

KNOWLEDGE AND PRACTICE TOWARDS MENSTRUATION AMONG VIETNAMESE UNIVERSITY STUDENTS: A CROSS-SECTIONAL STUDY

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ABSTRACT

Objectives: Investigate knowledge and practices of female university students in Vietnam regarding menstrual health and menstrual care.

Methods: A cross-sectional study through a self-administered questionnaire of 341 students.

Results: Students' knowledge and practices about menstruation are relatively high, passing knowledge rate is 66.3%; practicing reached 78.55%.

Conclusion: It is necessary to further strengthen communication and menstruation, and broader, reproductive health education for students, especially focusing on promoting propaganda for both female and male students to help them raise awareness and have the right mindset, practice and offer support about menstrual care.

Keywords: Menstruation, menstrual hygiene, knowledge, practice, female students, Vietnam.

1. INTRODUCTION

Menstruation is a natural and necessary monthly process that every woman goes through, so paying attention to menstrual health is extremely important for a good quality of life for women and girls. The World Health Organization (WHO) reports that problems related to sexual and reproductive health are becoming more widespread worldwide [1]. Physical symptoms such as uncomfortable cramps, excessive bleeding, irregular periods, and premenstrual syndrome (PMS) as well as emotional symptoms such as anxiety and sadness, can all have a detrimental influence on the quality of life, and cause physical and emotional distress[2,3]. It was found that females with menstruation disorders had lower quality-of-life scores than women who did not have menstrual disorders[4].

1.8 billion girls have their periods every month worldwide, however, a large percentage of these individuals lack the basic information and resources necessary to manage their periods suitably and healthfully[5,6]. UNICEF suggested in 2019 that menstrual hygiene management be taught in elementary schools in Asia and Africa so that young girls can learn about menstruation and reproductive health before puberty. Nonetheless, this study discovered that over half of the participants had not been taught menstruation hygiene in high school or college [5, 7]. Female students

are less confident in conversing, studying, and living as their health has changed [8]. Menstruation disorders caused by a lack of information and inadequate self-care approaches can have major consequences for their daily life, academic performance, and over all health. Moreover, menstrual stigma can be undermined in several areas, and many women are reluctant or ashamed to discuss their difficulties with others, especially with younger generations who might have limited understanding about menstrual problems, and complications and the research on the psychological function of adolescents is still limited [9,10].

A few recent studies were conducted in Pakistan [5] and India [11], with 20% and 51.7% of the participants, respectively, reporting that they knew nothing about menstruation before reaching menarche. Consequently, monitoring and having proper knowledge and practice in caring for menstruation is critical for enhancing women's quality of life.

In Vietnam, there is a lack of research on menstruation cycles and disorders, particularly among high school and university students. A cross-sectional study designed with 494 female students from 10–18 years old was conducted in Hanoi and Quang Binh (Vietnam)

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showed that 98.2% of students reported a bad or inadequate attitude toward managing their menstrual hygiene. Only 1.6% of students say they feel confident going to school when they are in period. Therefore, appropriate management measures are required to assist students in taking care of menstrual hygiene, pain management and potential risks of menstrual health issues.

The objective of the article is to evaluate the knowledge and practices of female students in Vietnam regarding menstrual health and menstrual care. The result of this study will then aim to improve knowledge and practice in taking care of menstrual hygiene and pain management, for Vietnamese university female students.

2. METHODS

2.1. Study design, setting and participants

This study employed a quantitative research design utilizing a cross-sectional descriptive approach. The study was carried out across three regions of Vietnam: North, Middle, and South. The quantitative survey will be administered both online and in person at universities in Vietnam.

The participants selected for data collection were female university students aged 18 years and above from various academic disciplines who have reached puberty, experienced their first menstrual period, and expressed voluntary willingness to participate. Exclusion criteria included failure to provide formal consent to participate and individuals with disabilities and/or diagnosed chronic mental illness.

2.2. Sampling Strategy and Sample Size

Convenience sampling was applied to collect data from the participants. To ensure generalizability, the sample was drawn from universities across three regions of Vietnam, employing many techniques for participant recruitment. The sample size was determined based on considerations such as the desired level of precision, anticipated response rate, feasibility of data collection, and numerous scientific articles on the same topic. Given the resources available and the expected response rate, a sample size of 300 participants was initially targeted. After the data collection and cleaning phase, a total of 359 valid participants were included in the study.

2.3. The Questionnaire:

Following extensive research and review of scientific articles on menstruation, a preliminary version of the KAP questionnaire was developed. Drawing from the work of Upashe et al. (2015), the researchers formulated knowledge and practice questionnaires related to menstruation. Additionally, inspired by Van Gesselleen's (2013) study, attitude-related questions were

selected and incorporated into the questionnaire. To ensure the validity and reliability of the questionnaire, a pilot study was conducted involving 25 female students with similar characteristics, and expert opinions were sought from two faculty members of the College of Health Sciences at VinUniversity. The questionnaire underwent translation from English to Vietnamese, followed by back-translation and review by English-speaking research experts to ensure translation accuracy.

The questionnaire consisted of three sections:

A. Socio-demographic Information: This section included questions about age, religion, living area, accommodation type, parents' education level, family income, and property ownership.

B. Menstruation Information: This part covered details such as age at menarche, emotions experienced during the first menstrual period, awareness about menarche before the onset of menstruation, sources of information about menstruation, and any restrictions observed during menstruation.

C. Knowledge and Practices Towards Menstruation:

This section comprised three subsections with 13 and 16 questions, respectively, aimed at assessing participants' knowledge, and practices related to menstruation.

The menstrual knowledge score of students was derived from 7 specific questions (Table 2). Each correct response was assigned one point, while incorrect or "don't know" responses received no score, resulting in a total knowledge score out of 7 points. Respondents who scored 5–7 points were categorized as having good knowledge of menstruation and menstrual hygiene, whereas those scoring 0–4 points were classified as having poor knowledge.

Similarly, the practice score related to menstrual hygiene was calculated based on specific questions (Table 3). Each correct response earned one point, while incorrect or "don't know" responses received no points. The total practice score was calculated out of 9 points. Respondents who scored 9 points were considered to have good practice of menstrual hygiene, whereas those scoring 0–8 points were deemed to have poor practice.

2.4. Data collection

To enhance the validity and applicability of this study, the researchers endeavored to approach over 300 students from 18 universities. Four female university students from each of the three regions were recruited as data collectors. They underwent a comprehensive one-day training session to acquaint them with the study's objectives, the importance of confidentiality,

participants' rights, and the significance of informed consent. The researchers diligently reviewed all questionnaires after each day and held regular meetings with the data collectors to address any issues encountered during data collection and provide prompt solutions. Data collection took place through both online self-administered surveys and in-person interviews. Alongside the online survey, data were also gathered in person at VinUniversity, Foreign Trade University, FPT University - Da Nang, and University of Economics Ho Chi Minh City. Between October and November 2023, a total of 341 students voluntarily participated in this survey.

2.5 Data processing and statistical analysis

Each completed questionnaire was assigned a unique code by the principal investigator using a pre-arranged coding sheet to minimize errors. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 27.0. Descriptive analysis, including proportions, percentages, frequency distribution, and measures of central tendency, was performed.

2.6 Ethics

The study protocol was approved by the Institutional Ethical Review Board for Biomedical Research of Vinmec International General Hospital – VinUniversity (No.57/2023/QĐ-VMEC). Participants were provided with comprehensive information regarding the study's objectives and procedures and were required to sign a written consent form. Strict measures were implemented to ensure the confidentiality of participants' personal information. Additionally, participants were explicitly informed of their right to opt out of answering any question or to withdraw from the study at any point.

3. RESULTS

Table 1 illustrates the characteristics of participants. In total, 341 students from university participated in the study. The average age of the respondents was 19 years old. The majority of the respondents (88.02%) did not identify with any religion, this may be due to the tradition of Vietnam, Catholicism (3.62%) and Buddhism (7.80%) were the most common religions reported by the respondents. A larger portion of the respondents live in urban areas (84.12%) compared to rural areas (15.88%). The most common living arrangement was an apartment or private house (40.95%), followed by living with parents or relatives (31.75%) and dormitory living (27.30%). The majority of the respondents (86.63%) reported earning money from their family. A smaller portion (55.43%) reported having personal income from part-time jobs or other sources.

Table 1. Demographic characteristics

Variables	N	%	
Age	Mean \pm SD: 19.77 \pm 1.07 (Min: 18, max: 24)		
Religion	None	302	88.56
	Catholic	10	2.93
	Buddhism	27	7.92
	Others	2	0.59
Living area	Urban	298	87.39
	Rural	43	12.61
Address	Dormitory	93	27.27
	Apartment, private house	147	43.11
	Living with parents, relatives	101	29.62
Earn money from family	Yes	300	87.98
	No	41	12.02
Have personal income (part-time jobs, ...)	Yes	198	58.06
	No	143	41.94

Table 2 shows the respondents of participants regarding knowledge about menstruation. The vast majority of respondents (98.89%) have a physiological understanding of menstruation. This suggests that the participants have accurate knowledge about the biological process of menstruation. Only a small minority (1.11%) reported confusion about menstruation.

Similarly, a high percentage of respondents (96.66%) correctly identified hormones as the cause of menstruation. However, there is a knowledge gap regarding the source of menstrual bleeding. While a substantial majority (64.90%) knew it originated from the uterus, a significant number (24.79%) incorrectly identified the vagina as the source. This finding highlights a need for educational interventions to address these misconceptions. In total, one-third of the participants reported poor knowledge of menstruation and menstrual hygiene.

Table 2. Knowledge respondents about menstruation

Variables		N = 341	% (100%)
Menstruation	Physiological	337	98.83
	Don't know	4	1.17
Menstruation cause	Hormones	331	97.07
	Don't know	10	2.93
Menstrual bleeding sources	Uterus	227	66.57
	Vagina	82	24.05
	Bladder	1	0.29
	Abdomen	0	0
	Don't know	31	9.09
Heard about menstruation before attaining menarche	Yes	203	59.53
	No	138	40.47
Know menstrual-related hygiene	Yes	281	82.40
	No	60	17.60
Know about foul smells while menstruation	Yes	207	60.70
	No	134	39.30
Menstrual bleeding is unhygienic	Yes	104	30.50
	No	237	69.50
Summary index of knowledge about menstruation	Good knowledge	228	66.86
	Poor knowledge	113	33.14

The data presented in Table 3 provides insights into the menstrual hygiene practices of the study population. Overall, most of the participants reported good practices. All respondents (100%) reported utilizing absorbent materials during menstruation, with commercially available sanitary pads serving as the sole method for all participants. This finding suggests a high level of access to and utilization of menstrual hygiene products among the students.

In terms of sanitary practices, the table reveals a positive trend. Nearly all respondents (99.44% and 93.87%) engaged in proper hygiene behaviors by washing reusable cloths with soap and water and wrapping used sanitary pads for disposal, respectively. Furthermore, all participants reported both daily bathing with soap and proper disposal of used sanitary pads during

menstruation. These findings indicate a strong adherence to recommended menstrual hygiene management practices among the student population.

Table 3. Practices respondents about menstruation

Variables	N = 341	%
Uses absorbent materials during menstruation	341	100
Uses commercially made sanitary pads as absorbent material during menstruation	341	100
Clean clothes with soap and water	339	99.41
Changing pads or clothes more than three times above during menstruation	289	84.75
Dispose used sanitary pads in proper places (bins,..)	341	100
Uses paper to dispose the pads by wrapping	320	93.84
Takes bath daily with soap during menstruation	341	100
Clean external genitalia during menstruation	339	99.41
Cleans external genitalia with water and soap during menstruation	329	96.48
Summary index of knowledge about menstruation	Good practice	261 (76.54)
	Poor practice	80 (23.46)

4. DISCUSSION

This study investigated the knowledge and practices of menstruation and menstrual hygiene among a sample of Vietnamese high school and university students. The findings revealed a generally positive outlook on menstrual hygiene practices within the population. The dominant utilization of absorbent materials, with sanitary pads being the sole method employed by all participants. This suggests a high level of access and potentially improved menstrual health management compared to studies conducted in rural areas where access to products may be lower. The high prevalence of reported sanitary practices, including daily washing of reusable cloths, frequent pad changing, and proper disposal methods, aligns with best practices outlined by organizations like the United Nations Population Fund (UNFPA) (UNFPA Supply Chain Management Unit, 2023) This finding is encouraging and suggests a level of awareness about the importance of menstrual hygiene.

Compare these results with studies conducted in

other Asian countries, research from India reports the exclusive use of hygienic methods (such as sanitary napkins, locally prepared napkins, tampons, and menstrual cups) to manage menstruation and prevent the visibility of bloodstains remains considerably low among adolescent women. Only 42% of adolescent women in rural India exclusively use hygienic methods for menstrual hygiene (Singh et al., 2022). This disparity might be attributed to socioeconomic factors, with limited access to commercially available products in rural areas. Additionally, cultural taboos surrounding menstruation may contribute to a reluctance to openly discuss the topic and seek out appropriate hygiene products. Additionally, the lack of acceptance leads to women not using sanitary hygiene products and missing school as an approach to managing menstruation (Madhusudan Gopalan, 2019). The observed differences in menstrual hygiene practices across Asian countries highlight the complex interplay of socioeconomic factors, cultural beliefs, and educational initiatives. In situations where access to commercially available products is limited, promoting the use of clean, reusable clothes alongside proper washing practices remains crucial. Additionally, culturally sensitive educational programs that address taboos and promote open communication about menstruation can significantly improve menstrual hygiene management.

The findings of this study serve as foundational data for understanding the landscape of knowledge and practices regarding menstrual hygiene in Vietnam. In Vietnam, there are fewer menstrual studies, so this baseline information not only fills a crucial gap in current understanding but also serves as a valuable resource for informing future research endeavors. The sample size is general, collected from 18 universities in three regions of Vietnam. This sample size can be representative of female students in Vietnam. Therefore, the insights of this study can inform the development of evidence-based policies and initiatives aimed at promoting menstrual health and well-being among women and girls in Vietnam.

Implications

The findings contribute to the board of information about menstrual health management, including the knowledge gaps, and practices surrounding menstrual hygiene in Vietnam and students-based settings. The adherence to menstrual care products and recommended hygiene practices among students imply a potential for wide-scale progress in menstrual health management. From this, more insights and baseline data can be added to the information pool for further monitoring and evaluation of menstrual-related initiatives in Vietnam.

Furthermore, these insights can guide the development of targeted interventions aimed at promoting menstrual health awareness and improving hygiene practices. This also highlights targeted research and intervention in rural areas. Educational initiatives can benefit

from incorporating comprehensive menstrual health education into school curricula, equipping young generations with essential information, and fostering a supportive environment for discussions about menstruation. Additionally, the study underscores the importance of continued research on menstrual health in Vietnam, encouraging future studies to explore diverse demographic groups, assess intervention effectiveness, and identify innovative approaches to advancing reproductive health equity.

The study has several limitations, which serve as a roadmap for future research endeavors. Firstly, reliance on self-reported data to assess knowledge and Practices towards menstruation among adolescent schoolgirls may introduce inaccuracies compared to observational methods. Despite efforts to minimize social desirability bias, the sensitive nature of the topic of menstrual hygiene may still influence participants' responses. Additionally, the use of a self-reported questionnaire introduces the possibility of reporting bias and recall bias. Secondly, the cross-sectional design of the study limits the ability to establish causal relationships among variables. Lastly, the adoption of a non-probability convenience sampling technique hinders the generalizability of the findings. Thus, future investigations should consider adopting a longitudinal approach, incorporating larger sample sizes with more robust methodologies and involving both mothers, male and adolescent girls.

5. CONCLUSION

The study provides further insights into the knowledge and practices of menstruation and menstrual hygiene among Vietnamese students. The observed high utilization of menstrual hygiene products and adherence to recommended sanitary practices are encouraging signs. However, further research is needed to explore the situation in rural areas and address potential cultural barriers.

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