

## ABSTRACT

### ANALYSIS OF CLINICAL PRACTICES RELATED TO ANTICIPATORY MENSTRUAL EDUCATION FOR ADOLESCENTS

By Lindsay K. Schehr

*Aims and objectives.* This study aimed to describe nurse practitioners awareness of the established guidelines for menstrual anticipatory education; to investigate practitioner's routine use of these established guidelines; and finally, to examine and describe nurse practitioners approach in educating adolescents about the signs, symptoms, and onset of menarche.

*Background.* Menarche marks a significant milestone as the beginning of a woman's reproductive life. The lack of comprehensive, age-appropriate information leads to misconceptions and contributes to menarche being a traumatic and uncomfortable experience. Nurse practitioners are in unique positions to provide current and accurate information related to menarche. Intentional practice guidelines are in place for clinicians surrounding anticipatory menstrual education. However, the actual awareness and utilization of clinical guidelines for anticipatory menstrual education by nurse practitioners is unknown.

*Design.* A descriptive design was utilized to determine current awareness of established guidelines for menstrual anticipatory education and to investigate and describe routine use of these guidelines; and secondly, to examine and describe other approaches in educating adolescent girls about the signs, symptoms, and onset of menarche. The conceptual framework for this study was Peplau's Theory of Interpersonal Relations. The nurse-patient relationship is established to meet the needs of individuals, and interactions are aimed at enhancing patient well-being.

*Methods:* A convenience sample of 33 ( $n=33$ ) advance practice nurse practitioners from a northeastern state were recruited and surveyed. A 27-item questionnaire was developed and administered using Qualtrics online survey software. The survey included 23 closed-ended questions about anticipatory menstrual education and 4 narrative questions about other educational approaches utilized.

*Results.* The sample consisted primarily of women ( $n=30$ , 90.9%), ranging in age from 24 to 55 years and older, with the majority of participants 46 to 55 years of age ( $n=14$ , 42.4%). All participants held a professional degree in advanced practice nursing, 93.9% ( $n=31$ ) held a master's degree in nursing, with 6.1% ( $n=2$ ) listing "other." Only 75% ( $n=25$ ) of the APRNs surveyed provided anticipatory menstruation education to adolescent girls; 51.4% of APRNs that provided anticipatory menstrual education were not aware that guidelines existed. The majority of participants ( $n=16$ , 48.5%) provided anticipatory menstrual education between 11 and 13 years of age. During menstrual education, participants reported 100% parental presence; however, it was reported that

the majority of parents do not solicit anticipatory menstrual education. APRNs identified types of education they provided to adolescents regarding menarche – 100% provided information related to physical developmental changes (n= 25), 72% provided information on pain management (n= 18), and 44% provided information on feminine product choices and usage (n=11).

*Conclusions.* Analyzing the research data revealed three significant findings: lack of knowledge related to anticipatory menstrual education, struggle to provide comprehensive menstrual education, and lack of standardized menstrual questions on physical and gynecologic examination forms.

*Clinical Relevance.* It is crucial that APRN's are aware and utilize the anticipatory menstrual education guidelines for adolescents. Instead of relying on school programs to provide menstrual education, APRN's need to understand the menstrual education they can provide is not interchangeable. APRNs are essential in providing information about the physical discomfort, sanitation issues, and the emotional and social impact of menarche. There is an obvious need for young adolescents to be prepared prior to menarche, and APRNs should be an integral part of the educational process.

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MENSTRUAL EDUCATION FOR ADOLESCENTS

by

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## Chapter I

### Introduction

Menarche marks a significant milestone as the beginning of a woman's reproductive life. Menarche is the first menstruation and the commencement of cyclic menstrual function (Myers, 2006). A female adolescent's first encounter discussing menstruation is commonly fraught with secrecy and trepidation. Her best educational resources related to menstruation are likely hushed advice from mothers, other female family members, friends, internet, or consumerism, which can lead to inaccurate and vague information (Chang, Hayter & Wu, 2010). The lack of comprehensive age appropriate information leads to misconceptions and contributes to menarche being a traumatic and uncomfortable experience.

Primary health care providers have a responsibility to provide anticipatory menstrual education to adolescents. Advanced practice registered nurses (APRNs) are in a unique position to provide the most current and accurate information about menstrual products and physiological and emotional changes that occur at menarche. Advanced practice registered nurses play an important role because of their holistic perspective, advanced knowledge, and practice skills that enable them to provide menstruation education in a sensitive manner. The American Academy of Pediatrics (AAP) and American Congress of Obstetrics and Gynecology (ACOG) have intentional practice guidelines in place for APRNs to utilize when providing anticipatory menstrual education (AAP, 2006). However, menstrual education is not routinely provided; in fact, only 2% of adolescents reported receiving information regarding menstruation from their health care provider (Houston, Abraham, Huang & D'Angelo, 2006).

The AAP guidelines state that primary care clinicians should include pubertal development in their anticipatory guidance for children 8 years and older and their parents on all annual examinations (AAP, 2006). An ongoing history and complete annual examination should be performed, including Tanner staging, by the clinician. Anticipatory menstrual education should include growth and development, instruction on use of feminine products, and what is considered normal menstrual flow (AAP, 2006). Ideally, both parents and clinicians should participate in the educational process. Assessment of menarche should be used as a tool to assess normal growth and development (AAP, 2006).

The ACOG guidelines for women's health care recommend that adolescents should establish a relationship between the ages of 13 and 15 years with a gynecologist to discuss normal adolescent development (Hillard, 2002). Providers should discuss pubertal development and explore emotional and physical changes associated with menarche. Providers are expected to explain current norms regarding menstruation, issues of self-confidence, body image, and sexuality (Hillard, 2002).

Both the AAP and the ACOG recommend that preventative health visits (a) are crucial in the initiation of dialogue related to menarche, (b) are important in establishment of a safe environment where the patient can ask questions about their reproductive health, and (c) help the patient feel comfortable that their concerns will be confidently addressed (AAP, 2006; Hillard, 2010).

Studies on menarche and menstruation have typically focused on the perceptions of menstruation, experiences of menarche, and cultural implications of menstruation. Previous studies offer no insight on the specific educational practices or clinical recommendations for providing menstrual education to female adolescents.

**Problem Statement**

Menarche is an important step in an adolescent's life. It is essential to educate females about what to expect regarding menstruation. Menarche preparedness aids in transition of physiological, psychological, and social changes that an adolescent experiences. Utilizing the established clinical practice guidelines for anticipatory menstrual education may increase preparedness and influence positive attitudes toward menstruation. This may have considerable implications for the overall promotion of the female adolescent's health.

The actual awareness and utilization of clinical guidelines for anticipatory menstrual education by APRNs is unknown. Current research indicates that awareness and utilization of the current standardized guidelines for anticipatory menstrual education is thought to be low. Current research indicates that adolescents may experience significant anxiety and negative perceptions surrounding menarche.

**Purpose of the Study**

The purpose of this study is to describe APRNs' awareness of established guidelines for anticipatory menstrual education, to investigate and describe APRNs' routine use of these established guidelines, and finally, to examine and describe APRNs' approaches in educating adolescents about the signs, symptoms, and onset of menarche.

## Definitions of Terms

### Conceptual definitions.

*Advanced practice registered nurse:* A nurse who, by advanced education and clinical experience in a specialized area of nursing practice, has acquired expert knowledge and skill in a special branch of practice (American Nursing Association, 2008).

*Client/Patient:* Person, couple, group, community deserving of humane care with dignity, privacy, and ethics (Forchuk, 1995).

*Environment:* Physiological, psychological, and social fluidity that may be illness maintaining or health promoting in the context of culture (Forchuk, 1995).

*Health:* Forward movement of personality and other ongoing human processes in the direction of creative, constructive, productive, personal and community living (Forchuk, 1995).

*Interpersonal:* phenomena that occurs between persons (Peplau, 1997).

### Operational definitions.

*Menarche:* The first menstruation and the commencement of cyclic menstrual function.

*Female Adolescent:* A person in the state or process of adolescence; a teenager.

*Advanced practice registered nurse:* Advanced practice nurses licensed in the state of Wisconsin working in family practice, women's health, or pediatrics.

**Research Questions**

1. What is APRNs' current awareness of clinical guidelines related to menstrual education?
2. What percentage of APRNs follow established guidelines related to menstrual education?
3. How do nurse practitioners present educational information related to menstruation?
4. What type of standardized menstruation questions do APRNs utilize on physical and gynecologic examination forms?

**Assumptions**

1. Adolescents have a knowledge gap related to menarche.
2. Menarche is an anxiety provoking, sensitive subject for adolescents to discuss.
3. Lack of preparation leads adolescent girls to approach menarche with conflicted negative ideas.
4. Adolescents' desire education related to menstruation.

**Significance to Nursing**

As care providers, it is important for APRNs to be up to date on the recommended guidelines for a population they will encounter. Adolescents benefit from an APRN's counsel and education related to menstruation. Advanced practice registered nurses are in a special position to provide education regarding menstruation. The APRN would be pivotal in helping adolescents navigate the psychosocial factors, socio-cultural influences, and in providing support and preparation regarding menarche.

Advanced practice registered nurses should take every opportunity to introduce menstrual education to young girls and their parents (Houston et al., 2006). The APRN could be valuable in providing accurate information related to the physiological changes occurring that other educational sources could not explain (Houston et al., 2006). During menstruation, girls may endure dramatic physical changes, encounter severe menstrual pain, or experience menstrual disorders that can limit their day to day life (Chang et al., 2010). Many teens lack the information necessary to recognize these symptoms as medical disorders that can be treated (Houston et al., 2006).

## Chapter II

### Theoretical Framework and Review of Literature

#### Theoretical Framework

The conceptual framework chosen to guide this descriptive study was based on the APRN's multiple roles in providing education to adolescents. The framework selected to guide this study is adapted from Peplau's Theory of Interpersonal Relations. The underpinning of Peplau's theory explores the primacy of the nurse-patient relationship (Peplau, 1997). Initial discussion of menstruation is commonly a private and sensitive topic for female adolescents, thus building a therapeutic relationship between the APRN and the patient is crucial. This relationship enables the nurse to provide the patient with education needed to understand expectations of menarche and clear misconceptions.

The nurse-patient relationship is established when there is a change in health needs of the patient and when the nurse is available to provide specific skills and assistance (Peplau, 1997). The nurse-patient relationship is composed of three phases: (a) the orientation phase, (b) the working phase, and (c) the resolution phase (Peplau, 1997). As the APRN works through the phases they serve in multiple roles, adapting to the needs of the patient. The roles include stranger, teacher, resource person, counselor, surrogate, and leader (Peplau, 1997).

Table 1.

*Phases of the Interpersonal Process*

Phases of Peplau's Interpersonal Process	Definition	Application of Peplau's Theory for Anticipatory Menstrual Education
Orientation Phase	Nurse who is a stranger to the patient meet	1. Assessment of readiness to learn
	Nurse focuses on knowing patient as a person	2. Assessment of prior knowledge related to menstruation
	Nurse works as a counselor to establish relationship	3. Uncover misconceptions
	Identification of actual or perceived problems	4. Work with the patient to formulate mutual teaching objectives. What does the patient want to learn about: physical development/ emotional changes, or feminine products, pain management?
	Move to next phase when they are ready to resolve identified problems	
Working Phase	Clarification of expectations of nurse-patient roles	1. Present educational material
	Relationship may facilitate patient to work independently, dependently, or interpedently based on the patients capacity	2. Teach patient and her care givers about available resources
	Identify patients personal strengths	3. Have open dialogue about expectations of menarche
	Nurse works as teacher, resource counselor, and surrogate to provide information and available options, facilitating patient's development towards well-being	4. Allow patient to ask questions



Table 1 (cont)

Resolution Phase	Patient moves beyond therapeutic relationship and are able to use their strengths to foster health needs	1. Patient feels satisfied and comfortable with knowledge related to menstruation
	Patient abandons old needs and sets new goals	2. Patient feels prepared for menarche
	Patient plans for alternative sources of support	3. Patient identifies with reliable care giver, family member, or friends for future support or questions related to menarche
		4. The patient is able to engage in self-care activities to maintain hygiene, manage emotional and physical changes

### **Application of Peplau's Theory.**

Applying Peplau's theory to practice aides the APRN in building a trusting patient-nurse relationship and helps to develop skills and teaching methods individualized to meet each patient's needs. The extent of each patient's needs defines what changing roles in the interpersonal processes the nurse practitioner will assume.

### **Review of Literature**

#### **Background review.**

Menarche, or initiation of the first menstrual cycle, is the beginning of a woman's reproductive life. The onset of menarche is an influential moment in an adolescent's life that has both physiological and psychological implications. Whether menarche will be a positive or negative experience is often influenced by culture, preparation, and support.

Studies on menarche and menstruation have typically focused on the perceptions of menstruation, experiences of menarche, and cultural implications of menstruation. A review of literature identified four key concepts related to menstruation. The four key concepts identified were psychosocial factors related to menstrual attitudes, socio-cultural influences, the impact of support and preparation on menstrual perceptions, and implications for clinical practice.

### **Psychosocial factors related to menstrual attitudes.**

Menstruation is a step in a female's life that influences her identity. An adolescent's menstrual attitude and perception of the changes between her body, self, family, and society are dependent on her emotional expectations of menarche (Yeung, Tang & Lee 2005). Whether an adolescent has a negative or positive experience, menarche is a significant memorable event. Lee's (2008) research indicated that maternal support facilitated positive experiences and lack of support implicated negative memories. Emotionally unavailable mothers were linked to daughters feeling shame and humiliation with menstruation (Lee, 2008). Positive responses to menarche were associated with physical development, perceptions of menarche as a natural event, access to privileges linked to maturity, and entering "womanhood" (Lee, 2008; Uskul, 2004; Yeung et al., 2005). Yeung et al. (2005) found that girls with a positive self-image of their bodies were more likely to view menarche as a positive advancement into womanhood. Negative responses were associated with lack of preparation, embarrassment, unpredictability, and inconvenience (Chang, Chen, Hayter & Lin, 2009; Lee, 2008; Yeung et al., 2005).

### **Socio-cultural differences in perceptions of menstruation.**

Cultural expectations can affect an adolescent's experience with menarche and how menstruation is managed. Ethnic and cultural differences have been shown to influence menstrual attitudes and experiences (Cooper & Koch, 2007). Lee (2008) suggested that menstruation is a culturally scripted experience, influenced by society, that can have negative implications for a female's sense of self. Differing cultural messages about the female body play a role in various reactions to menarche. Expectations of learning and differences in norms and values are contributing factors (Uskul, 2004). Among multiple cultures, secrecy and education of menstrual rules and regulations from a mother were defining features (Burrows & Johnson, 2005; Chang et al., 2009; Chang et al., 2010; Uskul, 2004).

Multiple studies compared specific cultures' educational practices and preparation related to menstruation. Among races, white mothers were remembered as more celebratory and demonstrative, while mothers of color were more helpful and matter of fact (Lee, 2008). Hoerster, Chrisler and Rose (2003) found that American pop culture did not give American participants an advanced understanding of menstruation in comparison to Indian culture. Yeung et al. (2005) found both Western and Chinese participants found menarche a personal matter and felt uncomfortable discussing it.

Conflicting themes existed whether over time cultural influences will change and have positive influences or if negative perspectives will prevail related to menstruation. According to Lee (2008), as women grow up in a more contemporary society, there will be an increased comfort level with discussion of menstruation. Increased media conversation of menstruation, social changes towards greater sexual liberation, and improved sexual education are thought to affect the changes among cultures (Burrow &

Johnson 2005; Lee 2008). However, many parts of the world are not touched by modern society. Existence of the power of religion, traditional rules and regulations surrounding menstruation, and the presence of rituals or ceremonies for menarche will continue to influence perceptions related to menstruation (Hoerster et al., 2003).

### **The impact of support and preparation on menstrual perceptions.**

A lack of adequate accurate education and guidance prior to menarche is evident. The importance of preparedness cannot be overstated (Chang et al., 2010). The type of education related to menstruation, or lack thereof, sets the tone of the menstrual experience. Menarche is already a stressful experience with an emotional impact, the lack of accurate education only magnifies it. Lack of education leads girls to feel that they may not be managing menstruation correctly and may cause females to have no idea what type of products to use or buy (Kalman, 2003).

Sources for menstruation education included mothers, family members, friends, school nurses and programs, and consumerism. Each of these sources can impact an adolescent's menstrual perceptions. Preparation from mothers, family members, friends, and consumerism can inaccurately present information, which can lead to misconceptions and further cause anxiety (Burrows & Johnson, 2005; Kalman, 2003; Lee, 2008). School classes pose problems, including time constraints, privacy issues, and commercially prepared material (Kalman, 2003). Cooper and Koch (2007) determined that in many cases education provided by schools was too late, and most women had begun menstruating when they learned about menarche. Self-education through books, magazines, and online resources is not satisfactory to emotionally or subjectively prepare adolescents (Hoerster et al., 2003; Yeung et al., 2005). Menstrual

education should include physical, emotional, and social components of menstruation (Chang et al., 2010).

### **Implications for Clinical Practice**

The APRN's role in regards to menarche should focus on providing anticipatory guidance regarding normal menstruation, completion of a thorough history to diagnose existing menstrual disorders, and prompt treatment of these disorders to decrease their associated morbidities (Houston et al., 2006). Development of clear, standardized menstruation questions on physical and gynecologic examination forms would serve as prompts to remind health care providers to discuss menstruation with adolescents (Houston et al., 2006).

Advanced practice registered nurses need to be especially sensitive to nontraditional and cultural families in their exploration of menstrual preparation for girls, especially if they have little or no access to their mothers or other female role models (Kalman, 2003). It would be important for APRNs to take the one-on-one time to offer advice about correct use of sanitary products and pain relief for menstruation (Chang et al., 2010). In two separate studies, it was reported that health care providers were not appropriate for providing menstrual education to all populations and should be supplemented with other sources (Cooper & Koch, 2007; Kalman, 2003).

Health care providers frequently do not have time to discuss menstruation in detail and may not be available for follow up questions (Kalman, 2003). Additionally, not all adolescents have access to health care providers (Kalman, 2003). Cooper and Koch (2007) found that some participants did not regard doctors as comfortable or credible sources for menstrual learning, and some participants were not trusting of doctors all

together. These findings may have been the result of health disparities that the participants had faced in their lives (Kalman, 2003). Despite these findings, evidence suggests APRNs would play an essential role providing information about the physical discomfort, sanitation issues, and the emotional and social impact of menarche.

It was discovered that no research has been conducted on the APRN's role in delivery of menstrual education, and specifically, how utilization of clinical guidelines surrounding anticipatory guidance for menstrual education would influence preparation and patient's experience with menarche. There is an obvious need for young adolescents to be prepared prior to menarche, and APRNs should be an integral part of the educational process.

## **Chapter III**

### **Methodology**

#### **Design of Study**

A descriptive design was utilized to measure APRNs' current awareness of established guidelines for anticipatory menstrual education and to investigate and describe if APRNs routinely follow these guidelines; and secondly, to examine and describe the APRN's approach in educating adolescents about the signs, symptoms, and onset of menarche. An online questionnaire was used to measure participant responses. A convenience sample of 33 APRNs was recruited and surveyed.

#### **Population, Sample, and Setting**

The population for this descriptive study was a convenience sample of participants recruited from online health care directories of APRNs in Northeast Wisconsin. Participants were asked for voluntary participation via email.

Inclusion criteria included:

1. Licensed advanced practice registered nurse in the State of Wisconsin
2. Area of practice to include primary care, pediatrics, or women's health

Exclusion criteria included:

1. Non-English speaking APRNs
2. APRNs who do not care for adolescent pre-menstrual girls

### **Data Collection Instruments**

A 27-item questionnaire was developed and administered using Qualtrics online survey software. The questionnaire was developed specifically for this research study. The structure of the survey included 23 closed-ended questions and four open-ended questions allowing participants to leave narrative responses. Dependent on participant answers, the survey would shut off, string to additional questions, or lead to purposive conditional survey branching. It was estimated that each participant would need approximately 5 to 10 minutes to complete all survey questions. The questionnaire could be completed only once per participant (Appendix B)

Participants answered multiple demographic questions, including patient care population, awareness of anticipatory menstrual guidelines, breadth of menstrual education provided, and use of supplementary education.

### **Data Collection Procedures**

Written permission was obtained for the University of Wisconsin Oshkosh Institutional Review Board (Appendix C) to conduct this research study. A letter of explanation was emailed to the participants stressing the anonymity and maintenance of confidentiality throughout the research study (Appendix A). Participants were informed that participation was completely voluntary and in no way would any identifying information be linked to their responses.

The questionnaire was linked to the initial email inviting participants to complete it. When participants accessed the online questionnaire, informed consent was obtained prior to starting.



**Data Analysis Procedures**

Using Statistical Package for the Social Sciences (SPSS®) version 1+9.0, we examined descriptive statistics for the demographic variables of participants.

## **Chapter IV**

### **Results and Discussion**

The purpose of this study was to describe the APRN's awareness of established guidelines for menstrual anticipatory education; to investigate and describe the APRN's routine use of these established guidelines; and finally, to examine and describe APRN's approach in educating adolescents about the signs, symptoms, and onset of menarche. Characteristics of the sample are described, and the analysis to address the specific research questions and findings are presented. All analyses were conducted with SPSS® v.19.0 ("SPSS 19.0," 2010). Descriptive statistics were calculated for categorical variables. Frequencies and percentages were examined and are described below. Data were screened for percentages of values missing, and three participants were omitted, as they did not complete the survey. There was one missing value for one of the participants; this survey was not excluded from this analysis.

A convenience sample of 33 (n=33) APRNs completed the survey. The participants were APRNs from outpatient clinics located in the Midwest. The sample consisted primarily of women (n=30, 90.9%), ranging in age from 24 to 55 and older, with the majority of participants 46 to 55 years of age (n=14, 42.4%). All participants held a professional degree, with 93.9% (n=31) reporting a master's degree and 6.1% (n=2) stating "other." No participants enrolled held a doctorate or PhD. The demographic characteristics are presented in Table 1.

Table 2

*Demographic Characteristics of APRNs Completing Survey*

	N	%
<u>Age Range</u>		
24-35	8	24.2
36-45	6	18.2
46-55	14	42.4
55 and Older	5	15.2
<u>Gender</u>		
Male	3	9.1
Females	30	90.9
<u>Educational Degree</u>		
Master in Nursing	31	93.9
Doctorate in Nursing Practice	0	0
PhD	0	0
Other	2	6.1

**Practice Settings**

The majority of participants described their current practice setting in primary care (60.6%, n=20). The remaining participants' practice settings included 18.2% in women's health (n=6), 12.1% in pediatrics (n=4), and 9.1% as other settings (n=3). Almost half (48.5%) of the participants (n=16) have been in practice between 0 and 5 years. Most participants, 69.7% (n=23), have been in their current practice setting for 0 to 5 years. Participants with the greatest number of years of experience in their practice setting, 21 to 30 years, was represented as 9.1% (n=3). Representation of care from both rural and urban clinical settings was reported. Thirty-nine percent (39.4%, n=13) of participants described their current practice setting as rural, while 60.6% (n=20) described urban clinical settings.

Over half of the participants, 51.5% (n=17) described 0 to 5 years of experience caring for female adolescents. Two participants, 6.1%, had 30+ years of experience caring for female adolescents.

The number of female adolescents seen in clinic monthly by APRNs was widely distributed from 0 to 10 to 50+. Most APRNs, 45.5% (n=15), reported seeing between 0 and 10 female adolescents monthly.

Table 3

*APRN Practice Characteristics*

	N	%
<u>Number of Years in Practice</u>		
0 -5	16	48.5
6-10	6	18.2
11-20	6	18.2
21-30	3	9.1
30+	2	6.1
<u>Years in Current Practice Setting</u>		
0-5	23	69.7
6-10	4	12.1
11-20	3	9.1
21-30	3	9.1
<u>Years Caring for female adolescents</u>		
0-5	17	51.5
6-10	5	15.2
11-20	6	18.2
21-30	3	9.1
30+	2	6.1
<u>Practice Setting</u>		
Primary Care	20	60.6
Women's Health	6	18.2
Pediatrics	4	12.1
Other	3	9.1

Table 3 (cont.)

<u>Female adolescents seen in clinic monthly</u>		
0-10	15	45.5
11-20	9	27.3
21-40	7	21.2
41-50	1	3.0
50+	1	3.0
<u>Clinical setting</u>		
Rural	13	39.4
Urban	20	60.6

### Characteristics of Female Adolescents as Described by APRNs

Participants reported that all adolescents were Caucasian. No other ethnicities were represented or described (Table 3)

Table 4

#### *Population Characteristics*

	N	%
<u>Demographic Population Served</u>		
Caucasian	33	100
African American	0	0
Hmong	0	0
Latino	0	0
Other	0	0

Of the APRNs surveyed, approximately 75% (n=25) provided anticipatory menstruation education to adolescent girls (Table 4).

Table 5

#### *Anticipatory Teaching*

	N	%
<u>Provides anticipatory teaching about menstruation</u>		
Yes	25	75.8
No	8	24.2

Once this data collection point was reached, respondents entered into purposive conditional survey branching. Respondents who provided anticipatory menstruation education completed the entire survey, and those who self-identified as not providing any education were forced to the last item of the survey, which thanked them for their participation. A link to the American Academy of Pediatrics practice guidelines for menstrual education was provided.

The APRNs (n=25) who provided anticipatory menstruation education were further identified as those who were aware that guidelines existed (n=8, 24.2%) and those who were not aware that guidelines existed (n=17, 51.4%). Of the eight respondents who utilized guidelines, three (n=3) identified the American College of Obstetrics and Gynecology and five (n=5) identified the American Academy of Pediatrics (Table 5).

Table 6

*Awareness and Guidelines Followed*

	N	%
<u>Awareness of Standard Guidelines</u>		
Yes	8	32.0
No	17	68.0
<u>Guidelines Followed</u>		
American College of Obstetrics and Gynecology	3	37.5
American Academy of Pediatrics	5	62.5

The majority of participants (n=16, 48.5%) provided anticipatory menstrual education between 11 and 13 years of age. During menstrual education, participants reported 100% parental presence. However, it was reported that the majority of parents do not solicit anticipatory menstrual education. Nineteen participants (57.6%) reported

parental solicitation of menstrual education between 0% and 25 % of the time. Twenty-four participants reported introducing anticipatory menstrual education during wellness appointments (n=24, 96%). Findings are summarized in Table 6.

Table 7

*Demographics of Adolescents Receiving Education*

	N	%
<u>Age when anticipatory menstrual education is provided</u>		
8-10 years	7	21.2
11-13	16	48.5
13-15	2	6.1
<u>Parental presence during menstrual education</u>		
Yes	25	100
No	0	0
<u>Parents/guardians who solicit anticipatory menstrual information</u>		
0-25%	19	57.6
25-50%	4	12.1
50-75%	1	3.0
75-100%	1	3.0
<u>Type of appointment anticipatory menstrual education is introduced</u>		
Wellness appointment	24	96.0
Sick appointment	1	4.0

The majority of participants reported providing care for a culture other than their own only some of the time (n= 18, 72%). Culture was not found to be an influence of menstruation education by 76% (n=19) of participants. Participants who thought that a female's culture changed the education they provided were able to describe how it influenced their teaching. Participants described cultures influencing education by language barriers and working with cultures that are not as open regarding menstruation. One participant stated, "Certain cultures are not as open regarding

menstruation and therefore my discussions are less conversational than I would like, but hopefully the adolescents are still gaining useful information from my education.”

Findings are summarized in Table 7.

Table 8

*Cultural Characteristics*

	N	%
<u>Care provided for adolescents from a culture other than the APRN</u>		
Never	3	12.0
Sometimes	18	72.0
Frequently	4	16.0
<u>Menstruation education is influenced by female adolescents culture*</u>		
Yes	5	20.0
No	19	76.0

\*One participant skipped this question, survey not omitted.

Participants were asked if they rely on school programs to supplement menstrual education. Fourteen stated they do rely on school programs (n=14, 56%), and 11 stated they do not rely on school programs (n=11, 44%). Participants were asked to explain why they rely on school programs to provide anticipatory menstrual education. This was an open-ended question. Responses included time restraints during well-child appointments, the ability to use AV equipment and videos, and the environment where female adolescents are together and have the same questions as their peers. One participant stated that school programs can “offer supplementary education in a controlled setting of the young girls together so that they do not feel they are the only ones going through menstruation.”

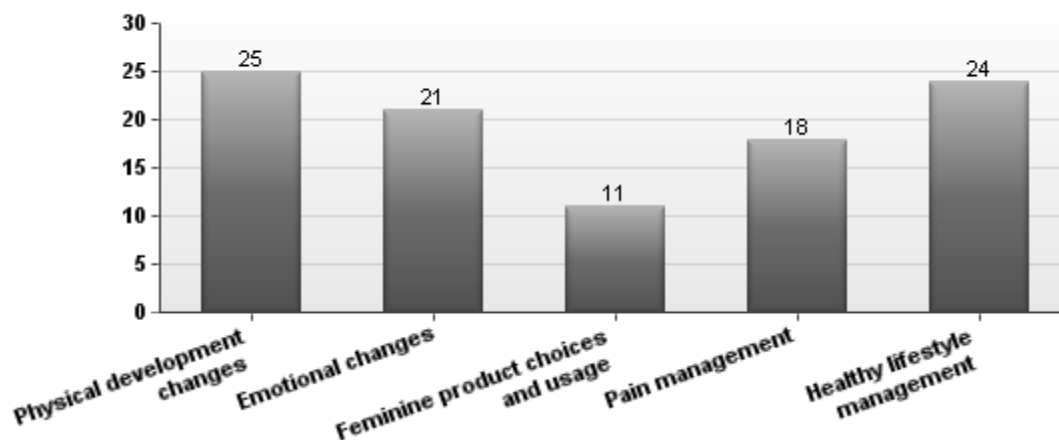


Table 9

*Supplemental Education*

	N	%
<u>Reliance on school programs to supplement menstrual education</u>		
Yes	14	56.0
No	11	44.0

The APRNs (n=25) were asked to identify the types of education they provide to adolescents regarding menarche. All participants provided information about physical developmental changes (n=25) and healthy lifestyle management (n=24), but less of the participants included teaching about pain management (n=18) and feminine product choices and usage (n=11). See Figure 1 for types of education.



*Figure 1.* Number of participants who provide specific types of education related to anticipatory menstrual education.

Table 10

*APRN Practice Evaluation and Presentation of Menstrual Education*

	N	%
<u>Utilization of standardized menstrual questions on examination forms</u>		
Yes	16	64.0
No	9	36.0
<u>Use of supplemental education for menstrual teaching</u>		
Yes	15	60.0
No	10	40.0

Sixty-four percent of participants (n=16) reported utilization of standardized menstrual questions on examination forms. When participants were asked to describe the type of standardized questions, they described questions surrounding onset of menarche, pain/discomfort with periods, flow/clotting with periods, and menstruation's impact on life.

Finally, the APRNs surveyed described the types of supplemental education resources typically used in menstruation educational practices as handouts and pamphlets, from sources, such as, American College of Obstetrics and Gynecology, Center for Disease Control and Prevention, or inter-hospital information technology system-generated teaching sheets.

## Chapter V

### Summary, Conclusions, Limitations, Implications, and Recommendations

In this chapter, a summary of the study and conclusions derived from the research findings are presented. Limitations of this study are identified. In addition, implications for APRNs and recommendation for future research are discussed.

#### Summary

The purpose of this study was to describe APRN's awareness of established guidelines for menstrual anticipatory education and to investigate and describe APRN's routine use of these established guidelines, and finally, to examine and describe APRN's approach in educating adolescents about the signs, symptoms, and onset of menarche.

A 27-item questionnaire using Qualtrics online survey software was utilized. The questionnaire was developed specifically for this research study. The structure of the survey included 23 closed-ended questions and 4 open-ended questions allowing participants to leave narrative descriptions. Dependent on participant answers, the survey would shut off, string to additional questions, or lead to purposive conditional survey branching. The questionnaire could be completed only once per participant (Appendix B)

Participants answered multiple demographic questions, including patient care population, awareness of anticipatory menstrual guidelines, breadth of menstrual education provided, and use of supplementary education.

The conceptual framework chosen to guide this descriptive study was based upon the APRN's multiple roles in providing education to adolescents. The framework

selected to guide this study is adapted from Peplau's Theory of Interpersonal Relations. The underpinning of Peplau's theory explores the primacy of the nurse-patient relationship (Peplau, 1997). Initial discussion of menstruation is commonly a private and sensitive topic for female adolescents, thus building a therapeutic relationship between APRN and patient is crucial. This relationship enables the nurse to provide the patient with education needed to understand expectations of menarche and clear misconceptions.

Characteristics of the sample were described, and the analysis to address the specific research questions and findings were presented. All analyses were conducted with SPSS® v.19.0 ("SPSS 19.0," 2010). Descriptive statistics were calculated for categorical variables. Frequencies and percentages were examined and were described.

Analyzing the research data revealed three significant findings: (a) lack of knowledge related to anticipatory menstrual education, (b) struggle to provide comprehensive menstrual education, and (c) lack of standardized menstrual questions on physical and gynecologic examination forms. These findings provided insight into all of the proposed research questions.

Findings from this study indicated that APRNs may not have the information necessary to effectively provide anticipatory menstrual education. The results identified a knowledge deficit in APRN's awareness of established guidelines by the AAP and ACOG for anticipatory menstrual teaching. Only 32% (n=8) of the participants had awareness of these guidelines. Utilization of evidence based guidelines is proven to improve the health of patients. The exact reasons for lack of awareness regarding these established guidelines are unknown. There are several assumptions that may be made.

First, it may be assumed that there is a lack of education and preparation in APRN curriculums. There may be a general failure of AAP and ACOG to disseminate information about the guidelines to professional nursing organizations. There may also be a lack of awareness by APRNs, due in part to nurses not familiarizing themselves with these guidelines and, in turn, being inadequately prepared to provide anticipatory menstrual education.

Despite the importance APRN involvement in anticipatory menstrual education, many providers fail to discuss it. Out of the 33 participants, eight (24.2%) denied providing anticipatory menstrual teaching. A barrier to utilizing established anticipatory menstrual guidelines is that APRNs are relying on school programs to provide menstrual education. Fifty-six percent of participants stated they relied on school programs to supplement menstrual education. However, current research shows that anticipatory menstrual education through school programs is not inclusive and may not always be effective (Chang et. al, 2010). Evidence shows the significant influence that menstrual preparation has on the attitudes women have related to menstruation (Houston et. al, 2006). Adolescents lack of menstrual preparation leads to negative attitudes towards menarche (Chang et al., 2010). This can lead to adolescents growing into women who struggle with their periods, instead of looking at menstruation in a natural healthy way. Secondly, potential health problems associated with menstruation can occur that all adolescents need to be aware of, such as endometriosis, possible pregnancy, and toxic shock syndrome (TSS), which kills women every year (Schelievert, 2012). One in 700 women will get TSS in their lifetime (Schelievert, 2012). Nationwide, an estimated 5,000 to 10,000 cases of staphylococcal TSS occur each year, making it as common as Lyme disease (Schelievert, 2012). However, only 11 participants that provide menstrual

education stated they provide education specifically related to feminine product choices and usage, allowing speculation of whether adolescents are even aware of TSS.

Although not the focus of this study, it raises questions for future studies. Though APRNs rely on parents and school programs to provide menstrual education, they are usually not well suited to provide this type of advanced medical knowledge. Advanced practice registered nurses need to arm their adolescent females and parents with anticipatory menstrual education to prevent adverse health outcomes.

Finally, the lack of standardized questions regarding menstruation may be contributing to the APRN's deficit in providing anticipatory menstrual education. Only 36% of participants reported use of standardized questions regarding menstruation. The use of clear standard questions in electronic health records or physical examination forms will prompt APRNs to ask questions regarding menstruation (Houston et al., 2006). Standardized questions would facilitate communication and serve as prompts to remind health care providers to discuss anticipatory menstrual education.

Parents and adolescents entrust in their health care providers to provide them with appropriate health teaching, which includes anticipatory menstrual education. Advanced practice registered nurses are in a special position to provide education regarding menstruation. Advanced practice registered nurses are best suited to provide menstrual education because of their holistic perspective, advanced knowledge, and practice skills that enable them to provide anticipatory menstruation education in a sensitive manner. If APRNs are prepared to provide current and accurate information about menstrual products and the physiological and emotional changes that occur at menarche, the APRNs would be pivotal in helping adolescents navigate the

psychosocial factors, socio-cultural influences, and in providing support and preparation regarding menarche.

## **Conclusions**

When evaluating the results of the study three major findings appeared:

- Advanced practice registered nurses' lack knowledge of the established anticipatory menstrual education guidelines
- Advanced practice registered nurses are struggling to provide comprehensive anticipatory menstrual guidance to all female adolescents
- There is a lack of standardized menstrual questions on physical and gynecologic examination form.

## **Limitations**

Several factors limit the generalizability of this study. Participants were obtained by convenience sampling methods may not represent a larger population of APRNs. The overwhelming majority of the surveyed APRNs were White, indicating a lack of diversity in the sample. There were a greater number of female participants than males, thus limiting significance regarding gender and its potential influence on providing menstrual education. The sample size is relatively small, comprised of only 33 APRNs. Lastly, the survey design first asked participants if they provided anticipatory menstrual education; if they answered no, the survey would end. There was no evaluation of their knowledge of awareness of anticipatory menstrual education guidelines. The area that conditional survey branching occurred limits our knowledge of

whether the population that did not perform anticipatory menstrual education (n= 8) were aware of the existence of guidelines.

### **Implications for Nursing**

It is crucial that APRNs are up to date on the recommended guidelines for the populations that they serve. Nurses need to be aware and utilize the anticipatory menstrual education guidelines for adolescents. Instead of relying on school programs to provide menstrual education, APRNs need to understand the menstrual education they can provide is not interchangeable and is very valuable in providing personalized education. Advanced practice registered nurses should take every opportunity to introduce menstrual education to young girls and their parents (Houston et al., 2006). Advanced practice registered nurses are essential in providing information about the physical discomfort, sanitation issues, and the emotional and social impact of menarche. There is an obvious need for young adolescents to be prepared prior to menarche, and APRNs should be an integral part of the educational process.

### **Recommendation for Further Research**

Results of this study could be validated by replicating the study with a larger group of participants using a computerized random sample. In replication of this study, the area of conditional survey branching should be moved to include evaluation of all participants' knowledge of anticipatory menstrual education guidelines. This study exposed a knowledge gap related to awareness and utilization of anticipatory menstrual education guidelines; however, only assumptions can be made to why this knowledge gap exists. Subsequent research should further analyze why APRNs are not routinely



providing anticipatory menstrual education, and in those that do follow the established guidelines, how it influences the patient's experience with menarche. This area may benefit from qualitative research using interview methodology. Finally, through conduction of this research, I critically appraised the established anticipatory menstrual education guidelines by the AAP and ACOG. These guidelines do not encompass holistic education to include psychological and emotional aspects. Future research should reevaluate the present guidelines.

APPENDIX A  
LETTER OF EXPLANATION

Dear Nurse Practitioner,

My name is Lindsay Schehr, I am completing a research study for my master's program at the University of Wisconsin Oshkosh titled *Analysis of Clinical Practices Related to Anticipatory Menstrual Education for Adolescents*. I am requesting your participation in my study by completing an online survey. Your response to this survey will help us better understand and identify how adolescents learn about menstruation and the role nurse practitioners have providing menstrual education. My survey does not ask for any personally identifying information, your identification will be completely anonymous.

I would be with great appreciation if you would take the time to complete my survey. Attached to this email you will find the link to access the survey. At the end of the survey you will find a link to the current recommended anticipatory menstrual education guidelines.

Thank you for your time.

Sincerely,

Lindsay Schehr  
schehl20@uwosh.edu

Faculty Chair: Dr. R. Shelly Lancaster  
Assistant Professor of Nursing UW Oshkosh College of Nursing  
lancastr@uowsh.edu 920-602-2228

APPENDIX B  
QUESTIONNAIRE

<p>Age range:</p> <p>24-35 36-45 46-55 55+</p>	<p>Gender:</p> <p>Male Female</p>	<p>What professional degrees do hold?</p> <p>Masters in Nursing Doctorate in Nursing PhD Other</p>
<p>Number of Years in Practice</p> <p>0-5 6-10 11-20 21-30 30+</p>	<p>Type of Practice Setting</p> <p>Primary care Women's health Pediatrics Other</p>	<p>Years in this practice setting</p> <p>0-5 6-10 11-20 21-30 30+</p>
<p>What is the majority demographic population that you serve?</p> <p>Caucasian African American Hmong Latino Other</p>	<p>What clinical setting best describes your practice?</p> <p>Rural Urban</p>	<p>Total years caring for female adolescents:</p> <p>0-5 6-10 11-20 21-30 30+</p>
<p>Number of female adolescents (age 8-14 years) you see in clinic monthly:</p> <p>0-10 11-20 21-40 41-50 50+</p>	<p>Do you provide anticipatory teaching about menstrual education to the female adolescents you care for?</p> <p>Yes No</p>	<p>Are you aware that standard guidelines exist surrounding anticipatory menstrual education?</p> <p>Yes No</p>
<p>If yes, what guidelines do you follow?</p> <p>American College of Obstetrics and Gynecology American Academy of Pediatrics Other</p>	<p>If you chose other guidelines which ones do you follow?</p>	<p>What anticipatory education do you provide to adolescents regarding menarche?</p> <p>Physical development changes Emotional changes Feminine product choices and usage Pain management Healthy lifestyle management</p>

<p>At what age do you provided this education?</p> <p>8-10 11-13 13-15 15-18</p>	<p>Are most parents present when anticipatory menstrual education is provided?</p> <p>Yes No</p>	<p>What percent of parents or guardians of adolescent girls ask you about providing this information:</p> <p>0-25% 25-50% 50-75% 75-100%</p>
<p>Do you rely on adolescent patient's school programs to offer anticipatory education surrounding menstruation:</p> <p>Yes No</p> <p>If yes, why?</p>	<p>How often do you care for children from a culture other than your own?</p> <p>Never Sometimes Frequently</p>	<p>Does a patient's culture influence the menstruation education you provide?</p> <p>Yes No</p> <p>If yes, please explain.</p>
<p>When is this educational information introduced to your adolescent patients?</p> <p>Wellness appointment Sick visit Other</p>	<p>Do you use standardized menstruation questions on physical and gynecologic examination forms?</p> <p>Yes No</p> <p>If yes, please provide examples of the questions you ask.</p>	<p>Do you use any supplemental educational resources?</p> <p>Yes No</p> <p>If yes, we will ask what type.</p>

APPENDIX C

IRB APPROVAL



12/21/2011

Ms. Lindsay Schehr  
917 Taft Ave  
Oshkosh, WI 54902

Dear Ms. Schehr:

On behalf of the UW Oshkosh Institutional Review Board for Protection of Human Participants (IRB), I am pleased to inform you that your application has been approved for the following research: Analysis of Clinical Practices Related to Anticipatory Menstrual Education for Adolescents.

Your research has been categorized as EXEMPT. This means you will not be required to obtain signed consent. However, unless your research involves **only** the collection or study of existing data, documents, or records, you must provide each participant with a summary of your research that contains all of the elements of an Informed Consent document, as described in the IRB application material. Permitting the participant, or parent/legal representative, to make a fully informed decision to participate in a research activity avoids potentially inequitable or coercive conditions of human participation and assures the voluntary nature of participant involvement

Please note that it is the principal investigator's responsibility to promptly report to the IRB Committee any changes in the research project, whether these changes occur prior to undertaking, or during the research. In addition, if harm or discomfort to anyone becomes apparent during the research, the principal investigator must contact the IRB Committee Chairperson. Harm or discomfort includes, but is not limited to, adverse reactions to psychology experiments, biologics, radioisotopes, labeled drugs, or to medical or other devices used. Please contact me if you have any questions (PH# 920/424-7172 or e-mail:rauscher@uwosh.edu).

Sincerely,

Dr. Frances Rauscher  
IRB Chair

Protocol Number 97219  
cc: Dr. Shelly Lancaster

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