACEs. This left 13 participants who completed the entire project from start to finish.

4.5 Conclusion

The results of this study were significant in that all participants who were being treated for depression reported adverse childhood experiences. Most of the participants had accumulating ACEs and reported that those early childhood experiences have affected their health in some way. The participants all found the app easy to use, and all used the app several times a week, for several weeks. The participants used the app at various times of day, and most would, and have, recommended the use of the app to others. The participants shared that the app helped to reduce their levels of anxiety, help them stay grounded, helped manage their emotions and helped with sleep.

Chapter 5

DATA INTERPRETATION AND CONCLUSION

This evidence-based project implemented ACEs screenings, the use of a mindfulness tool called Insight Timer®, and a follow up survey, in adults with depression, over an 8-week period. All adults who meet the DSM-V-TR criteria for depression in the site mentors practice were invited to participate. Qualitative and quantitative data were collected, evaluated, and analyzed using a descriptive design to determine if the aims and outcomes of this project were achieved.

5.1 Discussion

The aims of this project were: 1) to determine if adults with depression have had adverse childhood experiences to ensure a trauma informed approach to care; and 2) to determine if a mindfulness app (Insight Timer ®), in addition to current therapy, was a useful adjunct to care.

The first aim was analyzed using the ACEs screening tool that was completed by the participants during a counseling session with the site mentor, after completing the informed consent process. The data revealed that 100% of the participants reported having ACEs, and many of those participants reported accumulating ACEs. In addition, most participants reported that those ACEs had some impact on their health. These

findings support the early findings from the original ACEs study that early childhood trauma, particularly accumulating trauma in childhood, leads to long-term health and mental health issues well into adulthood. Although the original ACEs study demonstrated over 64% of study participants reported at least one ACE, this project found that 100% of the adults with depression reported at least one ACE, and many had high numbers of accumulating ACEs. The data collected from this project supports the importance of screening for ACEs, so that providers can utilize evidence-based interventions and provide a trauma-informed approach to care that won't further re-traumatize clients with depression. Although the site mentor currently does not use the ACEs screening tool, she does include all the questions that are on the ACEs screening tool in her intake survey for all new clients. This ensures that she is aware of earlier traumas, can assess the impact of that trauma, and that her approach to care includes appropriate treatment services.

The second aim, to determine if a mindfulness app (Insight Timer ®), in addition to current therapy, was a useful adjunct to care. This was analyzed using the follow-up survey that was collected four weeks into the project. The data from this survey demonstrated that the participants agreed that the app was easy to use, that they used it several times a week at various times throughout the day and evening, and that most of them would recommend the use of the app to others. Most of the participants reported that the app was helpful in some way, including relieving feelings of anxiety, helping to manage emotions, helping with feelings of sadness, and improving sleep. This data supports prior research that shows that depressed adults who utilize a mindfulness app for one month had significant decreases in depression, anxiety, and stress, and increases in

self-efficacy. It also supports that mobile apps and interventions may play a significant role for those coping with mental illness, as an adjunct to in-person therapy (Moberg et al., 2019). Self-efficacy was demonstrated by participants in this study who reported that the mindfulness intervention “gave me hope, hope that I could do something to help myself” and that “it helped me realize that I am not alone”. The results are supportive that mindfulness can help adults to focus, be aware of the moment, be non-reactionary and nonjudgmental, which has demonstrated improved behavioral, mental, and physical outcomes (Bouillier & Blair, 2018).

5.2 Project Limitations

Limitations of this study include the small sample size, from the convenience sample of adult participants with depression in a small private counseling practice. A larger practice, or group of practices, may have led to a larger sample of participants. As the ACEs tool was a self-report instrument, and these were adults whose ACEs may have occurred decades before, the information provided may not have been accurate. If any of the participants were new to counseling and had not developed a strong rapport with the counselor, they may not have felt comfortable being forthright about the type and number of traumas they have experienced. Another limitation is that seven of the participants who completed the consent process did not follow through with completing the four weeks of using the mindfulness tool. The participants needed frequent reminders by the site mentor to use the app for the four weeks. As the follow-up survey was self-report, the

information reported may or may not be accurate. Many participants reported “relieved feelings of anxiety”, but anxiety was not measured pre- and post- implementation.

5.3 Sustainability of the Practice Change

Sustaining an evidence-based practice change may be challenging and depends considerably on the organization and the buy-in of key stakeholders. Evidence suggests that there are several methods to support engagement and continued use of mindfulness apps. That evidence includes guided practice with trained personnel, email reminders, and even web-based features that include daily reminders (Winter et al., 2022). Once the project is completed and analyzed, the results of the project should first be disseminated to the project site and those stakeholders. The results of this project demonstrated that all the participants reported ACEs and most of the participants reported positive feelings and outcomes from implementing a mindfulness app in addition to their current counseling. These results have been shared with the site mentor, who will continue to suggest the use of this mindfulness app to use as an adjunct to therapy and counseling. After implementing this project, a suggested change to the methods would be to utilize the mindfulness app with the therapist during counseling sessions, in addition to current practices, to ensure that clients are implementing adjunctive therapies. The site mentor will continue to screen clients for adverse childhood experiences using the intake data collection tool she currently uses, which includes all the questions from the ACEs screening tool.

Another way to ensure sustainability of the project is to disseminate the results- not only within the current practice site, but outside the organization as well- and to the community through presentations, posters, and publications. Dissemination ensures the expansion of nursing knowledge and EBP to the healthcare community and is an important step in translating evidence into practice (Melnyk & Fineout-Overholt, 2019). The results of this EBP project will be submitted for poster presentation and publication to appropriate conferences and journals.

5.4 Significance of the Project

The project data and results demonstrated that adults with depression report high rates of accumulating adverse childhood experiences, and that those experiences have impacted their health to some degree. Considering the small sample size of this project, the findings are consistent with previous findings from (Felitti et al., 1998), that demonstrated the correlation between ACEs and depression in adults. All the participants in this project reported ACEs and many had large number of accumulating ACEs. Evidence supports that knowledge and understanding of previous ACEs allows for a trauma-informed approach to practice and may prevent inappropriate referrals, lack of treatment, or re-traumatization. The project findings are consistent with the important components of TIC, which include screening to identify trauma, assessment of the impact of trauma, and the provision of trauma treatment services for those who have experienced ACEs (Oral et al., 2016).

The project findings support the importance of screening for ACEs, so that counselors and other healthcare providers are aware of the trauma, can assess the impact of that trauma, and apply appropriate resources. Additionally, the use of a mindfulness app as an adjunctive therapy for adults with depression and ACEs, yielded positive results from the participants in this project. The participants found the app was easy to use, helped manage feelings and relieve feelings of anxiety and sadness, and helped with sleep. The results of this project are consistent with those in a large RCT (Moberg et al., 2019) of over 500 participants who were asked to implement a mindfulness app for one month and who reported decreases in stress, anxiety, and depression. Some participants in this project even reported they found “hope that I can help myself”, and feelings that “I am not alone with my struggles”, which are indications of improved self-efficacy. These feelings of self-efficacy correlate with the social cognitive theory which includes aspects of how an individual learns to regulate and control their behavior to achieve behavior goals that can be maintained over time (LaMorte, 2019). This supports the theoretical framework of this project.

5.5 Implications for Advanced Practice

There is a high rate of adult depression in the United States (18.5%) that ranges from mild to severe (Villarroel et al., 2022). The impact of multiple exposures to ACEs has a direct effect on high rates of depression and anxiety and these early traumatic, stressful experiences are linked to mental illness and other chronic, possibly life-limiting conditions, and diseases later in life (Felitti et al., 1998). The care of these clients is

challenging and time consuming. Advanced practice registered nurses (APRNs) are in a unique position to evaluate literature, translate findings, and develop EBP projects and changes that can be implemented to directly impact the care of clients with depression and adverse childhood experiences. This project offers two important practice changes that APRNs can implement to impact the care of these clients. First, screening for ACEs to ensure an approach to care that is not re-traumatizing, can be done on initial data collection or intake forms of clients with depression. Secondly, APRNs can offer adjuncts to current mental health services and counseling, such as the use of Insight Timer®, or another mindfulness app, that clients can use on their own to improve well-being and increase feelings of self-efficacy.

5.6 Conclusion

This project successfully implemented ACEs screening and the use of a mindfulness app, Insight Timer®, for adults with depression in a small private practice mental health counseling center in southeastern PA. The project demonstrated the importance of screening for early childhood trauma, as 100% of the clients who participated in the project reported ACEs, and many reported high rates of accumulating ACEs. The results also demonstrated that the participants reported this early trauma had an impact on their health. These results support earlier studies that screening for adverse childhood experiences is important in providing an environment of care that is trauma-informed (Oral et al., 2015). Screening for ACEs aligns with the current practice standard as these screening questions are currently included in the intake data collected

on all clients in this practice environment, so no additional resources are required to obtain this important information. There is no need to change the screening tool. This project also demonstrated the positive impact the addition of a mindfulness app, Insight Timer®, had on the participants who completed the follow-up survey. These results demonstrated positive feelings towards using the app, that the app helped with feelings of well-being and self-efficacy, and that they would recommend use of the app to others. As many adults with mental illness have limited access to mental health services (Moberg et al., 2019), the results of this project support that mindfulness apps may be promising and helpful to decrease the burden of lack of access to care and as an adjunct to care for those with depression and ACEs.

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9%2C%20approximately%20one%20in,and%202.8%25%20experiencing%20severe%20symptoms.

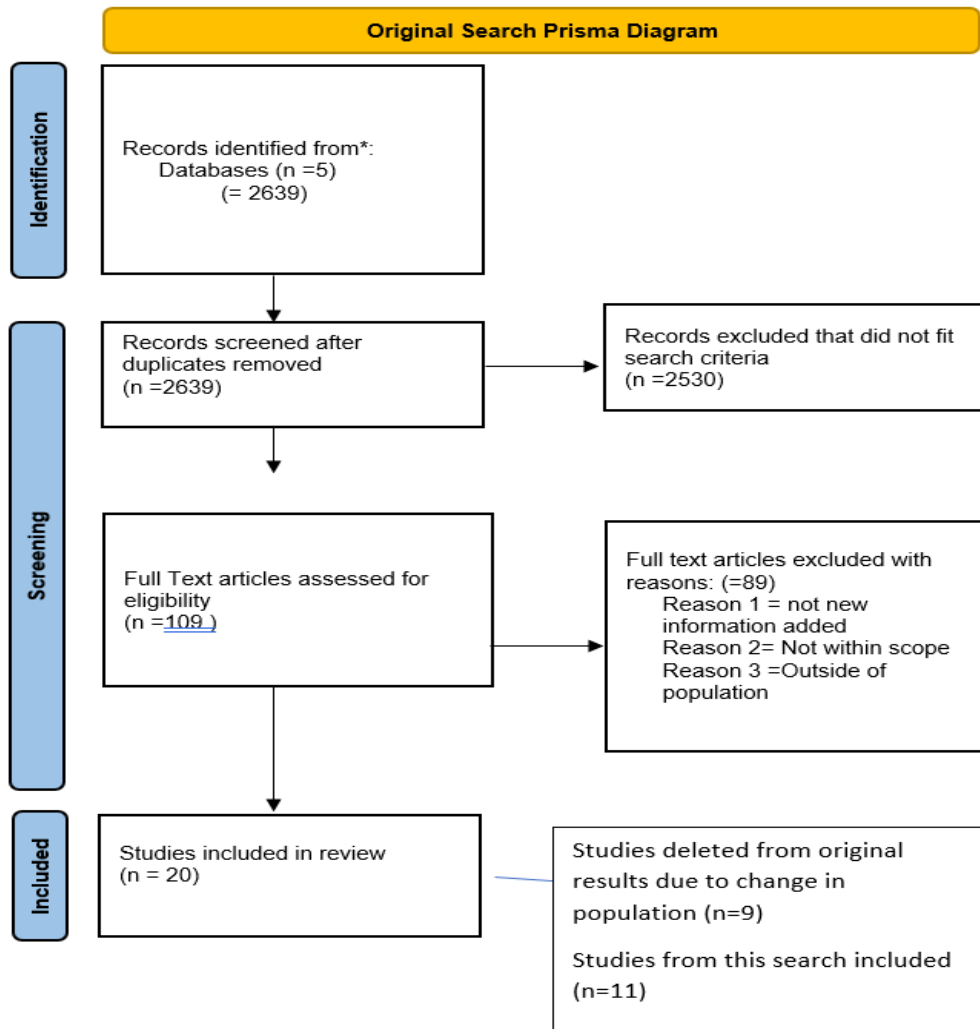
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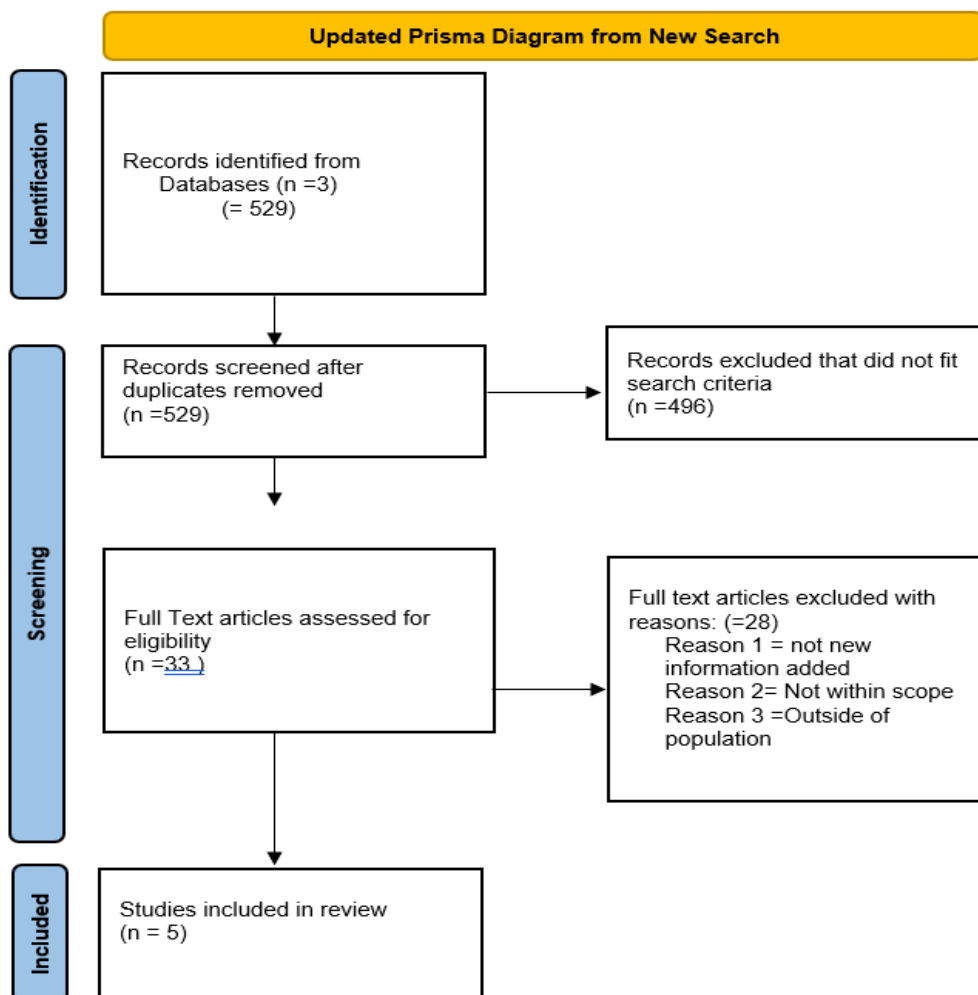
Appendix A

PRISMA ONE DIAGRAM



Appendix B

PRISMA TWO DIAGRAM



Appendix C

JOHNS HOPKINS LITERATURE REVIEW TABLE

Date: 4/20/22	EBP PICOT Question: For adults, in counseling for depression, with past adverse childhood experiences (ACEs) (P), does provision of mindfulness resources and trauma screening (I), lead to post intervention self-reported satisfaction and increased awareness of trauma informed care (O) over a 4-week period (T)?						
Article Number	Author and Date	Evidence Type	Sample, Sample Size, Setting	Findings That Help Answer the EBP Question	Observable Measures	Limitations	Evidence Level, Quality
1	Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Ross, M. P., & Marks, J. S. 1998 (Original Study)	Non-Experimental Quantitative	9,508 Large HMO	50% of respondents reported at least one ACE, one fourth reported >2, and those with 4 or more had 4-12-fold increase in health risks including depression	Survey Method: ACE study questionnaire mailed to participants one week after clinic visit (Response rate 70%-9508/13,494)	Self-reported-may impact reporting. Retrospective and only demonstrates associations between ACE and health status/disease/behaviors	Level III High Quality
2	Oral, R., Ramirez, M., Coohy, C., Nakada, S., Walz, A., Kuntz, A., Benoit, J., & Peek-Asa, C. 2016	Non-Experimental Systematic Review	N/A	Childhood adversity (events or circumstances outside of Childs control) may have detrimental effects on physical and mental health. Lead to sustained stress response in children. 64% of children have ACE, which predicts high rates of poor mental health, and increased	Survey Method Cortisol measures Child abuse screening tools Mental health screening tools Primary prevention	Not reported Review of previously published literature	Level III High Quality

				risky behaviors. Four or more ACEs leads to 4.5 times rate of depression and 12-15 x higher rates of suicide. Prevention is crucial. Early intervention through Psychological first aid (PFA), cognitive behavior therapy (CBT) and Trauma informed care (TIC)	programs PFA CBT TIC		
3	Bouillier, M., & Blair, M. 2018	Integrative review	N/A	ACEs well reported and studied Affect developing brain, immune and endocrine systems Leads to high-risk behaviors and poor adult health, disrupted neurodevelopment, social problems, disease, disability and early death. Requires primary prevention and early recognition and intervention. Good social support and mindfulness provides resilience	CDC-Kaiser ACE study Abuse Household challenges Neglect	Most respondents of original study were white and well educated Omitted economic hardship and family relationships Further research needed in low and middle countries and families	Level V High Quality
4	Schneider, F.D., Loveland Cook, C.A., Salas, J., Cleveland, I. N., Burge, S. K., 2020	Quantitative Descriptive Cross-sectional	254 adults in 10 primary care clinics	4 classes of ACEs were defined. Those who were verbally and physically abused, and who saw their mother abused, had higher rates of mental illness and depression in adulthood. Those who had	Questionnaires ACEs Quality of Social Networks Current health and mental health	Limited generalizability ACEs may be underreported	Level III High Quality

				ACEs, but strong supportive social networks had decreased reports of poor mental health	status Sociodemographic		
5	Milanovic, M. Ayukawa, E. Usyatynsky, A. Holhausen, K. Bowie, C. 2018	Quantitative Descriptive Cross-sectional	42 adults recruited from mental health clinics	Self-reported self-efficacy significantly predicted functioning in interpersonal and adaptive domains over and above depressive symptoms Interpersonal self-efficacy accounts for social underperformance in depressed persons and Aligns with Bandura's theory that having knowledge does not always align with beliefs that one can complete and skill, and therefore lead to avoidance of some tasks	Beck's depression inventory for depression Adaptive functioning Self-efficacy Interpersonal functioning	Measure used to assess functional disability subject to self-report biases Cross sectional design impact's ability to determine causality	Level III High Quality
6	Bellis, M. A., Hughes, K., Ford, K., Ramos Rodriguez, G., Sethi, D., & Passmore, J. 2019	Systematic Review and Meta- Analysis	N/A	40% of cases of mental illness in North America are attributed to ACEs. Annual costs associated with ACEs in North America is \$748 Billion, equivalent to 3.55% of gross domestic product. 75% of those costs are associated with those with 2 or more ACEs 10% reduction in	Risk factors (smoking, alcohol use, obesity, illicit drug use) ACEs Causes of ill health (anxiety, depression, cancer, cardiovascular disease, respiratory disease, diabetes)	Self-report Depression could affect recall of ACEs Inclusion was restricted to the general population and not those at high risk. Those unable to take part in surveys, such as the homeless,	Level I High Quality

				<p>ACE prevalence could equate to annual savings of \$105billion</p> <p>ACEs are an avoidable risk factor for some of the largest threats to public health and costs to health services.</p> <p>Evidence based approaches to preventing and moderating their effects exist</p>		<p>are likely to have high number of ACEs</p> <p>Inconsistencies exist in the definition and types of ACEs</p>	
7	<p>Burgess, E. E., Selchen, S., Diplock, B. D., Rector, N. A.,</p> <p>2021</p>	Quantitative. Exploratory	<p>N=54, physician referred, treatment seeking, community sample</p>	<p>An abbreviated, 5-week, 10–15-minute weekly mindfulness intervention led to a significant reduction in both depression and anxiety symptoms, and increased self-compassion and feelings of well being</p>	<p>Quality of life measures included disability related impairment, general well-being, and acute distress</p> <p>Depression Anxiety Self-compassion</p>	<p>Absence of control group</p> <p>No Control for medication use</p> <p>Lone physician</p> <p>Limited generalizability</p>	<p>Level III High Quality</p>
8	<p>Bygstad-Landro, M., & Giske, T.</p> <p>2017</p>	Qualitative Classic grounded theory methodology	<p>18 participants over age 18, undergoing treatment for depression scoring “moderately depressed” on the Beck's Depression Inventory (BDI). Inpatients and outpatients</p>	<p>Existential concerns are common part of depression</p> <p>Depression deeply related to shame, hope and enduring</p> <p>Importance of nurses uncovering the existential concerns to help facilitate the healing process for those with depression</p> <p>Theory of Risking</p>	<p>Longing for Belonging</p> <p>Risking existence</p>	<p>None listed</p> <p>Self-report</p> <p>Only one interview per participant</p>	<p>Level III High Quality</p>

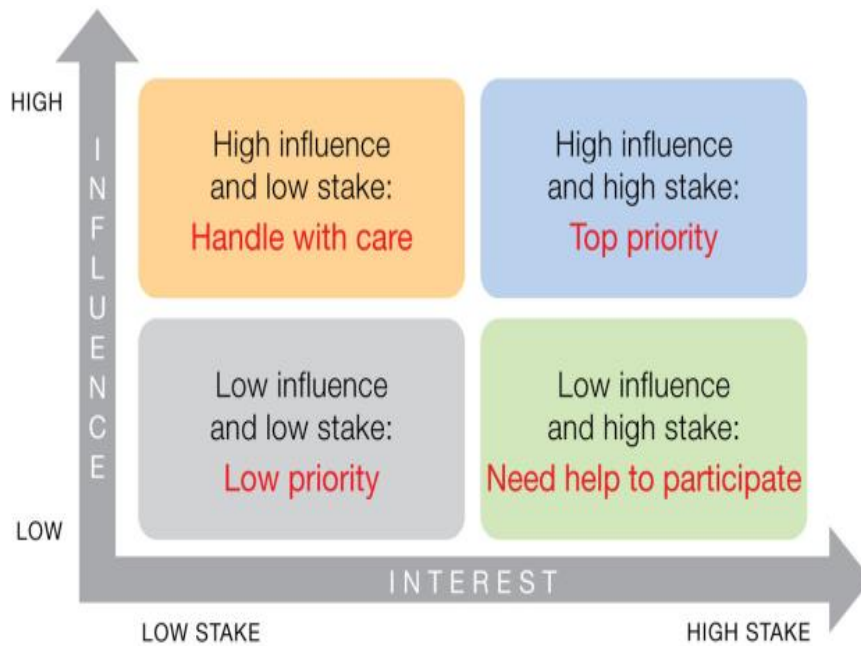
			at two different mental hospitals in Norway	Existence gives insight into how to support those with depression regarding longing for belonging			
9	<i>Centers for Disease Control.</i> 2020	Government Website	N/A	ACEs are common and preventable Some children more at risk than others Costly Long lasting negative health effects May lead to toxic stress and difficulty maintaining stable and healthy relationships	Abuse Neglect Substance abuse Family mental health issues Death of family member Divorce or separation Incarcerated family member	NA	Level V High Quality
10	<i>Governor. Delaware. gov</i> 2017	Government Website	N/A	50.4% of all children in Delaware have been exposed to at least one ACE, and 23% of all children in Delaware have been exposed to two or more ACEs.	Abuse Neglect Substance abuse Family mental health issues Death of family member Divorce or separation Incarcerated family member	NA	Level V
11	Moberg, C., Niles, A., Beermann, D. 2019	RCT	n=500 with mild to moderate depression recruited from with an app	A popular mindfulness app is effective to reduce self-reported symptoms of depression, anxiety, and stress, and is most effective in those who also used thought records and no medications App use was self-guided with no	Questionnaires at baseline (pretreatment), 4 weeks later, and 3 months after baseline Stress Anxiety Depression	Convenience sample Limited Generalizability Sample had low levels of anxiety and depression	Level I High Quality

				recommendations on frequency of use			
12	LaMorte, W. W. 2019	Website	N/A	Review of the Social Cognitive Theory		NA	Level V
13	<i>Robert Wood Johnson Foundation</i> 2020	Website	N/A	Children who experience trauma suffer health consequences long into adulthood ACEs linked to mental illness, chronic health conditions and premature death			Level V High Quality
14	<i>US Census Bureau</i> 2019	Government Website	N/A	Health Statistics and Data for Sussex County Delaware			Level V
15	Stefannacci, R. G 2018		N/A	The Triple Aim is the simultaneous pursuit of 3 aims: enhancing patient experience, improving population health, and reducing costs. ¹ It is widely accepted as the compass to optimize health system performance. The Quadruple aim includes the wellbeing of healthcare professionals			Level IV
16	Melnyk, B. M. 2019	Textbook	N/A	Discussion on EBP			Level V

Appendix D

STAKEHOLDER ASSESSMENT TOOL

Individual	Stake	Potential Involvement	Involvement
Study PI	Top Priority		Yes
Site Mentor	Top Priority		Yes
Participants	Top Priority		Yes
Faculty Mentor	Top Priority		Yes
Other providers in the practice site	Handle with Care	Nice to have information	No



Appendix E

ACES SCREENING TOOL

Adverse Childhood Experience Questionnaire for Adults

California Surgeon General's Clinical Advisory Committee



Our relationships and experiences—even those in childhood—can affect our health and well-being. Difficult childhood experiences are very common. Please tell us whether you have had any of the experiences listed below, as they may be affecting your health today or may affect your health in the future. This information will help you and your provider better understand how to work together to support your health and well-being.

Instructions: Below is a list of 10 categories of Adverse Childhood Experiences (ACEs). From the list below, please add up the number of categories of ACEs you experienced prior to your 18th birthday and put the total number at the bottom. (You do not need to indicate which categories apply to you, only the total number of categories that apply.)	
Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	
Did you lose a parent through divorce, abandonment, death, or other reason?	
Did you live with anyone who was depressed, mentally ill, or attempted suicide?	
Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?	
Did your parents or adults in your home ever hit, punch, beat, or threaten to harm each other?	
Did you live with anyone who went to jail or prison?	
Did a parent or adult in your home ever swear at you, insult you, or put you down?	
Did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way?	
Did you feel that no one in your family loved you or thought you were special?	
Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration)?	
Your ACE score is the total number of yes responses.	

Do you believe that these experiences have affected your health? Not Much Some A Lot

Experiences in childhood are just one part of a person's life story.
There are many ways to heal throughout one's life.

Appendix F

FOLLOW UP SURVEY TOOL

Please complete this survey to the best of your ability

Questions

1. Was the App simple to use?
2. How many times a week did you use the App?
 - a. 0-2
 - b. 3-5
 - c. 6 or more
3. How many weeks did you use the App for?
 - a. Less than 1
 - b. 1-2
 - c. 3-4
 - d. 4 or more
4. What time of the day did you use the App?
 - a. Morning
 - b. Afternoon
 - c. Evening
 - d. Bedtime
 - e. Several times a day
5. In what way was this app helpful to you? (select all that apply)
 - a. Relieved feelings of anxiety
 - b. Made me feel less sad
 - c. Helped me to manage my feelings
 - d. Helped me with sleep
6. Are there other ways this app and resources were helpful to you? (please explain)
7. Are there certain features of the app that you used most or preferred? (please explain)
8. Would you recommend this App, or one like it, to others?
9. Did you use any of the other resources provided to you? If so, which ones?

Appendix G

SWOT ANALYSIS

Strengths

- Small, privately owned mental health counseling center
- Owned by site mentor
- All clients in practice meet DSM-V-TR criteria for mild to moderate depression
- Engaged site mentor
- Follows evidence-based practice

Weaknesses

- Not currently screening for ACEs
- Not currently using Mindfulness based app as adjunct to counseling
- Limited time
- Large client list

Opportunities

- Willingness to engage with DNP student to improve outcomes for adults with depression (Internal)
- Engaged site mentor (Internal)
- Limited mental health resources in community (External)

Threats

- Needs IRB approval
- Consent required
- May be resistant to contact student investigator
- Possible hesitancy to complete ACEs tool
- May not use Mindfulness App
- May not complete follow up survey

Appendix H

WORK BREAKDOWN STRUCTURE

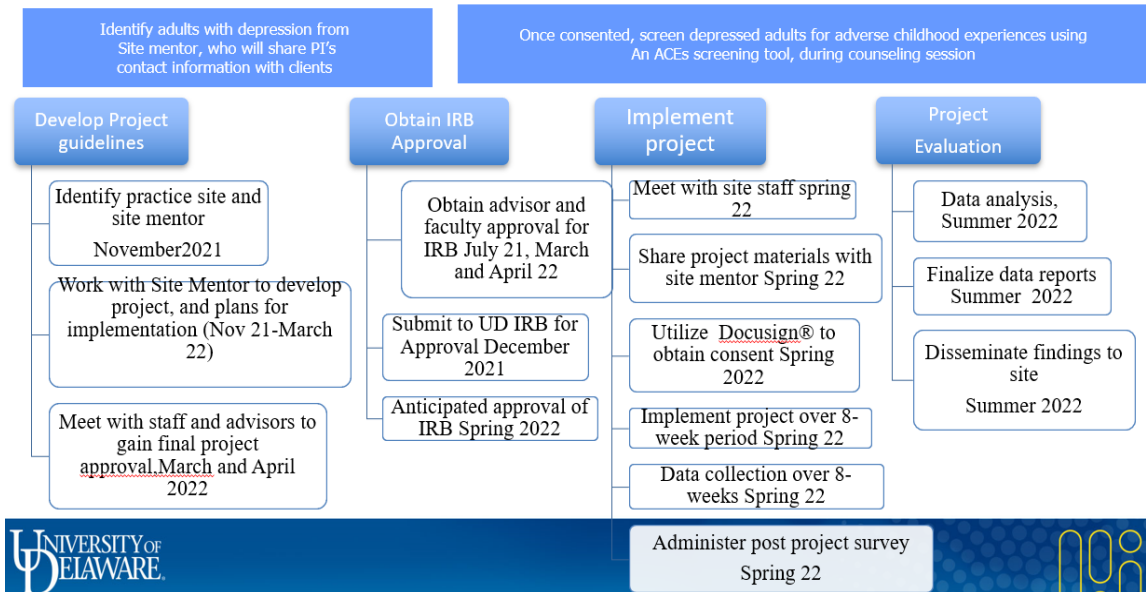
Purpose: To explore whether the use of a mindfulness app and a survey/questionnaire on adverse childhood experiences (ACEs) are helpful in the adjunctive treatment of depression in adults.



Aims

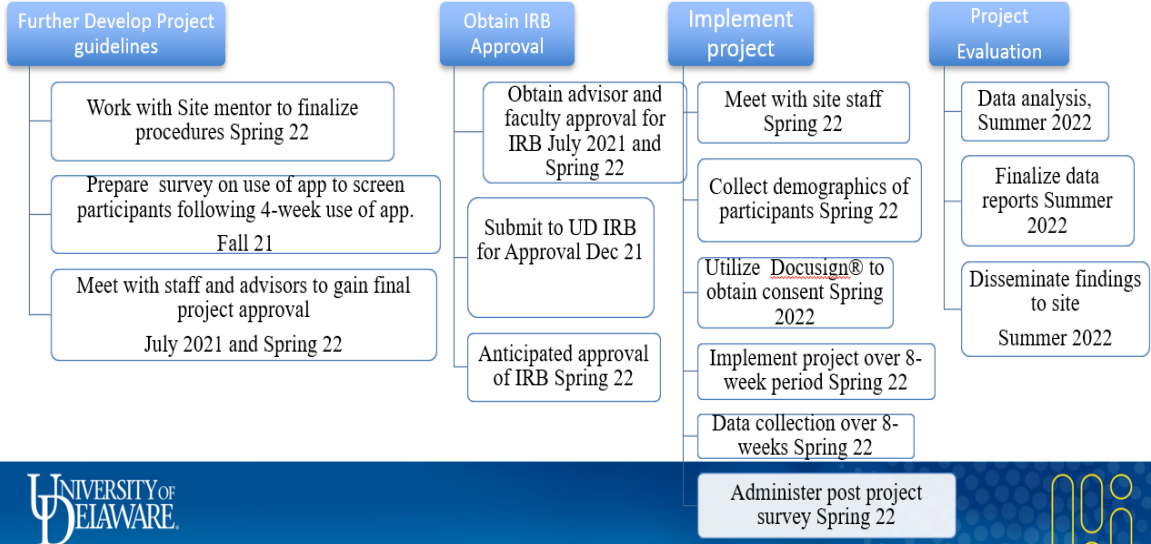
Determine if adults with depression have had adverse childhood experiences to ensure a trauma informed approach to care
 Determine if use of a mindfulness app (Insight Timer), in addition to current therapy, was a useful adjunct to care

Aim 1 Determine if adults with depression have had adverse childhood experiences to ensure a trauma informed approach to care tool.



2. Determine if use of a mindfulness app (Insight Timer), in addition to current therapy, was a useful adjunct to care

Analyze Survey for use of and satisfaction of resources



Appendix I

OUTCOMES MEASUREMENT

Outcomes Measurement Plan

EBP project Outcome	How <u>we will</u> measure it? (metric)	How often we will measure? (frequency)	Where <u>we will</u> obtain the data from?	Who will collect the data?	Who <u>we will</u> report the data to?
The number of clients with depression who have had adverse childhood experiences to ensure a trauma informed approach to care and determine feasibility of screening in practice	ACE screening tool 10 categories, metric is determined by # of yes answers	Once, after consent if obtained	ACE screening tool will be given to participants and completed in office and returned to Student Investigator	Site Mentor	UD, Site mentor
The frequency of use and the perceived quality of the mindfulness app (Insight Timer)	Survey	Week four	Survey emailed to participants and completed via email	Student Investigator	UD, Site mentor

Appendix J

INFORMED CONSENT



UD IRB Approved: 03/21/2022
IRBNet ID#: 1852333-1

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Study: Trauma informed mindfulness to mitigate depression in adults with adverse childhood experiences: A nurse-driven initiative

Principal Investigator(s): Susan Weaver

KEY INFORMATION

Important aspects of the study you should know about first:

I am a graduate Nursing Student at the University of Delaware pursuing a Doctor of Nursing Practice degree. I am currently conducting a study at this practice site. I am partnering with your counselor, Ann Valee McLaughlin.

Purpose: To explore whether the use of a mindfulness app and a survey/questionnaire on adverse childhood experiences (ACEs) are helpful in the adjunctive treatment of depression in adults.

Adverse childhood experiences ACEs are difficult childhood experiences you may have had that negatively affect your health and well-being and are strongly related to depression. Knowledge of these past experiences may help to ensure that interactions with your counselor do not cause further distress or trauma

Procedures: If you choose to participate, you will be asked to:

- Sign this consent via secure email
- Complete a demographics form (age and gender)
- Download and use a mindfulness App (Insight Timer)® that you will be asked to use at least 3 times a week, for at least 5-10 minutes at a time for 4 weeks
- Complete a short survey at the end of those 4 weeks, to see if you found the app helpful, in addition to your counseling
- At your next counseling session, you will be asked to:
 - Fill out a short Adverse Childhood Experiences (ACEs) questionnaire, which will be placed in a confidential envelope with no identifying information on it.
- **Duration:** This will take about 15 to 30 minutes a week, for a total of 4 weeks, on your own time. Your total time commitment will be a minimum of 1 hour, it can be more if desired. You may use the mindfulness tool as much as you would like.
- **Risks:** The main risk or discomfort from this study is that sometimes screening for past childhood experiences may make you feel uncomfortable, cause you sadness, or increase your stress. Because of this, the screening will occur while you are in a counseling session.

- **Benefits:** The main benefit to you from this study is that mindfulness is a very useful addition to counseling to help manage the symptoms of depression. Even short sessions of mindfulness have been shown to decrease negative emotions. Mindfulness helps to regulate emotions, build resilience, and improve coping mechanisms.
- **Alternatives:** You may choose not to take part in this study.
- **Costs and Compensation:** If you decide to participate there will be no cost to you. You will not be compensated to participate.
- **Participation:** Taking part or not in this study is your decision. You can decide to participate and then change your mind at any point. This intervention is in addition to your current counseling and does not replace that. If you choose not to participate, this will in no way interfere with your current counseling.

Please carefully read the entire document. You can ask any questions you may have before deciding if you want to participate.

You are being invited to participate in a research study. This consent form tells you about the study including its purpose, what you will be asked to do if you decide to take part, and the risks and benefits of participation. Please read the information below and ask us any questions you may have before you decide whether you want to participate.

PURPOSE OF THE STUDY

Purpose: To explore whether the use of a mindfulness app and a survey/questionnaire on ACEs are helpful in the adjunctive treatment of depression in adults.

ACEs are difficult childhood experiences you may have had that negatively affect your health and well-being and are strongly related to depression. Knowledge of these past experiences may help to ensure that interactions with your counselor do not cause further distress or trauma

The aims of this study are to:

- to determine if the use of a mindfulness app, along with current counseling, is helpful to you.
- determine if you have had adverse childhood experiences to see if using the ACEs screening tool is helpful to your counselor in guiding future care

WHO IS BEING ASKED TO PARTICIPATE?

You will be one of approximately 10-20 participants in this study.

You are being asked to participate because you are currently in counseling for depression and mindfulness is a useful addition to counseling to help manage the symptoms of depression.

PROCEDURES: WHAT WILL YOU BE ASKED TO DO?

As part of this study, you will be asked to:

- Sign this consent form
- Complete a form with your age and gender.

Page 3 of 6

I/C Form Rev. 04/2020

Participant's Initials _____

- Download a mindfulness app called Insight Timer [®], that can be downloaded on any device.
- Utilize the mindfulness app at least 3 times a week for 5-10 minutes, over a 4-week period. Your total time commitment is one to two hours.
- Fill out a short questionnaire on ACES, which will be completed at your next counseling session, and placed in a confidential envelope with no identifying information on it
- At the end of the 4-week period, in your counseling session, you will be asked to complete a short survey via email, asking if you thought the mindfulness tool was a helpful addition to your counseling.

You may choose not to take part in this study. Taking part or not in this study is your decision. You can decide to participate and then change your mind at any point. This intervention is in addition to your current counseling and does not replace that. If you choose not to participate, this will in no way interfere with your current counseling.

WHAT ARE POSSIBLE RISKS AND DISCOMFORTS?

Possible risks of participating in this study are that sometimes screening for past childhood experiences may make you feel uncomfortable, cause you sadness or increase your stress. Because of this, the screening will occur while you are in a counseling session.

WHAT ARE POTENTIAL BENEFITS FROM THE STUDY?

The main benefit to you from this study is that mindfulness is a very useful addition to counseling to help manage the symptoms of depression. Even short sessions of mindfulness have been shown to decrease negative emotions. Mindfulness helps to regulate emotions, build resilience, and improve coping mechanisms. There is no guarantee that the use of the mindfulness app will be helpful to you. Screening for ACES will allow for the data to be reviewed at the end of the study to see if trauma screening may be useful in future care.

The potential benefit to future participants is that your counselor may implement this evidence -based practice into her standard of care for all clients.

CONFIDENTIALITY: WHO MAY KNOW THAT YOU PARTICIPATED IN THIS RESEARCH?

Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used.

- To minimize the risks to confidentiality, only your counselor will have access to your confidential information. The student investigator does not have access to your personal health information, just the packet with your screening results, and your contact information, which will be kept confidential and separate from the other study materials.
- The confidential screening results will be kept in your counselor's locked office, in an envelope. The student investigator will visit the office at least weekly to collect the data, which will be transposed to an excel file on an encrypted, secure computer device. No names will be included in the collected data on the excel file, just numbers.
- All information you provide is confidential and will have no identifying information on it. The student investigator will not access your medical record. No personal information about you will be shared. At the end of the study, the results will be reported to the University of Delaware and shared with your counselor. The results may be published later.

We will keep your study data confidential. We may have to report certain information for legal or ethical reasons, such as child abuse, or intent to hurt yourself or others. If required, your records may be inspected by authorized personnel in the following groups and agencies: the University of Delaware Institutional Review Board.

COSTS AND COMPENSATION

If you decide to participate there will be no cost to you. You will not be compensated to participate.

DO YOU HAVE TO TAKE PART IN THIS STUDY?

Taking part in this study is your decision. You do not have to participate in this study. If you choose to take part, you have the right to stop at any time. If you decide later not to participate, or if you decide to stop taking part in the study, there will be no penalty or loss of benefits to which you are otherwise entitled. Your decision to stop participation, or not to participate, will not influence current or future relationships with the University of Delaware or with your counselor.

INSTITUTIONAL REVIEW BOARD

This study has been reviewed and approved by the University of Delaware Institutional Review Board (UD IRB), which is a committee formally designated to approve, monitor, and review biomedical and behavioral research involving humans. If you have any questions or concerns about your rights as a research participant, you may contact the UD IRB at hsrb-research@udel.edu or (302) 831-2137.

CONTACT INFORMATION

If you have any questions about the purpose, procedures, or any other issues related to this study, you may contact the Principal Investigator, Susan Weaver at 302-379-2974, or slweaver@udel.edu. You may also contact my UD Faculty Advisor, Dr Catherine Heilferty at che@udel.edu.

CONSENT TO PARTICIPATE IN THE RESEARCH STUDY:

I have read and understood the information in this form and I agree to participate in the study. I am 18 years of age or older. I have been given the opportunity to ask any questions I had and those questions have been answered to my satisfaction. I understand that I will be given a copy of this form for my records.

_____	_____	_____
Printed Name of Participant (PRINTED NAME)	Signature of Participant (SIGNATURE)	Date
_____	_____	_____
Person Obtaining Consent (PRINTED NAME)	Person Obtaining Consent (SIGNATURE)	Date

Appendix K

DEMOGRAPHICS FORM

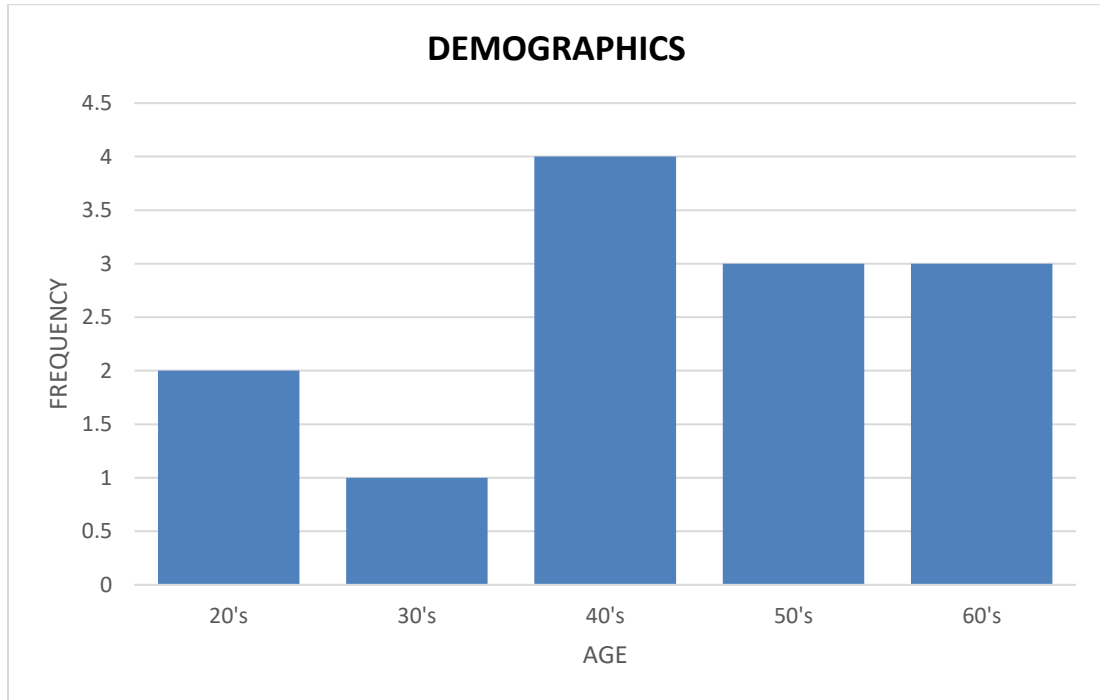
Demographics Form

Protocol Title: Trauma informed mindfulness to mitigate depression in adults with adverse childhood experiences: A nurse-driven initiative

Age _____

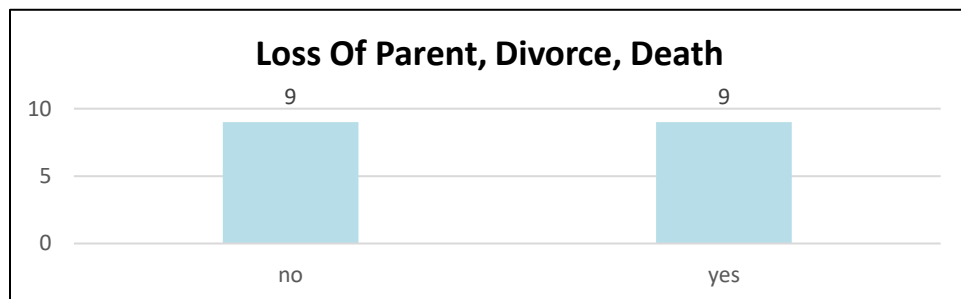
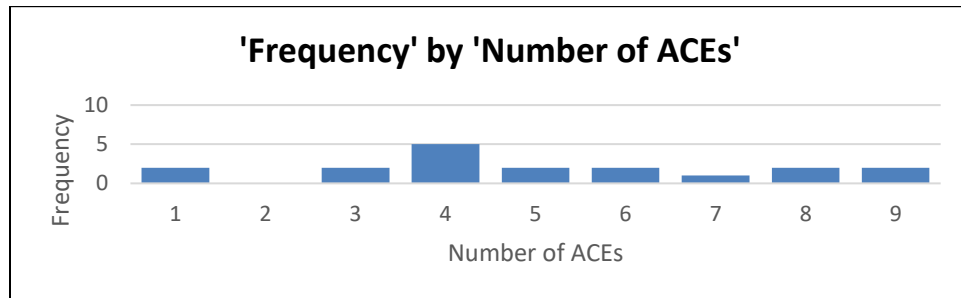
Gender (how you identify) _____

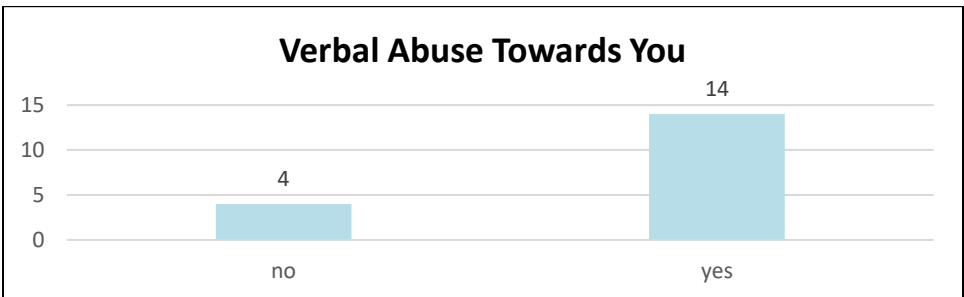
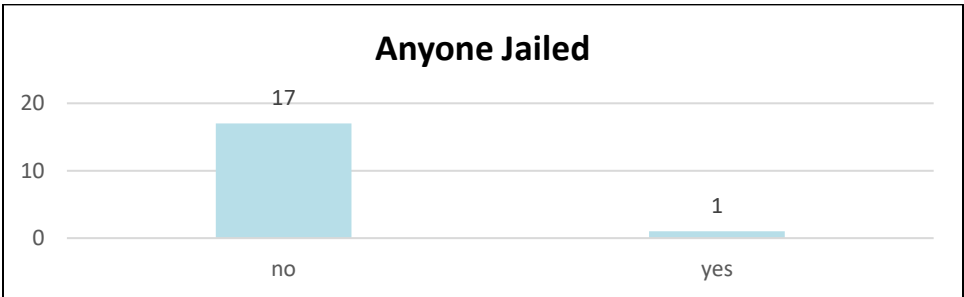
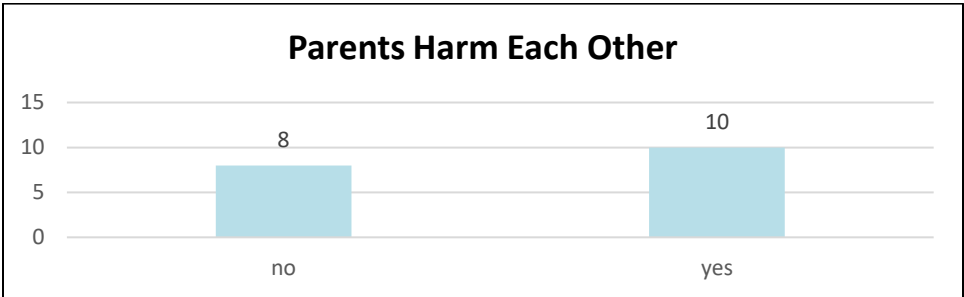
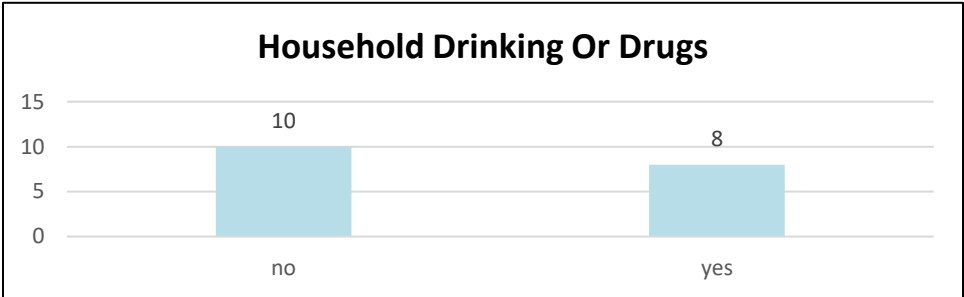
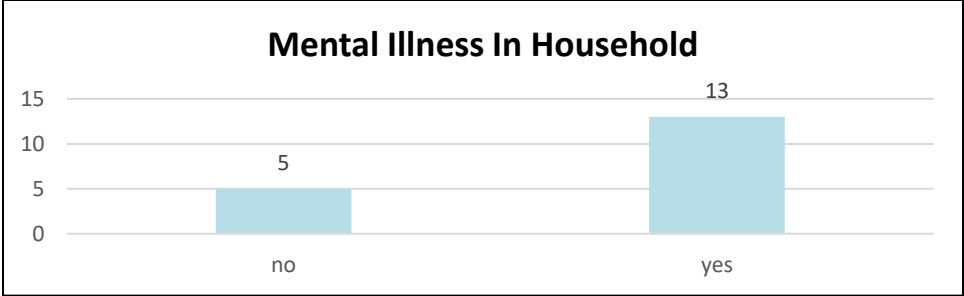
Appendix L
STUDY DEMOGRAPHICS

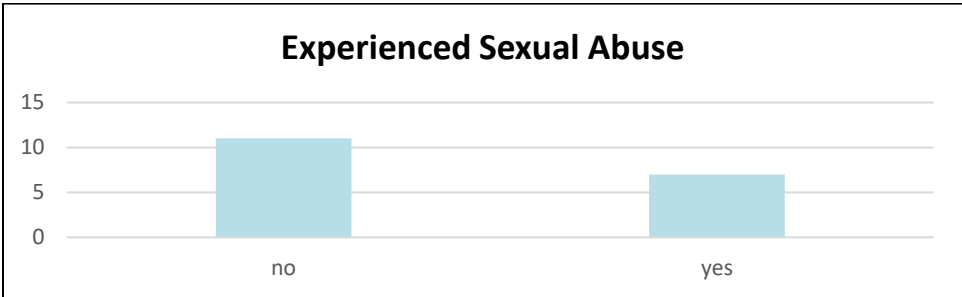
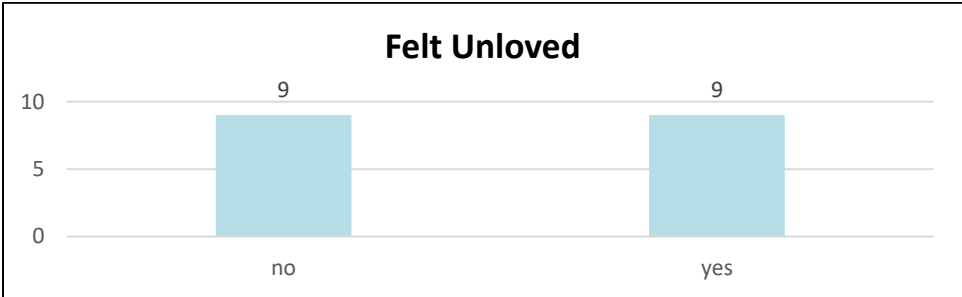
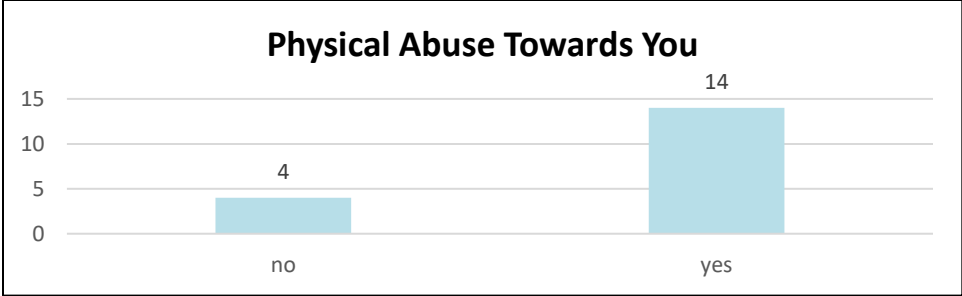


Appendix M

FREQUENCY AND TYPES OF ACES







Appendix N

EFFECT ON HEALTH

