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## **Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure**

Tatum N. Britton

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REDUCING PRIMARY DYSMENORRHEA

**Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure**

Tatum N. Britton

Submitted in partial fulfillment of  
the requirement for the degree of  
Doctor of Nursing Practice

AUGSBURG UNIVERSITY  
MINNEAPOLIS, MN

2024

# AUGSBURG UNIVERSITY®

## Department of Nursing Doctor of Nursing Practice Program Scholarly Project Approval Form

This is to certify that **Tatum Britton** has successfully presented his scholarly doctoral project entitled “**Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure**” and fulfilled the requirements for the Doctor of Nursing Practice degree.

Date of presentation: April 9, 2024

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**Presentations**

Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure

April 9, 2024

Augsburg University

Minneapolis, MN

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## Abstract

Primary dysmenorrhea is a common gynecological condition associated with painful cramps during menstruation in the absence of other diseases. It impacts large populations of women worldwide yet is often disregarded and inadequately treated. The ways in which women are treated for this condition often bring forth issues including overuse of medications, drug dependence, adverse reactions from medication use, and increased medical expenses. The utilization of non-pharmacological options has been shown to be effective in managing pain related to primary dysmenorrhea, including the complementary and integrative treatment of acupuncture. Guided by Jean Watson's Human Caring Science Theory, this scholarly DNP-FNP project explored the use of acupuncture to reduce the severity of primary dysmenorrhea in women. Women (N= 14) were asked to participate in an acupuncture education class and perform acupuncture at acupoints LI 4, SP 6, and SP 8 during one menstrual period. Pre- and post- intervention questionnaires were completed by the participants to measure the effectiveness of the acupuncture intervention. The post intervention questionnaires indicated reduced levels of pain in relation to primary dysmenorrhea. These findings are pertinent to the role of the nurse practitioner as they suggest the importance of utilizing integrative modalities including acupuncture as a means of treatment. The implications of this scholarly project can be utilized by all women experiencing pain related in primary dysmenorrhea and indicate the potential benefits of utilizing complementary and alternative modalities of health.

*Keywords:* Primary dysmenorrhea, pain, acupuncture, health





## Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure

### Chapter One: Introduction

Primary dysmenorrhea is a common gynecological condition associated with painful cramps during menstruation in the absence of other diseases (Coco, 1999). It is a common gynecologic complaint affecting large populations of women worldwide. Typical treatment of primary dysmenorrhea brings forth unnecessary medication use, drug dependence, adverse reactions from medication use, and unnecessary medical expenses (Jun et al., 2007). Non-pharmacological options can be utilized in managing pain related to primary dysmenorrhea, including the complementary treatment of acupressure. This chapter will discuss the purpose of this project, clinical questions, project objectives, the patient population focused upon, and the Essentials of Doctoral Education for Advanced Nursing Practice. This scholarly project will explore if the utilization of acupressure will reduce the severity of primary dysmenorrhea in women.

### **Background**

Primary dysmenorrhea is cyclical pain that typically occurs in the lower abdomen or pelvis and can radiate to the back and thighs, commonly occurring at the onset of menstrual flow and lasts for 24-48 hours (Omidvar et al., 2015). Typically, the pain is mild, but for some women, the discomfort is so severe that it can negatively affect the quality of life, leading to disruptions such as hindering daily routine activities, increasing medication use, and cause absence from school or work (Poureslami & Osati-Ashtiani, 2002). Primary dysmenorrhea is the most common gynecologic complaint among adolescent and adult females, with a prevalence of 88% worldwide (Bazarganipour et al., 2017). Pharmacological interventions are the general treatment to alleviate menstrual

caused pain and include nonsteroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives (Coco, 1999). Although these medications may provide temporary pain relief for women, the regular use of these medications brings forth the issues mentioned above, such as drug dependence, adverse reactions, and unnecessary medical expenses (Jun et al., 2007). Complementary treatments, such as acupressure, have been utilized as a form of pain reduction but have not yet become a primary intervention in reducing primary dysmenorrhea. Acupressure, an alternative form of acupuncture, utilizes physical pressure to the same energy points and channels used in acupuncture. By using acupressure in women, we can provide a non-invasive and cost-free way to manage dysmenorrhea independently, thereby reducing cost and medication use (Chen & Chen, 2004).

### **Problem Statement**

Many women suffer from primary dysmenorrhea. Primary dysmenorrhea brings forth issues of pain management, drug, and medical dependence, along with unnecessary expenses for women worldwide. However, there are complementary and integrative treatment options such as acupressure that are beneficial in reducing primary dysmenorrhea and would reduce the need for medication and other medical expenses. In this scholarly project, we will examine the effects of utilizing acupressure to manage pain related to primary dysmenorrhea.

### **Purpose of the Scholarly Project**

The purpose of this scholarly project is to examine the effects of utilizing acupressure for the management of pain related to primary dysmenorrhea.

### **Clinical Question**

The clinical questions that will guide this scholarly project is: In women experiencing primary dysmenorrhea, will the utilization of acupuncture reduce the severity of pain?

### **Objectives**

The objectives of this scholarly project will include:

1. Discuss the prevalence of those affected by severe primary dysmenorrhea.
2. Explain the benefits behind utilizing complementary treatment for pain reduction.
3. Demonstrate use of acupuncture points for primary dysmenorrhea with a group of women.
4. Create a plan appropriate for community members to utilize acupuncture resources.

### **Patient Population and Health Care Setting**

The patient population included in this scholarly project are young females of child-bearing age, suffering from pain secondary to primary dysmenorrhea in the Twin Cities region of Minnesota. Participants included will be women who are 18-30 years of age, suffering from moderate to severe dysmenorrhea according to the WaLIDD instrument (see Appendix B titled WaLIDD Scoring for Dysmenorrhea), individuals who have no history of past gynecological surgeries, and those who have no contraceptive changes or change in a regimen of other drugs which disturb the ovulation cycle within the last six months nor given birth within the last nine months.

The participants within the project will be aware of this offering through public outreach and informational postings at a location gynecology office. The health care

setting takes place in a Twin Cities clinic, accessible to all community members. The project benefits young women suffering from primary dysmenorrhea and all young women in the future who search for complementary and integrative treatments to reduce pain associated with primary dysmenorrhea.

### **Essentials of Doctoral Education for Advanced Nursing Practice**

This scholarly project implements the Essentials of Doctoral Education for Advanced Nursing Practice, including the Doctor of Nursing Practice (DNP) Essentials II, IV, VI, and VII (AACN, 2021). This project applies DNP Essential II, Person- Center Care, by focusing upon the holistic care of an individual while coordinating self-care management to perform acupuncture to a population of women to improve their health. DNP Essential IV, Scholarship for Nursing Discipline, is achieved by synthesizing research and applying it to nursing practice. DNP Essential VI, Interprofessional Partnerships, involves collaboration with professionals who interact with caregivers in community and support group settings. Lastly, by reducing severity of primary dysmenorrhea with the utilization of acupuncture, this scholarly project utilizes DNP Essential VII, Systems- Based Practice, by implementing techniques to reduce pain, reduce unnecessary use of medications and drug dependence, and reduce medical costs.

In conclusion, with primary dysmenorrhea being the most common gynecologic complaint among adolescent and adult females worldwide, further safe treatment options must be made available to those impacted, including complementary and integrative techniques such as acupuncture. By utilizing this complementary treatment, women may be able to reduce unnecessary medication use, drug dependence, and create a cost-effective way of treating this illness. Chapter 2 will examine literature surrounding the

utilization of acupressure in treatment of primary dysmenorrhea by examining vital concepts including population- primary dysmenorrhea, acupressure as a complementary and integrative treatment, acupressure point selection, dysmenorrhea pain reduction, and Jean Watson's concept of transpersonal caring.

## Chapter Two: Literature Review

With dysmenorrhea being one of the most common complaints amongst adolescent and mature women, many treatment options have been utilized to reduce the symptoms. Treatments of primary dysmenorrhea in the United States have gone through shifts over the years. Frequently, women would be treated for their symptoms brought forth by primary dysmenorrhea with medication management such as non-steroidal anti-inflammatory drugs and oral contraceptives (Sharghi et al., 2019). However, routine medication use brings on complications, and therefore, complementary and integrative techniques such as acupuncture have been utilized and studied (Jun et al., 2007). This chapter of the scholarly project will focus upon a literature review that supports the utilization of acupuncture as a method to reduce pain secondary to primary dysmenorrhea. The literature reviewed in this chapter has revealed vital concepts regarding utilizing acupuncture in women suffering from primary dysmenorrhea. These concepts include primary dysmenorrhea, acupuncture as a complementary and integrative treatment, acupuncture point selection, dysmenorrhea pain reduction, and Jean Watson's concept of transpersonal caring. By identifying literature that supports the utilization of acupuncture, this scholarly project will gain further support for implementation.

When working toward the implementation of an intervention, it is vital to review the available literature to create an evidence-based platform for implementation. Valid and high-quality research articles related to the utilization of acupuncture in the reduction of pain caused by primary dysmenorrhea will be reviewed. This literature review will support the DNP scholarly project and show that it is backed by proven, evidence-based science.

### **Primary Dysmenorrhea**

As this DNP scholarly project explores options to reduce pain caused by primary dysmenorrhea, this review will access literature related to the population affected and analyze the research reviewed. Primary dysmenorrhea or menstrual pain remains an essential women's health issue and has social, medical, and economic consequences for those affected. Typically, the pain is mild, but for some women, the discomfort is so severe that it can negatively affect the quality of life, leading to disruptions such as hindering daily routine activities, increasing medication use, and causing absence from school or work (Poureslami & Osati-Ashtiani, 2002). It is the leading cause of recurring short-term absenteeism in adolescent girls from school in the United States (Jiang et al., 2013). The prevalence of primary dysmenorrhea is typically highest in adolescent women but can affect all women who are of reproductive age (Jiang et al., 2013). Based on the population affected by the symptoms brought forth by primary dysmenorrhea, the types of participants included for each study were populations of women within menstrual or reproductive age (typically in the age range of 15 to 40 years old). All nine studies utilized in this literature review focused on women suffering from primary dysmenorrhea, meaning pain in the lower back/abdomen occurring just before or during menstruation, in the absence of other diseases such as endometriosis or uterine fibroids, or other reproductive illnesses (Coco, 1999).

Before diving into the treatment of primary dysmenorrhea, it is crucial to understand its prevalence and effect on women's lives. One of the qualitative analysis articles reviewed focused upon the prevalence and impact of primary dysmenorrhea in women. This article utilized a cross-sectional design study to assess 1,000 healthy



females aged 11-28 years old on the prevalence and severity of primary dysmenorrhea (Omidvar et al., 2015). The study revealed a prevalence of 70.2% within the examined population of females. According to the study, most subjects experienced pain for 1-2 days, 23.2% experienced pain for 2-3 days. Of the females studied, a small proportion of girls sought pharmacological management (25.5%), and 83.2% depended on non-pharmacological methods (Omidvar et al., 2015). In that same qualitative study, of those females experiencing pain, the average days absent from work or school was 1-2 days per month (Omidvar et al., 2015). This information ties directly into an additional qualitative study chosen for this literature review. A review by Sharghi et al (2019) of 17 research papers was conducted to investigate and offer an updated perspective on the treatments of dysmenorrhea, focusing upon complementary medicines, drug therapies, acupuncture, and acupressure. This review concluded that upon study, dysmenorrhea was the cause of one to three percent of cases of absenteeism at school and work, which translates into a loss of about 600 million hours a year and the equivalent to two billion dollars in the United States. This data identifies the importance of non-pharmacological techniques, such as acupressure, to treat pain caused by primary dysmenorrhea.

Of the five experimental research study manuscripts reviewed, all included inclusion criteria of those who suffer from primary dysmenorrhea with the severity of mild to severe (as determined by a variety of pain scales utilized), had not used oral contraception pill or an intrauterine device six months before participation in the study, those who had not undergone prior reproductive or uterine surgeries, and did not experience a stressful event in the last six months (Bazarganipour et al., 2017; Chen et al., 2015; Gharloghi et al., 2012; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010).

After analyzing literature related to the population affected and prevalence of primary dysmenorrhea, it is revealed that a multitude of treatment options should be available, including complementary and integrative options.

### **Acupressure as a Complementary and Integrative Treatment**

Generally, the typical treatment options chosen for primary dysmenorrhea include the use of nonsteroidal anti-inflammatory drugs and oral contraceptives. While those medications may provide immediate pain relief, their routine use brings forth possible adverse reactions, drug dependence, unnecessary use of reproductive agents, and unnecessary medical expenses (Gharloghi et al., 2012). With the increasing need to reduce medication use, one complementary and integrative treatment option for treating primary dysmenorrhea is using traditional Chinese medicine, such as acupressure which is free from such adverse effects (Wong et al., 2010).

Acupressure is an alternative form of acupuncture in which pressure is applied to the same acupressure points or energy points and channels that are utilized in acupuncture. Traditional Chinese philosophy reveals that certain channels in the human body, referred to as Qi, regulates the flow of energy, and it is the unbalancing Qi that results in disease (Yu et al., 2015). Acupressure is believed to open the channels and balance the energy, furthermore, restoring healing to the human body (Gharloghi et al., 2012). Acupoint stimulation in Chinese medicine has been examined in experimental studies and has been described as effective in managing primary dysmenorrhea (Bazarganipour et al., 2017).

Complementary and integrative treatments such as acupressure are increasingly offered as part of holistic nursing care. Considering the high prevalence of young women

affected by primary dysmenorrhea and its adverse effects on their quality of life, it is vital to reduce this problem by promoting health and self-care in primary care. Acupressure may provide a means to improve women's dysmenorrhea, improve their self-care and overall well-being (Bazarganipour et al., 2017). This background of acupressure as a complementary and integrative treatment brought forth by the literature review adds further support to the utilization of acupressure in the presence of primary dysmenorrhea.

### **Acupressure Point Selection**

The efficacy of utilizing acupressure in reducing primary dysmenorrhea varies upon the acupressure point, or acupoint, that is used. Traditional Chinese medicine practitioners believe the human body to have more than 2,000 acupoints connected by pathways throughout the human body. Given the varying acupoints utilized in acupressure, the acupoints utilized for each study varied among the literature reviewed in this scholarly project. Of the literature reviewed, seven article reviews included varying acupoints and study sizes, yet each study concluded that the utilization of the acupoint chosen was influential in the reduction of pain caused by primary dysmenorrhea (Bazarganipour et al., 2017; Chen et al., 2015; Gharloghi et al., 2012; Lin et al., 2010; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010; Yu et al., 2015). Yu et al. (2015) completed an investigation of modern literature to discover specific acupoints in different body parts used for treating primary dysmenorrhea. The article revealed that the most frequently used acupoint in treating primary dysmenorrhea was the *Sanyinjiao* (SP6) (Yu et al., 2015).

Four of the articles that were analyzed in this literature review focused upon the practice of acupressure at the *Sanyinjiao* acupoint or Spleen 6 (SP6) for the reduction of

pain caused by primary dysmenorrhea (Chen et al., 2015; Gharloghi et al., 2012; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010). The *Sanyinjiao* point is one of many points used in acupuncture, particularly for gynecologic, genitourinary, and digestive disorders, as well as dystocia and alleviating labor pain (Gharloghi et al., 2012). The *Sanyinjiao* acupoint is located on the medial lower portion of the leg, three thumbs breadth above the prominence of the ankle bone, in a depression close to the medial crest of the tibia (Chen et al., 2015). Within the four studies (Chen et al., 2015; Gharloghi et al., 2012; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010), the *Sanyinjiao* acupoint was utilized by the participants own doing or by a provider during the time of menstruation.

Rather than utilizing the *Sanyinjiao* point, Bazarganipour et al. (2017) placed their participants into three experimental groups, utilizing the LIV3, LI4 acupuncture points, and a placebo point while evaluating simple acupuncture utilization in women with primary dysmenorrhea. The LIV3 point (or third hepatic acupoint) is located on the dorsum of the foot in a depression distal to the junctions of the first and second metatarsal bones, while the LI4 point is located at the dorsal surface of the hand between the thumb and the index finger, at the middle of the second metacarpus bone (Bazarganipour et al., 2017). While many acupuncture points will affect the severity of discomfort secondary to primary dysmenorrhea, a literature review can identify the best selection of acupoints to utilize.

### **Dysmenorrhea Pain Reduction**

The meaning of healing can vary from person to person, but typically “to heal” can be taken as being free from injury or disease. The literature review of this scholarly

project focuses upon the support and promotion of healing self and relieving pain, specifically reducing the severity of primary dysmenorrhea. This portion of the literature review reveals the healing ability and reduction of pain that the complementary treatment of acupressure plays in women suffering from primary dysmenorrhea.

For further insight into the measurement of pain reduction within each of the experimental studies reviewed, various questionnaires were completed by the participants in order to track pain levels while utilizing acupressure in the treatment of primary dysmenorrhea. In addition, the researchers utilized pain scales such as the Visual Analog Scale for pain and McGill pain scale (Chen et al., 2015; Gharloghi et al., 2012; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010). For each piece of literature reviewed that utilized scales for measurement of pain reduction related to primary dysmenorrhea, the results were discussed in detail.

Within a systematic review and meta- analysis of randomized trials, Chung et al. focused upon acupoint stimulation interventions for people with primary dysmenorrhea (2012). Within the 25 research articles analyzed by Chung et al., acupoint stimulation including both invasive (acupuncture and electroacupuncture) and noninvasive (acupressure, moxibustion, and acupoint herbal patches) were examined in women suffering from menstrual pain or primary dysmenorrhea. It was concluded that from the quantitative assessment of the published data found that not only was acupoint stimulation effective for primary dysmenorrhea, but revealed that noninvasive acupoint stimulation, such as acupressure, showed the most effective (Chung et al., 2012). The results of this systemic review led to the further review of quantitative clinical trials.

Following three menstrual cycles of acupressure intervention within a study of 50 females aged 18-30 years old, Gharloghi et al. (2012) concluded that within their experimental study, acupressure at the *Sanyinjiao* point does reduce pain severity of dysmenorrhea for up to two hours following application and can be utilized to alleviate the severity of systemic symptoms. Chen et al. (2015) revealed that following the experimental group of 65 participants receiving acupressure therapy during menstruation over the period of 12 months revealed that acupressure significantly decreased menstrual distress and lower back pain in young adult women. In addition, since the study demonstrated the short-, mid-, and long-term effects of acupressure on alleviating menstrual distress by studying participants over a span of 12 months, it was confirmed that acupressure could be used as a safe and easy nonpharmacologic treatment (Chen et al., 2015). Chen et al. (2015) recommended that medical professionals be encouraged to promote this intervention among young adult women to improve their self-care during menstruation and even suggest that future research should explore acupressure interventions for other menstrual distress symptoms, including menstrual fatigue, headache, and bloating, to provide more comprehensive care for patients with menstrual distress.

Wong et al. (2010), who evaluated 40 participants with dysmenorrhea, found that after utilizing acupressure for 20 minutes at the *Sanyinjiao* acupoint during the initial intervention session and having participants self-perform the same technique twice a day from the first to third days of their menstrual cycles, found significant improvement in pain reduction. Furthermore, acupressure applied to the *Sanyinjiao* acupoint for three consecutive months was effective in relieving both the pain and menstrual distress

resulting from dysmenorrhea (Wong et al., 2010). Mirbagher-Ajorpaz et al. (2011) concluded in a randomized controlled pre and post-test design with 30 college-aged women that by receiving acupressure at the *Sanyinjiao* acupoint during menstruation cycles, acupressure alleviates dysmenorrhea symptoms immediately. This article concludes that acupressure at the *Sanyinjiao* acupoint can be an effective non-invasive nursing intervention for alleviating primary dysmenorrhea (Mirbagher-Ajorpaz et al., 2011). Additionally, Bazarganipour et al. (2017) conducted an experimental study that evaluated the acupressure therapy in the LIV3 and LI4 acupoints versus placebo point in women with primary dysmenorrhea during three menstrual cycles. It concluded that acupressure therapy effectively decreases the intensity and duration of dysmenorrhea and improves the overall quality of life.

The quantitative research utilized in this literature review noted limitations and gaps related to unblinding bias. The articles by Gharloghi et al. (2012), Chen & Chen (2004), and Bazarganipour et al. (2017) note that a potential limitation would be that participants could communicate with other participants or that participants were not blinded therefore adherence to instructions could not be controlled by the researchers. Although each of these experimental study designs vary on number of participants and interventions provided to experimental/control groups, limitations and gaps are similar. Other limitations and gaps in research that are worth noting is the varying ways of understanding information from person to person. Bazarganipour et al. (2017) recognized that individuals express pain intensity differently based on both mental and psychological differences and therefore, varying pain tolerances among people could cause differences in perspectives of pain reduction. The results from these literature reviews conclude that

the utilization of acupressure reduces the severity of pain caused by primary dysmenorrhea.

### **Transpersonal Caring**

Within Watson's Caring Science and Human Caring Theory, Watson focuses upon the concept of transpersonal caring, which resonates well with this scholarly project purpose. The Theory of Human Caring highlights that caring is a moral ideal that involves mind, body, and soul engagement with another (Chinn & Kramer, 2018). The idea of mind, body, and soul engagement brings forth the idea of an interconnectedness that ties into the treatment of acupressure. Within acupressure treatment, one experiences connection with another while utilizing the meridians and acupoints that touch, and pressure are applied at. If the flow of energy or connection within the meridians is blocked, it's thought to cause various symptoms, and that is where illness occurs. The characteristic of transpersonal caring can connect the provider and patient at the spirit level, which opens possibilities for healing and human connections (Watson, 2020).

Within the concept of transpersonal caring, Watson leads one to question the view of a human, what it means to be human and how caring is incorporated into the human experience. Transpersonal caring brings forth the concept of caring in regard to helping the person find meaning in illness, healing, suffering, and pain while helping that being gain knowledge in self-caring and self-healing. This aspect of the caring concept accentuates the importance of practicing holistic-based care for oneself, and the patients served. One aspect of holistic-based care that each concept brought forth by the literature supports is the use of acupressure.



Considering that primary dysmenorrhea is vastly prevalent within vast populations of women, the attempt to reduce this problem is an essential duty to healthcare providers. The literature shows the importance of reducing the effects that primary dysmenorrhea plays in the world's population of women. Utilizing acupuncture to lessen the severity of primary dysmenorrhea can improve the quality of life in women and could be an essential means of delivering holistic care to this population. The literature review of this scholarly project brings forth the concepts of population, acupoint selection, healing, and Jean Watson's concept of caring. The literature review also demonstrates the positive impact that the utilization of acupuncture plays on the reduction of pain caused by primary dysmenorrhea. Chapter 3 will provide the theoretical framework of Jean Watson's Theory of Human Caring that will guide and further support this scholarly project.

### Chapter Three: Theoretical Framework

Watson's Theory of Human Caring Science will function as the theoretical framework for this scholarly project. Watson's theory is grounded in nursing and its rapidly evolving nature. The theory focuses upon nursing as person-centered transpersonal caring, meaning wholeness of mind, body, and soul (Pajnkihar et al., 2017). This concept of wholeness resonates with this scholarly project and guides its integration into practice. As this scholarly project explores the utilization of acupressure in reducing the severity of primary dysmenorrhea in women, it is crucial to identify a theoretical framework that supports the practice being utilized. This chapter of the scholarly work will focus upon how Watson's theoretical framework guides this project, along with Watson's concepts that resonate with the utilization of acupressure in women suffering from primary dysmenorrhea. These concepts include transpersonal caring, human being, and health. By focusing upon Watson's Caring Science and Human Caring Theory, one will gain a deeper understanding of the scholarly work of reducing the severity of primary dysmenorrhea by utilizing acupressure.

#### **Theory of Human Caring Science**

Within Watson's Theory of Human Caring Science, she points out that caring is essential to the practice of nursing, which itself is described as a human science and art (Pajnkihar et al., 2017). As healthcare culture has been shifting to a more isolated individualistic work, it is crucial to incorporate nursing theories such as Watson's into one's practice. Instead of focusing upon only the illness or pain of the patient, Watson challenges those to view the patient as a holistic individual, health as the unity of mind, body, and soul, environment as an affective variable, and nursing's role is to develop

caring, transcendental relationships while attending to the balance of the person, as a whole (Pajnkihar et al., 2017). The focus of the moral idea that caring involves the mind, body, and soul engagement with another resonates with the interconnectedness of acupressure. The holistic practice of acupressure considers a person as a whole in terms of body, spirit, mind, and emotions to aim for optimal health and wellness. Although this scholarly project focuses upon the severity of pain experienced by those with primary dysmenorrhea, the intervention of acupressure brings forth the importance of health throughout the body as a whole. If the flow of energy or connection within the meridians is blocked, that is where illness occurs. Therefore, transpersonal caring opens the gateway of connecting the provider and patient on a healing level. Watson's theory and Chinese medical theory both set forth to correct imbalance throughout the body and produce harmony from within. Literature regarding Watson's approach demonstrates that The Human Caring Theory is widely utilized to guide nursing education, practice, and research (Wei & Watson, 2019). Concepts within Watson's theory that further guide this scholarly project are transpersonal caring, human being, and health.

### **Transpersonal Caring**

One way to ensure that caring is central to the patients' experience is to endorse Watson's Theory of Human Caring as the basis and guide for this scholarly project. Transpersonal caring is a significant aspect of the theory and involves the patient and provider coming together with their unique histories to create a genuine caring interaction (Watson, 2020). Transpersonal caring helps persons find meaning in illness, healing, suffering, pain, and existence while enabling gain self-knowledge, self-caring, and self-healing. Within the definition of transpersonal caring falls Watson's use of the terms

“curative” versus “carative” interventions. Curative factors align with the biomedical model and focus on simply curing disease and illness. Carative factors, which Watson highly utilizes, are modalities that can assist a person in reaching or maintaining optimal levels of health through the connection between people and the interventions needed medically (Pajnikihar, 2017). These concepts and theory hold crucial importance in facilitating the development of a culture that supports treating a patient as a whole and utilizing complementary medicine such as acupressure. Acupressure focuses upon the carative factors that Watson’s theory brings forth and accentuates the need for connection between the practitioner and the individual human being to reach optimal levels of health.

### **Human Being**

The human being is a central concept within Watson's theory that resonates well with this scholarly project. Watson describes the human being as a valued individual to be cared for, respected, nurtured, understood, and assisted (Watson, 2020). Within Watson's theory, it is brought forth that when caring is not present, non-caring consequences and dissatisfaction with care occur where the person feels like they are viewed simply as an object, or illness, rather than an individual or human being (Pajnikihar et al., 2017). This takes away from the human being’s worth and can become a significant threat to the human being in terms of healing. With this insight in mind, the practice of acupressure focuses upon the individual and their specific needs rather than the single act of treatment. Acupressure points are chosen based on the desired outcome of the individual and focus upon the connection within the human being's body by opening and harmonizing an obstructed meridian (Mirbagher- Ajorpaz et al., 2011). Traditional Chinese Medicine modalities, such as acupressure, supports Watson's view

that a human being should be viewed as more significant than and different from the sum of their parts but rather viewed as a whole thus improving health.

### **Health**

Health can be defined in varying ways by individuals based on personal beliefs or goals. However, Watson's theory explains health as a unity and harmony within the mind, body, and soul (Pajnkihar et al., 2017). Watson brings forth that a person becomes ill when there is disharmony with the mind, body, and soul (Watson, 2020). The belief of illness that Watson describes within her theory runs parallel with Traditional Chinese Medicine's acupuncture beliefs. The focus of health correlates to the connection and harmony within the individual's mind, body, and soul.

Watson identifies that the future of healthcare reveals that health practitioners will need to work within a framework of caring-healing relationships, healing arts, and energy models of self-healing to fully promote health to individuals (Watson, 2020). This idea of the future of healthcare promotes the importance of illness prevention along with the encouragement of self-caring practices. Furthermore, this framework points to the increased utilization of complementary and integrative interventions and holistic health perspectives within the healthcare system.

Watson's Theory of Human Caring provides support for this scholarly project. The concepts of transpersonal caring, human being, and health resonate with acupuncture intervention and express the importance that complementary and integrative medicine plays in an individual's health experience. Although various aspects of Watson's theory can be viewed as complex, the theory guides and improves the practice of healthcare providers who seek to provide satisfaction to patients with holistic care, including

reducing the severity of primary dysmenorrhea in women. The focus of providing women with pain relief by utilizing complementary and integrative interventions such as acupuncture is a crucial task for healthcare professionals to pave the way for the future of healthcare. Chapter 4 of this scholarly project will focus upon the methodology and evaluation utilized for implementation.

## Chapter Four: Methodology and Evaluation

Primary dysmenorrhea is a very common gynecologic issue among women worldwide, with a prevalence of 88 percent (Bazarganipour et al., 2017). Hence, the burden of primary dysmenorrhea is greater than any other gynecological complaint and has significant impact upon the quality of life in many women (Yu et al., 2015). Complementary and integrative interventions such as acupuncture aim to reduce the severity of pain transpired by primary dysmenorrhea while avoiding negative effects that pharmacological interventions typically bring forth. Therefore, the purpose of this scholarly project is to assess the effectiveness of acupuncture on reducing pain secondary to primary dysmenorrhea. This chapter will focus upon the methodology and evaluation of acupuncture as a method to reduce pain secondary to primary dysmenorrhea and will specifically identify the project participants, clinical setting, tools, intervention, data collection, evaluation process, results, and goals of this scholarly project.

### **Methodology**

This scholarly project includes the involvement of 14 female participants of child-bearing age, ranging from the ages of 18 to 30 years old. Each participant within the project must experience mild to severe dysmenorrhea according to the WaLIDD instrument (see Appendix B titled WaLIDD Scoring for Dysmenorrhea). Individuals who expressed interest in participating in the scholarly project were provided with the WaLIDD instrument prior to being selected as a participant. The completion of the WaLIDD instrument assisted in determining severity of dysmenorrhea and eligibility. The participants must be individuals who experience primary dysmenorrhea rather than secondary dysmenorrhea, meaning they have no known underlying pelvic disease

diagnosed or suspected. The project participants must have no history of past gynecological surgeries, have no contraceptive changes, or change in a regimen of other drugs which disturb the ovulation cycle within the last six months, nor have given birth within the last nine months from the start of the scholarly project education session date.

### **Clinical Setting**

The clinical setting for this scholarly project included a community-based, outpatient setting. To increase accessibility and convenience for the project participants, the scholarly project was implemented via zoom, or electronic conferencing, within a group setting. Due to the utilization of electronic conferencing for the educational session, each project participant must have access to an electronic device capable of accessing zoom and have access to the internet.

### **Intervention and Tools**

The zoom-based acupressure educational session was held on July 11, 2022 and July 18, 2022 to the participants who meet the criteria to take part in this scholarly project. Outreach for the program participants was performed through networking with GYN providers in community-based clinics and posting on social media platforms including Instagram and Facebook. Prior to the acupressure education session, trifold educational pamphlets were provided to each participant via email, along with information regarding the zoom session, a description of objectives for the scholarly project, and the organizers contact information. During the education session, participants were provided information on the gynecologic issue of primary dysmenorrhea along with acupressure education including techniques to be practiced reducing the severity of primary dysmenorrhea. The education session focused on teaching participants on the



correct methods of locating acupressure points to be utilized, including acupoints LI 4, SP 6, and SP 8. The participants were provided information on the specifics of the acupoints and techniques on applying pressure. The participants were instructed to apply pressure at each acupoint for 60 to 90 seconds, while utilizing relaxation breathing techniques, over the course of one menstrual cycle when experiencing discomfort. The participants then had the opportunity to utilize acupressure at those three specific acupoints whilst instructed to avoid typical treatment of dysmenorrhea pain including medication use.

### **Measures and Data Collection**

Data collection was completed by utilizing a pre- and post- intervention anonymous survey (see Appendix C titled Participant Pre- Intervention Survey & Appendix D titled Participant Post- Intervention Survey). The pre-intervention data was collected and then compared to the post- intervention survey collection. The primary objective of the scholarly project was to increase participant knowledge surrounding the utilization of acupressure in order to reduce the severity of pain related to primary dysmenorrhea. Each survey utilized included seven questions that use a number rating scale and open-ended questions. The pre- intervention survey was provided to each participant at the acupressure informational sessions available on July 11, 2022, and July 18, 2022, prior to the start of the session. The pre- intervention survey included two questions adapted from the WaLIDD scale in order to gain information related to baseline menses symptoms, including intensity of pain and number of days pain is experienced during menses. The open-ended questions allowed the organizer to gain further information on the participants typical menstrual periods prior to the intervention,

including typical treatment interventions utilized by the participant, typical cycle length, date of beginning of last menstrual period, and typical length of menstrual period.

The post- intervention survey was distributed via email 15 days following the educational session and instructed to be completed by the participant following the end of the menstrual period that acupuncture education was utilized. The post- intervention survey included both questions adapted from the WaLIDD scale in order to assess level of effectiveness of the acupuncture intervention along with a question for the participant to describe if the intervention reduced the level of menstrual pain typically experienced. Additionally, the post- intervention survey questions included questions regarding the participant's experience including what the participant found helpful with the education session, if they will continue to utilize acupuncture in the future for menstrual pain, and recommendations for improvement for the organizer.

### **Results**

With primary dysmenorrhea affecting almost half of all women worldwide with symptoms so severe that routine activities are disrupted, the utilization of complementary and integrative interventions along with scales such as the WaLIDD tool to measure effectiveness is imperative (Gharloghi et al., 2012). This scholarly project is a developmental evaluation of the effects of utilizing acupuncture for the management of pain related to primary dysmenorrhea.

The acupuncture education session consisted of 17 participants initially. Of those participants, 14 participants completed both the pre- and post- intervention survey. In order to obtain the 14 participants, the education session was offered and implemented on two separate days. The effects of acupuncture on pain management during a menstrual

cycle was assessed by calculating each self-rating question on the pre- and post-intervention survey. Overall, the results of this project did correlate with the findings of the existing literature brought forth in this project. Utilizing acupressure can reduce pain brought forth by primary dysmenorrhea.

The self-rating questions utilized to assess effects of the intervention were questions 2 and 3 which included rating intensity of pain and how many days pain was felt during a menstrual cycle. The average score for question 2 regarding intensity of pain felt during menstruation (on a scale of 0-3) prior to the acupressure intervention was 2.57. The average score for question 3 on the pre-intervention questionnaire regarding the number of days pain is felt per menstrual cycle on a scale of 0-3 (0= 0 days; 1 = 1-2 days; 2= 3-4 days; 3= >5 days) was 2 meaning on average pain was felt 3-4 days per menstrual cycle.

Following the educational sessions, the post survey was distributed to assess the effects of acupressure following the participant's menstrual period. After the incorporation of the acupressure intervention during a menstrual cycle, question 2 regarding pain intensity had an average score of 1.35, while question 3 regarding days pain was felt had an average score of 1 (1-2 days).

This analysis identifies a reduction of pain ratings for each individual participant. This demonstrates a 1.22 decrease in the average rated pain levels post intervention (see Appendix E titled Pre- and Post- Intervention Pain Rating Average). Throughout analysis, it was identified that each individual participant experienced some degree of pain reduction (see Appendix F titled Pre- & Post- Intervention Pain Levels). Along with

pain level reduction, analysis of the surveys revealed a decreased in days pain was experienced from an average of 3-4 days per cycles to 1-2 days per cycle.

Along with the quantitative data, qualitative data was assessed through open-ended questions to further understand the project participants experiences during the utilization of acupressure during a menstrual cycle. The qualitative data collected in the post intervention survey identified that acupressure assisted with reducing pain and would therefore be a great first-line option with combination of medication. Other qualitative data suggested potential improvements of the project such as offering educational session in person instead of via zoom and monitoring the effects of the intervention over more than one menstrual cycle. Furthermore, it was noted by two participants that although the educational pamphlet described the acupoints to be utilized, a video would have also been a helpful resource. Being provided this feedback from participants furthers the synthesis of this project.

Analysis of findings indicated that acupressure effectively reduced pain severity and duration in primary dysmenorrhea sufferers. While participants acknowledged the benefits, some noted that it did not fully alleviate pain, suggesting a potential role for medication in certain cases. The project highlights acupressure as a promising first-line treatment.

### **Analysis of Findings**

The findings of this scholarly project indicate that the utilization of acupressure reduces the severity of pain and number of days pain is felt during a menstrual cycle in women who experience pain related to primary dysmenorrhea group of participants. Of the 14 project participants, all participants noted decreased intensity of pain during their

menstrual cycle while utilizing acupressure and each participant noted on the post-intervention questionnaire that they would utilize acupressure in the future for pain management. Although there was a noted decrease in pain intensity from each participant, a number of participants also noted that the acupressure did not fully relieve the pain, therefore, noting the need for medication may remain for certain participants. After reflecting on pain management feedback from participants, it appears that acupressure would be potentially beneficially utilized as a first line treatment for women prior to medication use during menstruation.

Furthermore, based on the participants educational session feedback, future educational sessions may have additional benefit if offered in person. After evaluation of the anonymous post- intervention questionnaires, it is revealed that the scholarly projected was successfully implemented. The results of this project can be used and adapted for primary care providers caring for women who suffer from primary dysmenorrhea.

This scholarly project aimed to examine the effects of utilizing acupressure for the management of pain related to primary dysmenorrhea. Acupressure is a convenient, cost-effective, and safe method of integrating complementary medicine that improves pain and self- care among large populations of women (Chen et al., 2015). In previous studies evaluating the effectiveness of acupressure in women suffering from primary dysmenorrhea, Wong et al (2010), reported that acupressure has a long-term and accumulative effect in relieving primary dysmenorrhea. As there has been an increasing interest in application of complementary and integrative approaches, it is therefore crucial to obtain initial clinical evaluation on the effectiveness of acupressure as a non-

pharmacological and integrative intervention to adopt for the treatment of primary dysmenorrhea pain.

This scholarly project implemented acupressure during one menstrual period in a group of 14 women suffering from mild to severe dysmenorrhea. The findings of this scholarly project reveal that acupressure performed at acupoints LI 4, SP 6, and SP 8 during a menstrual period may provide some relief of menstrual pain associated with primary dysmenorrhea. Given these effects of acupressure on women with primary dysmenorrhea, it can be used as a convenient self-care method of pain reduction, free of cost and complications that long-term medication use brings forth. In addition, the results of this scholarly project can be used to adapt other similar research to promote holistic complementary and integrative techniques of treating pain. Chapter 5 will focus upon the scholarly project conclusion, significance, and implications for the utilization of acupressure for women experiencing moderate to severe primary dysmenorrhea.

### Chapter Five: Conclusions, Significance, and Implications for Future

Primary dysmenorrhea is a highly prevalent and often inadequately treated complaint among both young and adult females (Itani et al., 2022). Typical treatment includes utilizing pharmacological options which bring forth possible adverse reactions, drug dependence, unnecessary use of reproductive agents, and unnecessary medical expenses (Gharloghi et al., 2012). Women who experience severe dysmenorrhea can practice complementary and integrative treatment options such as acupuncture to aid in relief of pain. The utilization of acupuncture as a form of pain management for severe dysmenorrhea can be adapted by advanced practice nurses to promote a safe and effective way to alleviate pain. Chapter five will discuss the Doctor of Nursing Practice Essentials and NONPF Core Competencies related to the scholarly project, critical reflections, and implications of the project for future use in clinical practice.

#### **Doctor of Nursing Practice Essentials and NONPF Competencies**

This scholarly project addresses the American Association of Colleges of Nursing (AACN) Doctor of Nursing Practice Essentials II, IV, VI, and VII (AACN, 2021). DNP Essential II, Person- Centered Care, emphasizes care as the core purpose of the nursing discipline. Foundational to person-centered care is understanding of diversity, differences, values, resources, and determinants of health that are unique to the individual. The project addressed Essential II by exploring Watson's Theory of Human Caring as the basis and guide for this scholarly project. Transpersonal caring is a significant aspect of the theory and involves the patient and provider coming together with their unique histories to create a genuine caring interaction (Watson, 2020). By understanding person- centered care, one can emphasize the importance of delivery of

care based on the individual's preferences and lived experiences. Acupressure focuses upon the caring factors that Watson's theory brings forth and accentuates the need for connection between the practitioner and the individual human being to reach optimal levels of health. DNP Essential II also focuses upon the ability to promote self-care management by employing educational strategies to foster self-care practices into population health. This scholarly project strongly supports the emphasis on promoting self-care management, by teaching community members how to utilize acupressure as a means of self-care to advance wellness.

DNP Essential IV, Scholarship for Nursing Discipline, involves integration of best evidence into nursing practice. This scholarly project translates and integrates research into clinical practice by utilizing literature reviewed ways of decreasing the severity of primary dysmenorrhea. Not only does this scholarly project support DNP Essential IV by engaging in scholarship to advance health, but it also focused on applying the theoretical framework on Jean Watson's model to practice and evaluates outcomes of new practices based on evidence. The literature reviewed during this scholarly project demonstrated that the utilization of acupressure may reduce the severity of primary dysmenorrhea. The scholarly project also utilizes DNP Essential VI, Interprofessional Partnerships, which focuses upon intentional collaboration across professions in order to improve patient care and enhance population health outcomes.

DNP Essential VII, Systems Based Practice, focuses upon utilizing evidence-based methodologies to lead innovative solutions to address complex health issues and ensure optimal care. Essential VII also explores incorporating considerations of cost-effectiveness of care. The project addressed this by exploring acupressure as an



intervention to reduce severity of pain, but also minimize the need for pharmacological intervention which frequently increases healthcare costs. Interventions in clinical practice such as acupressure help to reduce the need for medication and lower the incidence of drug dependence, adverse reactions, unnecessary use of reproductive agents, and other unnecessary medical expenses.

The National Organization of Nurse Practitioner Faculty (NONPF) identify competencies that are essential to the practice of nurse practitioners, regardless of population focus (NONPF, 2022). This scholarly project addresses NONPF competencies including scientific foundation, leadership, quality, and practice inquiry. The scientific foundation competencies focus on the ability to analyze data and evidence for improving advanced nursing, along with translating research and other forms of knowledge to improve practice processes and outcomes. The scholarly project explored and analyzed literature to understand the prevalence, impact, and most frequently utilized treatment options for primary dysmenorrhea. Literature reviews identified that there may be a reduced severity of pain with primary dysmenorrhea with the utilization of acupressure. Therefore, practice approaches were created in this scholarly project to implement acupressure in a community setting.

The NONPF leadership competencies that were brought forth in this scholarly project were the ability to provide leadership in order to foster collaboration to improve health care. Throughout this scholarly work, collaboration with patient, community members, and integrated health care teams were utilized. An additional leadership competency that was prevalent during this scholarly project was the act of advocating for improved quality and cost-effective health care by demonstrating a complementary pain

management option that reduces pain and is available for all individuals. By evaluating the relationship of pain management options related to access, cost, and safety, the NONFP quality competencies are also a key element within the scholarly project.

The final NONFP competency that was incorporated into this scholarly project was practice inquiry by utilizing past knowledge from clinical practice to improve practice and future patient outcomes. The scholarly project also continually applied clinical investigative knowledge to improve health outcomes by implementing acupuncture in a population of women who experienced severe pain secondary to primary dysmenorrhea. The NONPF competencies were a resource that assisted in guiding the planning and implementation process of this scholarly project, along with guidance for future implementation.

### **Critical Reflection**

Primary dysmenorrhea is a common gynecologic complaint affecting large populations of women worldwide (Coco, 1999). With pharmacological treatment generating unnecessary medication use, drug dependence, adverse reactions from medication use, and unnecessary medical expenses, additional interventions including complementary and integrative approaches have been explored. The literature included in this scholarly project concluded that acupuncture can be used as an intervention to reduce the severity of primary dysmenorrhea. The results of the scholarly project further support the utilization of acupuncture as a form of pain management during menstrual periods. Therefore, integrating acupuncture education into primary care clinics is a way to promote a cost-effective and self-care promoting intervention. The educational pamphlet

and sessions utilized in this scholarly project can be adapted into resources provided to patients in healthcare settings.

By performing acupressure education in an in-person setting, the practitioner can better evaluate the understanding of the patient and the need for further assistance. While the zoom-based and electronic education interventions were successful during this scholarly project, feedback from project participants emphasize an interest in having in-person resources made available. During this scholarly project, the acupoints utilized were not monitored to there is no guarantee that the correct acupoint sites were utilized. Other feedback from patients brings forth the option of utilizing acupressure as a first-line treatment and adding medication concurrently if needed for unrelieved pain.

By utilizing a complementary approach to treating pain, integrative and self-care practices were encouraged which could in turn give the participants a better understanding of what health maintenance means to them. This scholarly project can be used as a guide to future implementation of acupressure and utilized in primary care setting by clinicians.

### **Implications for Advancing Nursing Practice**

Primary care settings should incorporate complementary and integrative practices, such as acupressure, for the management of primary dysmenorrhea. As identified, as one of the most common gynecological complaints impacting women, primary dysmenorrhea is an illness that deserves attention and more adequate treatment options. Advanced practice nurse practitioners must be educated on the approaches, benefits, and utilization of acupressure as a means of managing or reducing pain caused by menstruation. By emphasizing the utilization of complementary and integrative practices, practitioners are

creating a holistic and patient- focused environment. If advanced practice providers lead with acupuncture as an initial treatment and prevention option for primary dysmenorrhea, these practitioners would be playing a crucial role in reducing medication dependence and unnecessary prescribing. By offering acupuncture as a means of reducing the severity of primary dysmenorrhea, advanced practice providers are providing their patients a safe and effective alternative intervention. This scholarly project has revealed the potential that complementary and integrative options bring to modern day medicine. If we continue to explore complementary and integrative modalities, such as acupuncture, providers are advocating for individualized treatment. This project has lifted the importance of partnership between the patient and the practitioner in the healing process and the utilization of a variety of treatment options assisting in fostering that partnership.

This scholarly project implemented a focus on acupuncture as a complementary and integrative approach to reducing severity of primary dysmenorrhea. Acupuncture has not only been shown to reduce the level of pain women experience during menstrual periods, but it has the potential of reducing healthcare costs, unnecessary prescribing, medication dependence, and opens a door for the population to utilize self-care practices. The project results show that by utilizing acupuncture at three specific acupoints, severity of pain is reduced. Therefore, the time is now to begin further implementation of complementary and integrative approaches such as acupuncture and advanced practice nurses have the skills to lead with implementation.

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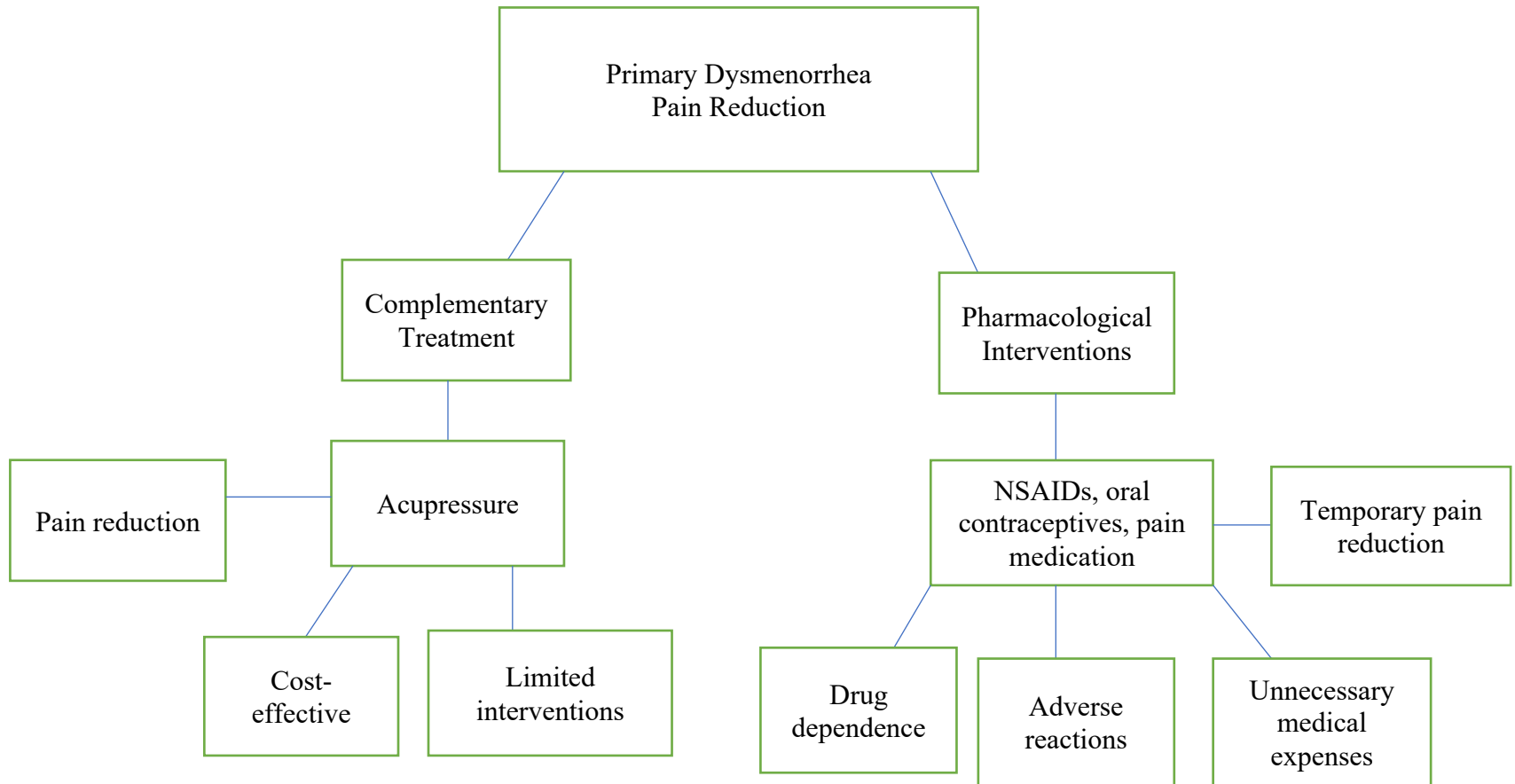
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**Appendix A**

Concept Map



## Appendix B

### WaLIDD Scoring for Dysmenorrhea

**Table 1** WaLIDD score variables

<b>Working ability</b>	<b>Location</b>	<b>Intensity (Wong–Baker)</b>	<b>Days of pain</b>
0: None	0: None	0: Does not hurt	0: 0
1: Almost never	1: 1 site	1: Hurts a little bit	1: 1–2
2: Almost always	2: 2–3 sites	2: Hurts a little more – hurts even more	2: 3–4
3: Always	3: 4 sites	3: Hurts a whole lot – hurts worst	3: $\geq 5$

**Notes:** Score: 0 without dysmenorrhea, 1–4 mild dysmenorrhea, 5–7 moderate dysmenorrhea, 8–12 severe dysmenorrhea. Wong–Baker scale was reclassified to adjust a four-level scale.

**Abbreviation:** WaLIDD, working ability, location, intensity, days of pain, dysmenorrhea.

[Photograph of WaLIDD scale utilized for primary dysmenorrhea severity scoring]

**Appendix C**

## Participant Pre- Intervention Survey

1. Do you experience pain with menstrual periods?

YES

NO

2. On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods

(0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)

0

1

2

3

3. On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?

(0= 0; 1 = 1-2; 2= 3-4; 3= >5)

0

1

2

3

4. How do you typically treat your menstrual pain?

5. What is your typical menstrual cycle length (in days)?

6. What is your typical length of menstrual period?

Created by: Tatum Britton

**Appendix D**

## Participant Post- Intervention Survey

1. Do you experience pain with menstrual periods?

YES

NO

2. On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods

(0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)

0

1

2

3

3. On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?

(0= 0; 1 = 1-2; 2= 3-4; 3= >5)

0

1

2

3

4. Has acupuncture reduced the level of menstrual pain typically experienced?

5. What did you find helpful with the education sessions on acupuncture?

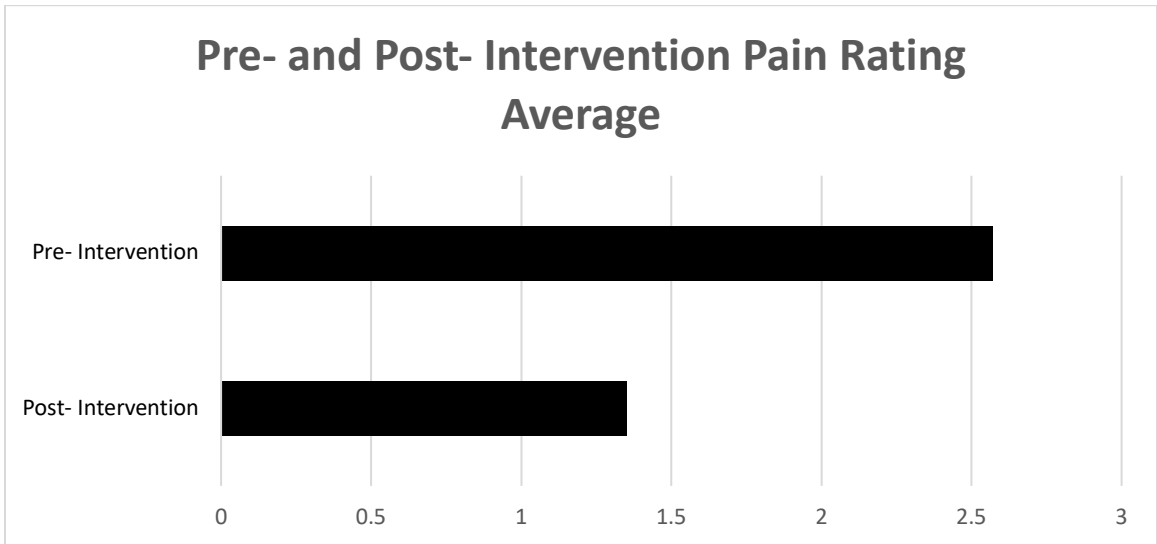
6. Will you continue to use acupuncture to reduce menstrual pain?

7. Do you have any recommendations for improvement regarding the teachings of acupuncture?

Created by: Tatum Britton

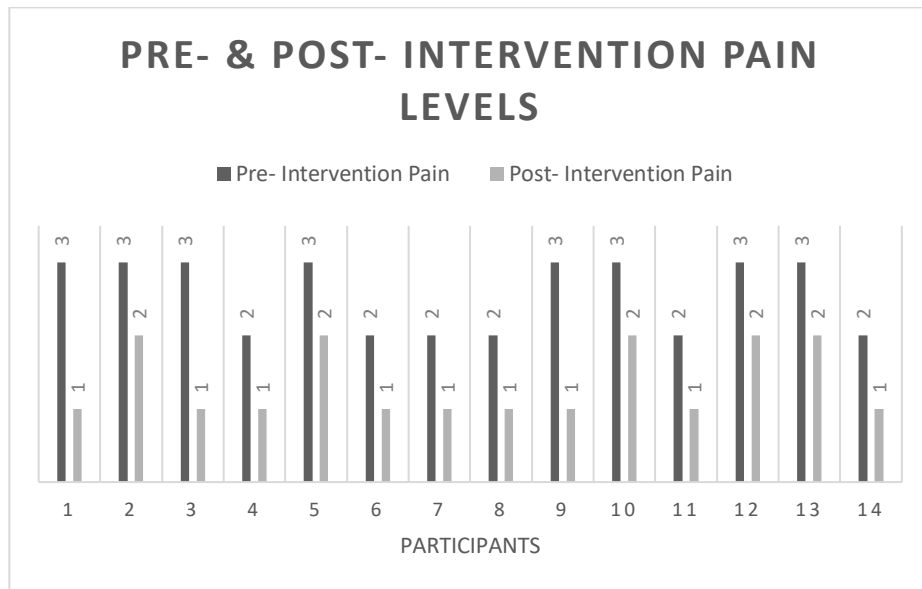
**Appendix E**

Graph of Pre- & Post- Intervention Average Pain Rating



**Appendix F**

Graph of Pre- & Post- Intervention Pain Levels



## Appendix G

### Doctoral Presentation

# Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure

Tatum Britton, DNP- FNP Student, RN- BSN

*Submitted in partial fulfillment of the requirement for the degree of Doctor of  
Nursing Practice  
Augsburg University*

## Background

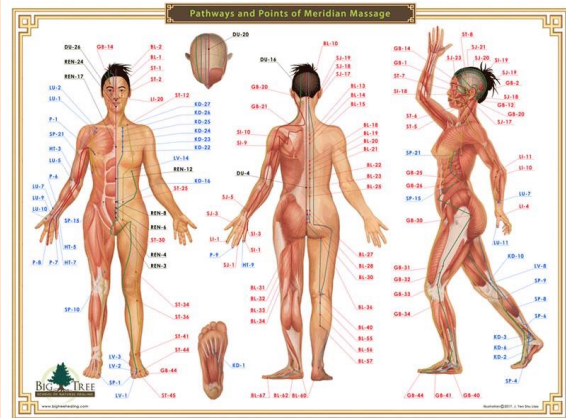
- Primary dysmenorrhea is a common gynecological condition associated with painful cramps during menstruation (Coco, 1999)
  - Absence of other diseases (PCOS, endometriosis, etc.)
  - Affects large populations of women; prevalence of 88% worldwide (Bazarganipour et al., 2017)
  - Cyclical pain that occurs in the lower abdomen or pelvis, occurring at onset of menstrual flow and last 24-48 hours (Omidvar et al., 2015)
  - Negatively affects quality of life
- Typical treatment: NSAIDS, Tylenol and/or hormonal contraceptives (Smith & Kaunitz, 2023)
  - Brings forth overuse of medications, unnecessary use of oral contraceptives, dependence, adverse reactions, increased medical expenses

### Impacts of Primary Dysmenorrhea

- Omidvar et al. (2015) *Primary Dysmenorrhea and Menstrual Symptoms in Female Students: Prevalence, Impact and Management*
  - Qualitative analysis article; utilized a cross-sectional design study
  - Assessed 1,00 healthy females aged 11- 28 years old
  - Revealed a prevalence of 70.2% within examine females
  - Of those experiencing pain, average days absent from work or school was 1-2 days/month
- Sharghi et al. (2019) *An update and systematic review on the treatment of primary dysmenorrhea*
  - Investigation of 17 research papers
  - Revealed dysmenorrhea was the cause of 1-3% of absenteeism at school and work
  - Loss of 600 million hours/ year; 2 billion dollars lost in the United States

### Acupressure

- Alternative form of acupuncture, stemming from traditional Chinese medicine
- Utilizes physical pressure to the same energy points (acupoints) and channels used in acupuncture (Yu et al., 2015)
- Provides a non-invasive and cost-free way to manage pain independently (Chen & Chen, 2004)



(Photo: <https://www.bigtreehealing.com/acupressure-chart/>)

## Significance of Scholarly Project

- Purpose:
  - The purpose of this scholarly project is to examine the effects of utilizing acupressure for the management of pain related to primary dysmenorrhea.
- Clinical Question:
  - The clinical question that guided this scholarly project is: In women experiencing primary dysmenorrhea, will the utilization of acupressure reduce the severity of pain?

## Literature Review

- Acupressure Point Selection
  - **SP6 & SP8** (Chen et al., 2015; Gharloghi et al., 2012; Mirbagher-Ajorpaz et al., 2011; Wong et al., 2010; Yu et al., 2015 )
  - **LI4** (Bazarganipour et al., 2017)
- Dysmenorrhea Pain Reduction
  - Gharloghi et al. (2012)
  - Chen et al. (2015)
  - Wong et al. (2010)
  - Mirbagher- Ajorpaz et al. (2011)
  - Bazarganipour et al. (2017)
  - Chen & Chen (2004)





## Theoretical Framework

### Jean Watson's Human Caring Theory (Watson, 2020)

- Caring is a moral idea that involves mind, body, and soul engagement with one another (Chinn & Kramer, 2018)
- Transpersonal caring helps persons find meaning in illness, healing, suffering, pain, and existence while enabling self-knowledge, self-caring, and self-healing.
- Practicing holistic- based care



(Photo: <https://www.stanfordmedicine.org>)

## Implementation

### Project Participants

- 14 female participants

### Clinical Setting

- Implemented via electronic conferencing within a group setting

### Tools

- WaLIDD scoring instrument
- Acupressure trifold educational pamphlet
- Pre- and Post- Intervention Survey

### Intervention

- Participants were instructed to utilize acupoints LI4, SP6, and SP8 during one menstrual cycle
  - Instructed to apply pressure at each acupoint for 60 to 90 second intervals over the course of one menstrual cycle when experiencing discomfort
  - Instructed to avoid typical treatment of dysmenorrhea pain including medication use

## WaLIDD Scoring Instrument for Dysmenorrhea

**Table 1** WaLIDD score variables

Working ability	Location	Intensity (Wong-Baker)	Days of pain
0: None	0: None	0: Does not hurt	0: 0
1: Almost never	1: 1 site	1: Hurts a little bit	1: 1-2
2: Almost always	2: 2-3 sites	2: Hurts a little more – hurts even more	2: 3-4
3: Always	3: 4 sites	3: Hurts a whole lot – hurts worst	3: ≥5

**Notes:** Score: 0 without dysmenorrhea, 1-4 mild dysmenorrhea, 5-7 moderate dysmenorrhea, 8-12 severe dysmenorrhea. Wong-Baker scale was reclassified to adjust a four-level scale.

**Abbreviation:** WaLIDD, working ability, location, intensity, days of pain, dysmenorrhea.

Teherán, A., Píneros, L. G., Pulido, F., & Mejía Guatibonza, M. C. (2018). WALIDD score, a new tool to diagnose dysmenorrhea and predict medical leave in university students. *International Journal of Women's Health*. <https://doi.org/10.2147/ijwh.s143510>

## Brochure

### What is Acupressure?

Acupressure is a type of complementary and integrative medicine technique that comes from traditional Chinese medicine practice. Acupressure is an alternative form of acupuncture and utilizes the same points on the body to reduce pain and illness.

### How does acupressure work?

Acupressure works by placing pressure on specific points on the body (called acupoints) to regulate the flow of qi (or energy) throughout the meridians (energy highways flowing to each region) of the body.

### Purpose of Acupressure

The integrative practice of acupressure has been increasingly offered as a part of holistic care and has been known to reduce levels of pain, including menstrual discomfort in women. Acupressure can be performed by a certified individual or by oneself. By utilizing acupressure for pain relief, you are promoting health and self-care while avoiding possible adverse reactions that medications bring forth including dependence, overdose, and unnecessary medical expenses.

### About the Author

Tatum Britton is a Registered Nurse and student of Advanced Practice Nursing at Augsburg University. Tatum has always had a passion for women's health and looks forward to assisting women with gynecologic concerns in a safe and holistic way. Tatum has completed a certification in acupressure training.

### Contact Tatum with questions

Tatum Britton, RN, BSN, DNP, FNP student  
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Email: [tbritton@augur.edu](mailto:tbritton@augur.edu)



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### How to perform acupressure on self:

Use your thumb's/fingers to massage the area and hold firm (but comfortable) pressure. Apply this pressure for anywhere from 3 deep breaths or 60 to 90 seconds while deep breathing through the nose and out through the mouth. Repeat as necessary.

### Acupressure for menstrual pain:

There are many acupoints that assist in reducing pain caused by menstruation. Here are a few to focus upon to reduce cramping:

#### Large Intestine 4 (LI4):

Located in the webbing between your thumb and pointer finger. Find a tender point on the webbing between the thumb and pointer. Press these points on each hand firmly for 60 to 90 second intervals.



### Preforming Acupressure for Primary Dysmenorrhea

Tatum Britton RN, BSN, DNP, FNP Student

#### Spleen 8 (SP8):

Located along the tender channel on the inner aspect of the tibia.

Find the knee crease on the inner leg and trace your finger down the tibia bone about 5-7 inches until you find a tender spot. This spot should be a muscle/lendon-like area next to a bone. Rub or hold in 60 to 90 second intervals on both legs.



#### Spleen 6 (SP6):

Located along the inner channel aspect of the tibia.

Find the inner ankle bone and use four finger width to find a dip in the fleshy part of the leg just behind the bone. Rub or hold in 60 to 90 second intervals on both legs.



*“Many women who suffer from pain during menstruation turn to medications. Not only is acupressure free, but it reduces side effects of long-term medication use.” (Charloughi et al., 2012)*

### References

Charloughi, S., Torakabani, S., Akbarzadeh, A. R., Hosseini, R. (2012) The effects of acupressure on severity of primary dysmenorrhea. *Pain Practice and Advances*, 137. <https://doi.org/10.2147/ppa.s27127>

## Data Collection

**Participant Pre- Intervention Survey**

- Do you experience pain with menstrual periods?  
 YES                      NO
- On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods  
 (0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)  
 0            1            2            3
- On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?  
 (0= 0; 1= 1-2; 2= 3-4; 3= >5)  
 0            1            2            3
- How do you typically treat your menstrual pain?
- What is your typical menstrual cycle length (in days)?
- What is your typical length of menstrual period?

**Participant Post- Intervention Survey**

- Do you experience pain with menstrual periods?  
 YES                      NO
- On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods  
 (0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)  
 0            1            2            3
- On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?  
 (0= 0; 1= 1-2; 2= 3-4; 3= >5)  
 0            1            2            3
- Has acupuncture reduced the level of menstrual pain typically experienced?
- What did you find helpful with the education sessions on acupuncture?
- Will you continue to use acupuncture to reduce menstrual pain?
- Do you have any recommendations for improvement regarding the teachings of acupuncture?

## Analysis/ Results

Figure 1

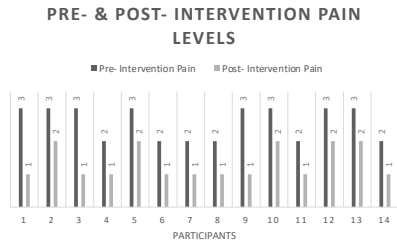
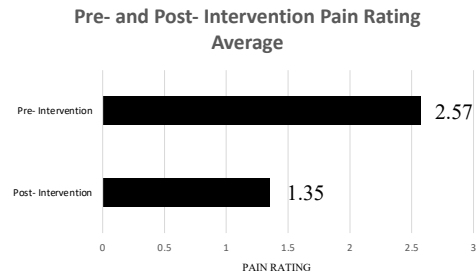


Figure 2



**WaLIDD pain scoring**

- 0= Does not hurt
- 1= Hurts a little bit
- 2= Hurts a little more
- 3= Hurts a whole lot

## Qualitative Results

- “I will definitely continue using acupressure for pain management in the future.”
- “I would have liked to practice acupressure for more than one menstrual cycle.”
- “Acupressure helped to reduce pain levels, but it would be a good first line option with combination of medication if needed.”

## Reflections

- Primary dysmenorrhea is the most common gynecologic complaint affecting large populations of women worldwide
- Pharmacological treatment can generate medication overuse, unnecessary use of hormonal contraceptives, adverse reactions, drug dependence, and increased medical expenses
- Literature reveals that acupressure can be used as an intervention to reduce the severity of primary dysmenorrhea
- The results of this scholarly project further support the utilization of acupressure as a form of pain management during menstrual periods

## ACCN Essentials and NONPF Competencies

### AACN Essentials (AACN, 2021)

- Essential II Person- Centered Care
- Essential IV Scholarship of Nursing
- Essential VI Interprofessional Partnerships
- Essential VII Systems Based Practice

### NONPF Competencies (NONPF, 2022)

- Leadership Competencies
- Quality Competencies
- Practice Inquiry Competencies

## Implications for Nursing Practice

- Advanced practice nurse practitioners must be educated on the approaches, benefits, and utilization of acupressure as a means of managing or reducing pain caused by menstruation
  - Creating a holistic and patient- focused environment
  - Playing a crucial role in reducing medication dependence and unnecessary prescribing
  - Providing a safe and effective alternative intervention



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Questions



**Appendix H**

Publication Ready Manuscript

**Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure**

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I have no conflicts of interest to disclose.

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**Abstract**

Primary dysmenorrhea, a prevalent gynecological issue characterized by menstrual cramps in the absence of underlying diseases, is often inadequately addressed despite its widespread impact on women globally. This scholarly project explores the efficacy of acupressure as a non-pharmacological intervention for primary dysmenorrhea. Fourteen participants engaged in an acupressure education program, targeting acupoints LI 4, SP 6, and SP 8 during one menstrual period. Utilizing pre- and post-intervention questionnaires, the study revealed a noteworthy reduction in pain levels following acupressure. The research sheds light on the limitations of conventional treatments, such as unnecessary prescribing, adverse reactions from medication use, and increased expenses, emphasizing the potential of non-pharmacological alternatives. Nurse practitioners can benefit from incorporating integrative modalities like acupressure into their treatment approaches, as underscored by this study. The findings are applicable to women experiencing primary dysmenorrhea, emphasizing the advantages of complementary and alternative health modalities.

*Keywords:* Primary dysmenorrhea, pain, acupressure, health

## **Reducing Severity of Primary Dysmenorrhea with the Utilization of Acupressure**

### **Topic & Purpose**

Primary dysmenorrhea is a common gynecological condition associated with painful cramps during menstruation in the absence of other diseases (Coco, 1999). It is a prevalent issue among adolescent and mature women and poses significant challenges to their well-being and daily functioning. Historically treated with medication, including nonsteroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives, the goal of treatment is shifting as these medications may provide temporary pain relief for women, though the regular use of these medications brings forth issues such as medication dependence, adverse reactions, and unnecessary medical expenses (Jun et al., 2007). Therefore, the focus of non-pharmacological methods to alleviate symptoms is pertinent.

Research reveals a growing interest in complementary and integrative approaches for primary dysmenorrhea. Acupressure, an integrative technique rooted in traditional Chinese medicine, emerges as a promising avenue for managing pain secondary to primary dysmenorrhea. As an alternative form of acupuncture, it utilizes physical pressure to the same energy points and channels used in acupuncture. Experimental studies consistently highlight the potential of acupressure in reducing pain severity and improving overall well-being (Bazarganipour et al., 2017). By using acupressure in women, we can provide a non-invasive and cost-free way to manage dysmenorrhea independently, thereby reducing cost and medication use (Chen & Chen, 2004).

Acupressure emerges as a valuable non-pharmacological intervention for primary dysmenorrhea, offering a holistic approach to symptom management. With its efficacy demonstrated across various studies, acupressure provides a promising avenue for

improving women's well-being and reducing the societal and economic burdens associated with this common women's health issue (Wong et al., 2010). As the medical landscape continues to evolve, integrating complementary and integrative techniques like acupressure into primary care becomes imperative for promoting women's health and self-care.

### **Project Design**

This project aimed to evaluate the effectiveness of acupressure in reducing pain secondary to primary dysmenorrhea. Fourteen female participants, aged 18 to 30, experiencing mild to severe dysmenorrhea, were involved. The WaLIDD instrument (see Appendix A titled WaLIDD Scoring for Dysmenorrhea) determined eligibility, excluding those with secondary dysmenorrhea or recent gynecological surgeries. The project utilized a community-based outpatient setting, employing Zoom for electronic conferencing to enhance accessibility. Recruitment occurred through informational handouts being posted at a local gynecology office and social media platforms.

Educational sessions took place on two separate occasions, providing information on primary dysmenorrhea and acupressure techniques, specifically targeting acupoints LI 4, SP 6, and SP 8. Educational pamphlets were emailed to participants before the sessions. During the sessions, participants learned correct acupressure methods, with instructions to apply pressure for 60 to 90 seconds on the specified acupoints during pain episodes during menstruation, while avoiding traditional dysmenorrhea treatments.

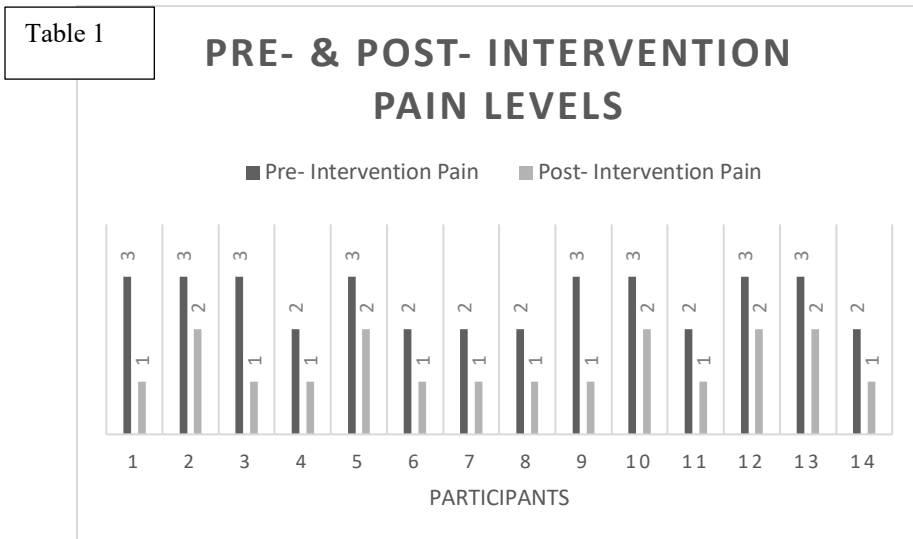
Data collection involved pre- and post-intervention anonymous surveys (see Appendix B titled Participant Pre- Intervention Survey & Appendix C titled Participant Post- Intervention Survey), distributed during and after the educational sessions,

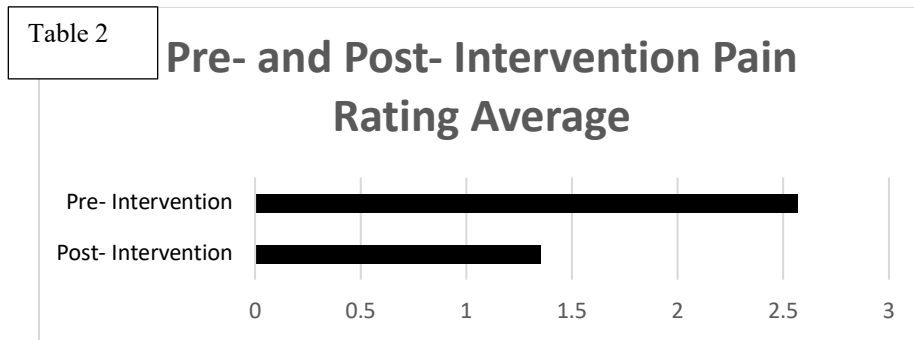
respectively. The pre-intervention survey included questions adapted from the WaLIDD scale and open-ended inquiries about baseline menstrual symptoms. The post-intervention survey, emailed 15 days after the session, assessed acupressure effectiveness, and gathered participant experiences and recommendations. The primary goal was to enhance participant knowledge about acupressure for primary dysmenorrhea, with the outcome measured through survey comparisons.

Through this project, valuable insights were gained into the potential benefits of acupressure as a complementary intervention for primary dysmenorrhea. The findings contribute to promoting a non-pharmacological approach to alleviate pain and enhance the overall quality of life for affected women.

**Project Findings/ Results**

This scholarly project aimed to assess the effects of acupressure on pain management related to primary dysmenorrhea in women. The acupressure intervention involved 17 participants, with 14 completing both the pre- and post-intervention surveys to compare and assess for patterns of pain ratings.





As the above graphs reveal, all 14 participants reported significant reduction in pain intensity during a menstrual cycle by utilizing techniques learned in the acupressure sessions. Table 1 identifies a reduction of pain ratings for each individual participant. Table 2 demonstrates a 1.22 decrease in average rated pain levels post intervention. The qualitative data collected in the post intervention survey identified that acupressure assisted with reducing pain and would therefore be a great first-line option with combination of medication. Other qualitative data suggested potential improvements of the project, such as in-person education sessions, extended monitoring, and the addition of instructional videos for better comprehension.

Analysis of findings indicated that acupressure effectively reduced pain severity and duration in primary dysmenorrhea sufferers. While participants acknowledged the benefits, some noted that it did not fully alleviate pain, suggesting a potential role for medication in certain cases. The project highlights acupressure as a promising first-line treatment.

### Implications and Recommendations

Primary dysmenorrhea is a widespread issue affecting both young and adult females, often inadequately treated with pharmacological options, leading to potential adverse reactions, medication dependence, and unnecessary medical expenses (Gharloghi

et al., 2012). Severe dysmenorrhea sufferers can benefit from complementary approaches such as acupressure, providing a safe and effective pain management alternative. Advanced practice nurses can integrate acupressure into their practice to alleviate pain. This work advocates incorporating acupressure education into primary care clinics, offering a cost-effective and self-care promoting intervention. In-person acupressure education allows practitioners to assess patient understanding, addressing the preference for in-person resources highlighted by project participants. While electronic interventions were successful, feedback suggests a preference for in-person resources. Monitoring acupoint utilization and considering acupressure as a first-line treatment with concurrent medication if necessary are additional insights. The project encourages integrative and self-care practices, providing participants with a better understanding of health maintenance. This work serves as a guide for implementing acupressure in primary care settings.

### **Conclusion**

In conclusion, this work underscores the prevalence and often insufficiently treated nature of primary dysmenorrhea. The exploration of complementary and integrative options, specifically acupressure, emerges as a promising avenue for alleviating the severity of primary dysmenorrhea, presenting a safe and cost-effective alternative for women seeking relief.

The emphasis on acupressure in this work not only provides a tangible solution to pain management during menstrual periods but also advocates for a holistic, patient-centered approach in primary care settings. Advanced practice nurses, armed with

knowledge about acupuncture, can play a pivotal role in reducing medication dependence and unnecessary prescribing.

While the success of zoom-based and electronic education interventions is acknowledged, feedback highlights a preference for in-person resources. Additionally, the need for monitoring correct acupoint sites and consideration for acupuncture as a first-line treatment, with medication as an adjunct, if necessary, are crucial considerations for future implementation.

Ultimately, this project advocates for a paradigm shift in the management of primary dysmenorrhea, urging advanced practice providers to lead with acupuncture as an initial treatment option. By doing so, practitioners not only address the immediate pain concerns but also contribute to reducing healthcare costs, unnecessary medication use, and fostering a more collaborative partnership between patients and providers in the healing process. The time is now for the wider integration of complementary and integrative approaches like acupuncture, unlocking the potential for a more patient-centered and cost-effective healthcare landscape.

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**Appendix A: WaLIDD Scoring for Dysmenorrhea**

**Table 1** WaLIDD score variables

<b>Working ability</b>	<b>Location</b>	<b>Intensity (Wong-Baker)</b>	<b>Days of pain</b>
0: None	0: None	0: Does not hurt	0: 0
1: Almost never	1: 1 site	1: Hurts a little bit	1: 1-2
2: Almost always	2: 2-3 sites	2: Hurts a little more – hurts even more	2: 3-4
3: Always	3: 4 sites	3: Hurts a whole lot – hurts worst	3: ≥5

**Notes:** Score: 0 without dysmenorrhea, 1-4 mild dysmenorrhea, 5-7 moderate dysmenorrhea, 8-12 severe dysmenorrhea. Wong-Baker scale was reclassified to adjust a four-level scale.

**Abbreviation:** WaLIDD, working ability, location, intensity, days of pain, dysmenorrhea.

**Appendix B: Participant Pre- Intervention Survey**

1. Do you experience pain with menstrual periods?

YES NO

2. On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods

(0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)

0 1 2 3

3. On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?

(0= 0; 1 = 1-2; 2= 3-4; 3=>5)

0 1 2 3

4. How do you typically treat your menstrual pain?

5. What is your typical menstrual cycle length (in days)?

6. What is your typical length of menstrual period?

**Appendix C: Participant Post- Intervention Survey**

1. Do you experience pain with menstrual periods?

YES

NO

2. On a scale of 0 to 3, rate intensity of pain experienced during menstrual periods

(0= Does not hurt; 1= Hurts a little bit; 2= Hurts a little more; 3= Hurts a whole lot)

0

1

2

3

3. On a scale of 0 to 3, how many days per menstrual cycle do you experience pain?

(0= 0; 1 = 1-2; 2= 3-4; 3= >5)

0

1

2

3

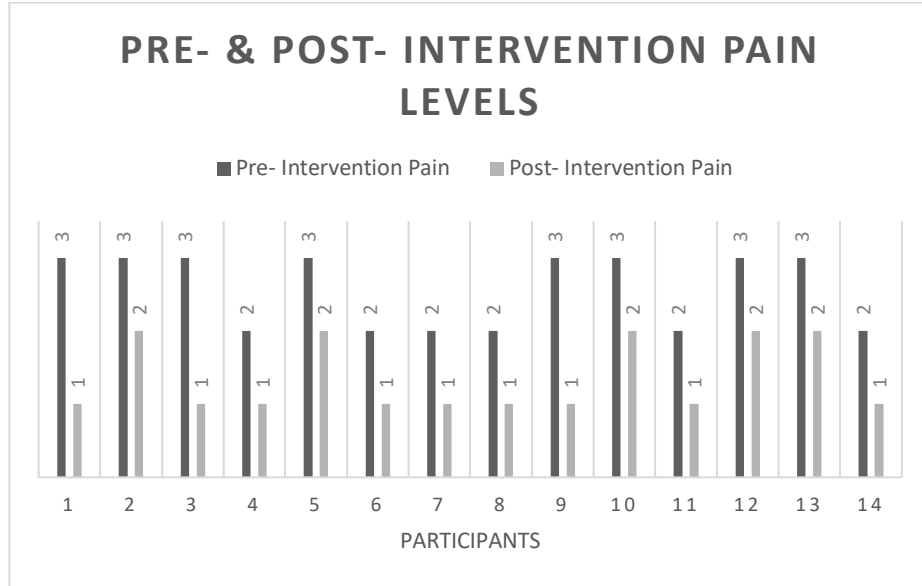
4. Has acupressure reduced the level of menstrual pain typically experienced?

5. What did you find helpful with the education sessions on acupressure?

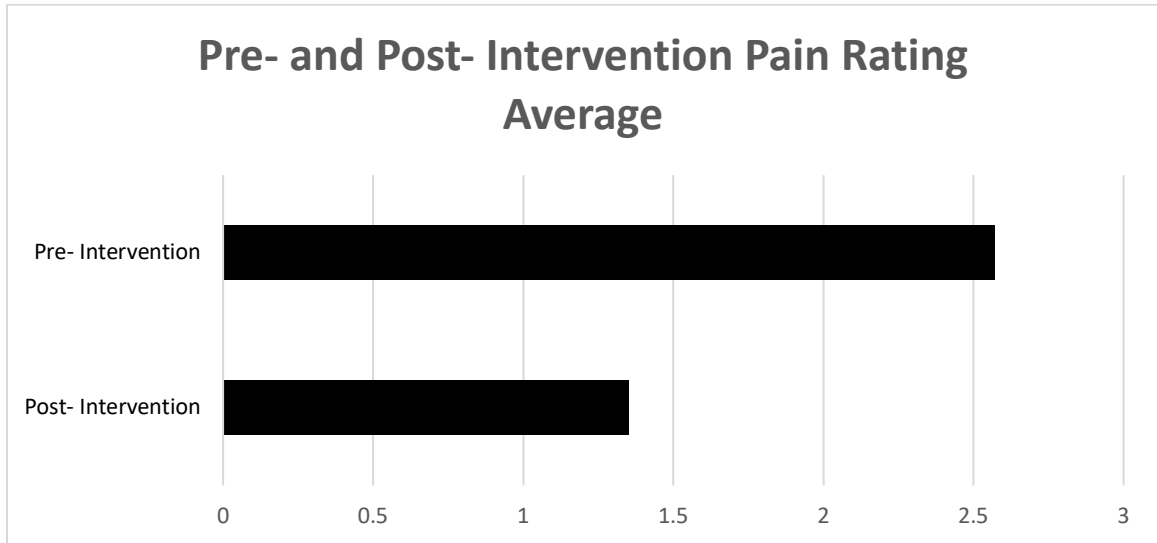
6. Will you continue to use acupressure to reduce menstrual pain?

7. Do you have any recommendations for improvement regarding the teachings of acupressure?

**Appendix D: Graph of Pre- & Post- Intervention Pain Levels**



**Appendix E: Graph of Pre- & Post- Intervention Average Pain Rating**





# AUGSBURG UNIVERSITY

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Author(s) of Work(s): Tatum Britton

Depositor's Name (Please Print): Tatum Britton

Author's Signature: Tatum Britton Date: 4/23/24

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