

An Observational Study on Knowledge Attitude Practice on Menstrual Hygiene and Urinary Tract Infection in a Community.

Jyothi S Naik¹, Varsha H J², Dr Ravindra P Choudhary*³, Dr Hanumanthachar Joshi*⁴, Apoorva B⁵

^{1,2,5}Pharm D 5th year students, Sarada Vilas College of Pharmacy, Mysore, Karnataka, India.

³Assistant Professor, Department of Pharmacy Practice, SVCP, Mysuru, Karnataka.

⁴Principal, Sarada Vilas College of Pharmacy, Mysore, Karnataka, India.

Submitted: 17-12-2022

Accepted: 31-12-2022

ABSTRACT:

Background: Menstrual unhygienic practices and incomplete knowledge of menstrual hygiene in teen, women may lead to UTI and associated complications which in turn enhances treatment-related economic burden.

Aims and Objectives: To Assess KAP on menstrual hygiene, UTI, and associated risk factors

Methods: six months cross-sectional observational study conducted on 250 females from age 11 to 49 years in the urban area of Mysuru. The KAP questionnaire was prepared and validated which is then implemented. The essential data required for analyzing the KAP on menstrual hygiene and UTI were collected using suitable forms. Scores were evaluated using the statistical tool and risk factor analysis is carried out.

Results: we have found that the majority of the study population were having good knowledge (n=196, 78.4%), poor attitude (n=185, 74%), good practice (n=241, 96.4%) on menstrual hygiene and most of were having good knowledge (n=158, 63.2%), good attitude (n=206, 82.4%) and good practice (238, 95.2%) on urinary tract infection. Risk factor analysis showed occupation (p-value=0.04717) influences overall KAP in UTI.

Interpretation and conclusion: Our study showed that 44% of our study participants have UTI, hence there is a greater need for awareness programs that can help those who are unaware of menstrual hygiene practices and continuous education, counselling regarding UTI is necessary for women to be knowledgeable about it and improve their attitude and practices towards menstrual hygiene and UTI, to prevent any complicated urinary tract infections later on.

Keywords: Urinary tract infection, menstrual hygiene, risk factor analysis

I. INTRODUCTION:

Women's hygiene-related behavior during menstruation is extremely important since it affects their health by making them more susceptible to diseases of the renal system and reproductive systems (RTI). It is clear how socioeconomic status, menstrual hygiene behaviors, and RTI interact. Renal infections, RTI, and its complications affect millions of women today, and the illness frequently spreads to the pregnant woman's unborn child.

Women who are more educated about safe procedures for menstrual hygiene are less susceptible to UTI, RTI, and its effects. Increased awareness of menstruation from an early age may therefore enhance safe behaviors and lessen the pain of millions of women^[1].

Menstrual hygiene management (MHM) refers to access to menstrual hygiene products to absorb or collect the flow of blood during menstruation, privacy to change the materials, and access to facilities to dispose of used menstrual management materials. Menstrual hygiene management is how women and adolescent girls deal with their menstruation. (Good) MHM requires a minimum level of knowledge and awareness in women and adolescent girls to manage their menstruation effectively and hygienically by using a clean material to absorb or collect menstrual blood, practicing good hygiene and personal care during their period, and having access to facilities to wash or dispose of used menstrual management materials with dignity and in an environmentally responsible manner. MHM is not just about the management of the menstrual period but also the need to address societal beliefs and taboos surrounding the issue. Sufficient knowledge, guidance, and support for girls and

women in preparation for and during menstruation is also part of the definition^[2].

A urinary tract infection (UTI) is an infection in any part of the urinary system — kidneys, ureters, bladder, and urethra. Most infections involve the lower urinary tract — the bladder and the urethra. Women are at greater risk of developing a UTI than men. Infection limited to the bladder can be painful and annoying. However, serious consequences can occur if a UTI spreads to the kidneys. Symptoms of UTIs include A burning feeling while urinating, A frequent or intense urge to urinate, and passing small amounts of urine each time, Cloudy and Foul smell of urine, which may sometime contain blood, Fever, chills, and tiredness, Pain or pressure in the back or lower abdomen

Treatment: Antibiotics are the first-line treatment for urinary tract infections. Drugs recommended for simple UTIs include: Trimethoprim/sulfamethoxazole, Fosfomycin, Nitrofurantoin, Cephalexin, and Ceftriaxone. Antibiotics like fluoroquinolones — such as ciprofloxacin, levofloxacin, and others — isn't recommended for simple UTIs, for complicated UTIs or kidney infection, the doctor might prescribe a fluoroquinolone medicine only if there are no other treatment options. Often, UTI symptoms will reduce within a few days of starting treatment. But you should continue antibiotics for a week or more. The patient should complete the entire course of antibiotics. For an uncomplicated UTI doctor may recommend a shorter course of treatment, such as taking an antibiotic for one to three days. The doctor may also prescribe an analgesic that numbs the bladder and urethra to relieve the burning sensation while urinating, but the pain usually is relieved soon after starting an antibiotic^[3].

II. MATERIALS AND METHODS:

Study design: It is a cross-sectional observational study.

Sources of data: All the relevant and necessary data were collected through direct interviews of participants through questionnaires.

Study population: 250 women.

Study period: This study was conducted over six months among in-women in the community from March 2022 to August 2022.

Inclusion Criteria:

- Girls and women who have attained menarche.
- Girls and women who are willing to participate in the study.

Exclusion Criteria:

- Geriatric women.
- Women who have attained menopause.

Site of study: The study was carried out in the residential area of MYSURU.

Study Tools:

- a. Informed Consent Form: Informed consent is a process by which a subject voluntarily confirms the participant's willingness to participate in this study, after having been informed of all survey aspects relevant to the subject's decision to participate. It is documented using a written, signed, and dated informed consent form.
- b. KAP questionnaire: A Knowledge, Attitude, and Practices (KAP) survey is a quantitative method (predefined questions formatted in standardized questionnaires) that provides access to quantitative and qualitative information. It is a 24-points questionnaire with 4 knowledge-based questions, 4 attitude-based questions, and 4 practice-based questions on both menstrual hygiene, UTI was scored and analyzed.
- c. Patient Data Collection Form: It included demographic details like name, age, weight, social history, past medical history, past medication history, marital status, menstrual history occupation address, and height.
- d. Analysis: The quantitative variables were described using their number and mean. Microsoft word and Excel have been used to generate graphs, tables, etc. The Chi-square test, mean, and P-value were used in our study.

III. RESULT:

Out of 250 female subjects, the average age of the participants was 23 years, while the majority [n=35, 14%] of them were of age 20 years. A total of 227 [90.8%], subjects had a regular menstrual history. A majority of them were unmarried [n=192, 76.8%] and a majority of them were unemployed [n=183, 73.2%]. The distribution of participants based on demographics is presented in table 1.

Table 1: Distributions of subjects based on demographics.

Demographics		Numbers (%) (n=250)
Age group	11-30 yrs.	220 (88%)
	31-49 yrs.	30 (12%)
Occupation	Employed	67 (26.8%)
	Unemployed	183 (73.2%)
Economic status	Middle	235 (94%)
	Upper middle and High	15 (6%)
Marital status	Married	58 (23.2%)
	Unmarried	192 (76.8%)

KAP analysis on menstrual hygiene:

There are 4 Knowledge questions, 4 Attitude questions, and 4 Practice questions in our KAP questionnaire on menstrual hygiene. The KAP questionnaire was implemented for all the participants involved in our study (n=250), and responses is taken and scored. The overall score for the knowledge, attitude, and practice questionnaire are 12 points i.e. (4, 4, and 4 points respectively).The mean of the knowledge questionnaire was found to be 3.212 points, the mean of the attitude questionnaire score was found to be 2.316 points and the mean of the practice questionnaire score was found to be 3.72 points. The mean of the overall KAP questionnaire score was found to be 9.25 points and around 92.8% of the study population (n= 232) were having good overall KAP scores.We have found that the majority of the study population were having good knowledge(n=196,78.4%), poor attitude(n=185,74%), and good practice (n=241,96.4%) on menstrual hygiene.

KAP analysis on urinary tract infections:

12 questions containing the KAP questionnaire on urinary tract infection was implemented to all the study participant (n=250), and response is taken and scored. The overall score for the knowledge, attitude, and practice questionnaire will be 12 points (4, 4, and 4 points respectively).The mean of knowledge, attitude, and practice questionnaire was found to be 2.724, 2.952, and 3.132 respectively.The mean overall KAP questionnaire score was found to be 8.808 and around 85.2% of the study population (n= 213) were having good overall KAP scores.we have found that the majority of the study population were having good knowledge(n=158,63.2%), good attitude (n=206, 82.4%), and good practice (238, 95.2%) on urinary tract infection.

Risk factor Analysis:

The probable risk factors such as age, occupation, economic status, and marital status were considered for analysis, the following results were obtained.

Table 2: The details of various factors influencing Overall KAP of menstrual hygiene.

Factors		Overall KAP scores of menstrual hygiene		Chi-square value	p-value
		0-6 (poor)	7-12 (good)		
Age	12-30 (n=220)	5	215	0.1258	0.99996
	31-49(n=30)	1	29		
Occupation	Employed (n=69)	1	68	0.3676	0.985031
	Unemployed (n=181)	5	176		
Economic status	Rich/ upper middle (n=15)	0	15	0.385	0.9993
	Middle class (n=235)	6	229		
Marital status	Married (n=58)	1	57	0.14650	0.9974
	Unmarried (n=192)	5	187		

Note: Significance level: ≤ 0.05 ,
 (*) indicates results are significant.

The occupation, economic status of the subject, age of the subject, and marital status of the subject does not show a statistically significant p-value and it won't influence overall KAP on menstrual hygiene.

Table 3: The details of various factors influencing the Overall KAP of UTI.

Factors		Overall KAP scores of UTI		Chi-square value	p-value
		0-6 (poor)	7-12 (good)		
Age	12-30 (n=220)	32	188	0.094169	0.999983
	31-49(n=30)	5	25		
Occupation	Employed (n=69)	18	51	3.6982	0.04717*
	Unemployed (n=181)	19	162		
Economic status	Rich/ upper middle (n=15)	0	15	0.596684	2.77169
	Middle class (n=235)	37	198		
Marital status	Married (n=58)	15	43	0.119496	7.3286
	Unmarried (n=192)	22	170		

Note: Significance level: ≤ 0.05 ,
 (*) indicates results are significant.

The occupation (p-value=0.04717) shows a statistically significant value and may directly influence on overall KAP of UTI. While the economic status of the subject, age of the subject, and marital status of the subject does not show statistically any significant p-value.

INTERPRETATION:

According to our study, 97.6% (n= 244) of the participants had a good KAP score and 2.4% (n=6) had a poor KAP score on menstrual hygiene. 85.2% (n=213) of the participants of our study had a good KAP score and 14.8% (n=37) had a poor KAP score for Urinary tract infection. While using KAP scores to analyze risk factors, we found that occupation is a risk factor that affected the overall KAP scores on UTI (p value=0.04717), i.e., the occupation of women played a significant role in getting higher KAP scores.

Our study results showed that a majority of 63.2% of the participants were aware of

menstruation before attaining menarche; this is similar to the study conducted by Juyal R et al where 64.5% of the female participants in their study knew about menstruation before menarche. [4] Whereas in another study conducted by Subhash B Thakre et al, only 36.95% of the participants knew about menstruation before menarche. [5] Our study results showed that a majority of 96.4% of the participants had a Good menstrual hygiene practices, this is higher when compared to the study conducted by Maxwell Tii Kumbeni et al, where the results showed that 61.4% of the girls practiced good menstrual hygiene. [6] In a study conducted by Juyal R et al, only 64% of the participants were bathing daily during their period and 94% were washing their genitalia with water, [7] in contrast to this 90% of the participants of our study were bathing regularly during their menstrual period and 94.4% of the female participants were washing their genitalia with water.

In a previous study conducted by Mona Alshahrani et al, 80.5% of the study participants knew what is UTI, which is comparatively less than our study, where 76.4% of the study participants

knew what UTI is.^[8] And in our study, 62.4% of the study participants had knowledge about the causes of UTI which is very high when compared to the same study conducted by Mona Alshahrani et al where only 12.6% of participants knew about the causes. In the same study by Mona Alshahrani et al, 65.5% of women had overall good knowledge regarding UTI, which is almost similar to our study results where we found that 63% of the participants had a good knowledge of urinary tract infections. As for perception and attitude towards UTI, in the previous study, 49.9% of women had good perception and attitude^[8] while in our study a majority of 82% of the study participants had a good attitude towards UTI.

Almost 3/4th of the study population had a good knowledge regarding menstrual hygiene and a majority of the participants had good menstrual hygiene practices. This may be the result of various advertisements and other menstrual hygiene-related campaigns being conducted. Further awareness programs need to be constantly arranged so that they can help those who are unaware of menstrual hygiene practices. Our results also showed that a majority of the participants had a good knowledge, attitude, and practice towards urinary tract infections. Continuous education and counseling regarding UTIs are necessary for women to be knowledgeable about it and improve their attitude and practices towards UTIs, to prevent any urinary tract infections later on.

ACKNOWLEDGEMENT:

It is genuine pleasure to express our sincere thanks and gratitude to **Dr. Charan C S**, Associate professor, Sarada Vilas College of Pharmacy, Mysuru.

ABBREVIATIONS:

UTI- Urinary tract infection

RTI- Reproductive tract infection

KAP-Knowledge Attitude Practice

MHM-Menstrual hygiene management

REFERENCE:

- [1]. Available from: [Internet]<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2784630/>
- [2]. Available from: [Internet]https://en.wikipedia.org/wiki/Menstrual_hygiene_management
- [3]. Available from: [Internet]<https://www.mayoclinic.org/diseases-conditions/urinary-tract-infection/diagnosis-treatment/drc-20353453#dialogId36164783>
- [4]. Juyal R, Kandpal SD, Semwal J, Negi KS. Practices of menstrual hygiene among adolescent girls in a district of Uttarakhand. *Indian journal of community health*. 2012 Jun 30;24(2):124-8.
- [5]. Thakre SB, Thakre SS, Reddy M, Rathi N, Pathak K, Ughade S. Menstrual hygiene: knowledge and practice among adolescent school girls of Saoner, Nagpur district. *J Clin Diagn Res*. 2011 Oct 1;5(5):1027-33.
- [6]. Kumbeni MT, Otupiri E, Ziba FA. Menstrual hygiene among adolescent girls in junior high schools in rural northern Ghana. *The Pan African Medical Journal*. 2020;37.
- [7]. Juyal R, Kandpal SD, Semwal J, Negi KS. Practices of menstrual hygiene among adolescent girls in a district of Uttarakhand. *Indian journal of community health*. 2012 Jun 30;24(2):124-8.
- [8]. Alshahrani M, Alzahrani AB, Alzahrani AA, Alqhtani AM, Alwabel HH, Asiri KM, Mohammed Y, Abumelha MD, Alshahrani RS, Alshahrani AA, Alhussain RM. Knowledge, Attitude and Practice of Urinary Tract Infection among Female in Aseer Region. *Bahrain Medical Bulletin*. 2022 Mar;44(1).