

KNOWLEDGE, ATTITUDE, AND PRACTICES (KAP) OF MENSTRUAL HYGIENE AMONG THE MOTHER-DAUGHTER DUO OF THE NOCTES OF ARUNACHAL PRADESH, INDIA

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Abstract: Menstrual hygiene is one of the most important aspects that girls and women need to take care of themselves. However, knowledge passed down from one generation to the next can shape the overall understanding of menstrual hygiene management. This study attempts to understand and compare the knowledge, attitudes, and practices regarding menstrual hygiene among mother-daughter pairs of the Nocte tribe of Arunachal Pradesh. We employed a community-based cross-sectional study among 130 individuals, i.e., 65 mother-daughter pairs. Data on the knowledge, attitudes, and practices regarding menstrual hygiene among mothers and their daughters were collected from different villages in Tirap district. Among the daughters, 76.92% had knowledge that menstruation is a biological event, and only 55.38% of the mothers were aware of the biological phenomena behind the process of menstruation. Among the daughters, 89.23% and 84.61% of mothers had knowledge about menstruation before they experienced menarche. The use of sanitary pads was 61.53% among daughters and 27.69% among mothers. The use of both cloth and sanitary pads was 43.07% among mothers and 38.46% among daughters. Overall, the results show that daughters had better knowledge of menstruation, and the knowledge transferred from mother to daughter was evident. Mothers may have played

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significant role in how the daughters learn about menstruation even before their menarche. The generational gap regarding knowledge, attitudes and practices was evident in the study.

Keywords: Menstruation, hygiene, KAP study, Mother-Daughter Duo, Nocte tribe, Arunachal Pradesh

Introduction

In healthy adolescent girls and premenopausal adult women, menstruation is a natural and beneficial monthly occurrence (Sumpter & Torondel, 2013). The monthly menstrual cycle in women involves the normal discharge of blood and tissue from the uterine lining through the vagina (Devi and George, 2023). One of the most significant changes that females undergo during adolescence is the onset of menstruation, known as menarche (Dasgupta and Sarkar, 2008). It is often recognised as a special period that signifies the transition from girlhood to womanhood (Kumari et al., 2021). The age of menarche varies from person to person and is influenced by geographic region, nutrition, lifestyle, ethnicity, maternal education level, and other factors (Esmaelpour et al., 2022). Age at menarche often ranges from 8 to 16 years, with a median of about 13 years in the low-income population (Sumpter & Torondel, 2013). The termination of menstruation is called menopause. It is characterised by a decline in fertility and ovarian activity, as well as a variety of symptoms such as irregular menstrual cycles. While this can vary from person to person, menopause often occurs around 40 years of age (Ceylan & Özerdoğan, 2015). Sexual and reproductive health issues are becoming increasingly prevalent worldwide, as per the World Health Organisation (WHO, 2022). Menstrual hygiene is a critical issue that negatively impacts the health and empowerment of women and girls of reproductive age (Shah et al., 2023).

Maintaining hygiene during menstruation is extremely crucial in order to avoid any reproductive health issues. Unhygienic menstrual practices and having limited knowledge regarding menstruation might increase the risk of getting reproductive tract infections (RTI), urinary tract infections (UTI) and other similar risks associated with unhygienic menstrual practices. Women worldwide have devised their own distinctive strategies for managing menstruation, which may differ from one nation to another and even within countries. The effectiveness of these strategies is contingent upon the individual's personal preferences, economic status, available resources, local traditions, cultural beliefs, and level of education or experience. Particularly in impoverished environments, women frequently manage menstruation

through methods that may be unhygienic or inconvenient (Sumpter & Torondel, 2013).

The Millennium Declaration and the International Conference on Population and Development did not include menstrual health as a topic. The Sustainable Development Goals do not explicitly state either of these. Nevertheless, grassroots workers and activists from the global South have prioritised it on the global health, education, human rights, and gender equality/equity agendas. This has underscored the reports of women's and girls' experiences of shame and embarrassment, as well as the obstacles they encounter in managing their periods due to their lack of access to the necessary resources. (WHO, 2022). The study conducted by Yadav et al (2018) in Nepal, which has a high prevalence of "*Chhaupadi*," a traditional practice in which females are prohibited from touching anything and are compelled to live in isolation during menstruation, underscores the numerous societal taboos associated with menstruation. Lack of knowledge regarding menstruation can have various negative impacts on the lives of women.

Menstrual health and hygiene remain one of the most overlooked aspects of women's well-being, often overshadowed by other health priorities. The present study aimed to understand the Knowledge, Attitudes, and Practices (KAP) regarding menstrual hygiene among mother-daughter pairs of the Nocte tribe in Tirap district, Arunachal Pradesh. The Noctes are one of the major indigenous tribes of Tirap district. They are the ethnic Naga tribe known for their distinct culture, language, and traditions. Understanding of menstrual hygiene is essential because cultural taboos, lack of awareness, inadequate resources, etc., can significantly affect women's overall health, which in turn can have a large impact on their education and quality of life.

Methodology

Study design and population

It is a community-based cross-sectional study conducted in Tirap district, Arunachal Pradesh. Participants, i.e., mothers and their daughters, were purposively selected from different villages in the Tirap district for the study. A total of 130 individuals, i.e., 65 mother-daughter pairs, were included in the study. The mean age of the daughter is 12.5 years, and the mean age of the mother is 35 years.

Data Collection

A schedule was designed, pretested, and used to collect data from participants regarding their Knowledge, Attitudes, and Practices (KAP) on

menstrual hygiene. A door-to-door visit was conducted to collect information for the study mentioned. The Borduria Secondary School in the Tirap district was also visited to collect information from the girls who are studying there. The inclusion criteria were post-menarcheal daughters aged 10-15 years, and for mothers, pre-menopausal women aged 30-40 years. Informed consent was obtained from each participant by explaining the objectives and benefits of the studies before data collection. Descriptive statistics were calculated using MS Excel.

Results

The demographic profile of the respondents is shown in Table 1. It demonstrates the educational qualification, occupational status and religion of the mothers and their respective daughters. The majority of mothers (41.54%) attended secondary education, followed by those with middle school qualification (38.46%), and 16.92% have attended primary education. The remaining (3.08%) are undergraduate. Among the daughters, the majority (58.46%) have completed higher secondary education, 21.54% have secondary education, and 20.00% have attended middle school. When it comes to occupation, the majority of the mothers (70.77%) are engaged in farming, followed by housewives (23.08%), private business (3.08%), and government employees (3.08%). Most mothers and daughters are Catholic (84.61%), while 15.38% are Baptist.

Table 1: Socio-demographic profile of the respondents

<i>Variable</i>	<i>Mother</i>		<i>Daughter</i>	
	N	%	N	%
<u>Educational level</u>				
Primary	11	16.92	0	0.00
Middle school	25	38.46	13	20.00
Secondary	27	41.54	14	21.54
Higher secondary	0	0.00	38	58.46
Under graduate	2	3.08	0	0.00
<u>Occupational status</u>				
Housewife	15	23.08	0	0.00
Business women	2	3.08	0	0.00
Government/ private employee	2	3.08	2	3.08
Farmer	46	70.77	0	0.00
Student	0	0.00	63	96.92
<u>Religion</u>				
Catholic Christian	55	84.61	55	84.61
Baptist Christian	10	15.38	10	15.38

The average age of mothers at menarche is 13.5 years, and the average age of daughters at menarche is 13.2 years. This comparison shows an earlier onset of menarche among the daughters compared with the previous generation or their mother's generation, indicating a secular trend. The data in Table 2 represent the density and the duration of menstruation. The findings show that the majority of mothers (50.77%) and an even higher number of daughters (70.76%) report a medium menstrual flow density, indicating that moderate flow is the most common across both generations. Regarding the duration of menstruation, most mothers (38.46%) reported a cycle lasting 3 days, whereas 30.7% of daughters reported a cycle lasting 5 days. This variation demonstrates that while the general patterns of menstrual flow are similar, the duration tends to be relatively longer among the daughters, indicating possible changes in menstrual characteristics over time.

Table 2: Comparison on Nature of Menstruation

<i>Variable</i>	<i>Mother</i>		<i>Daughter</i>	
	No.	%	No.	%
<u>Density</u>				
Heavy	16	24.62	11	16.92
Medium	33	50.77	46	70.76
Light	16	24.62	8	12.30
<u>Duration</u>				
3 days	30	46.15	13	20.10
4 days	17	26.15	21	23.20
5 days	9	13.85	20	30.70
6 days and above	9	13.85	11	16.92
<u>Periodicity</u>				
Regular	58	89.23	46	70.76
Irregular	7	10.76	19	29.23

A comparison of knowledge, attitudes, and practices among mothers and daughters is shown in Table 3. Here, the findings show that 55.38% of the mothers were aware of menstruation as a physiological process, while 44.61% reported not knowing the biological reasons behind it. In contrast, among the daughters, 76.92% recognised menstruation as a biological/physiological process, while 23.07% reported a lack of knowledge. Awareness prior to menarche was reported by the majority of the mothers (84.61%) and daughters (89.23%). However, the source of information differed for both.

Among mothers, peers were the main source of knowledge regarding menstrual hygiene for 46.15%, whereas for the majority of daughters (52.30%), their mothers were the main source of knowledge. It was observed that a majority of the mothers were unaware of the source of menstrual bleeding. Only 15.38% of mothers were aware of the correct source of menstrual bleeding, and 84.61% were unaware. Among the daughters, 44.61% were aware of the source of menstrual bleeding. It is evident from the table that the majority of the mothers (90.76%) discussed any menstruation-related issues with their respective partners. Whereas, a majority of the daughters (63.07%) discuss with their mothers. There are no restrictions on household chores during menstruation for both the mother and the daughter.

Table 3: Comparison of Knowledge of Menstrual Hygiene

Variable	Mother		Daughter	
	N	%	N	%
<u>Belief Regarding the Cause of Menstruation</u>				
Biological/ Physiological	36	55.38	50	76.92
Curse/ Disease	0	0.00	0	0.00
Don't know	29	44.61	15	23.07
<u>Awareness about menstruation before menarche</u>				
Yes	55	84.61	58	89.23
No	10	15.38	7	10.76
<u>Awareness of menstrual hygiene</u>				
Yes	56	86.15	56	86.15
No	9	13.84	9	13.84
<u>Source of knowledge on Menstrual hygiene</u>				
Mother	9	13.84	34	52.30
Siblings	10	15.38	10	15.38
Peers	31	47.69	17	26.15
Self-experience	15	23.06	4	6.14
<u>Belief about the source of menstrual bleeding</u>				
Uterus	10	15.38	30	46.15
Urinary bladder	0	0.00	1	1.54
Don't know	55	84.61	34	52.31

Table 4: Comparison of Attitude and Practices of Menstrual Hygiene

<i>Variable</i>	<i>Mother</i>		<i>Daughter</i>	
	N	%	N	%
<u>Menstruation as taboo</u>				
Yes	0	0.00	0	0.00
No	65	100	65	100
<u>Can be discussed freely</u>				
Yes	59	90.76	56	86.15
No	6	9.23	9	13.84
<u>If required, it can be discussed with</u>				
Mother	5	7.69	42	64.62
Daughter	13	20.0	0	0.00
Peers	10	15.38	11	16.92
Partner	37	56.92	1	1.54
Siblings	0	0.00	11	16.92
<u>Restrictions in day-to-day activities</u>				
Household chores	0	0.00	0	0.00
Consumption of certain foods	8	12.30	6	9.23
No restriction	57	87.70	59	90.76
<u>Feelings during menstruation</u>				
Low self esteem	29	44.62	34	52.30
Negative body image	0	0.00	0	0.00
Humiliation	0	0.00	0	0.00
None	36	53.38	31	47.69
<u>Visited health care related to menstruation for</u>				
Amenorrhea	4	6.15	14	21.54
dysmenorrhea	1	1.54	2	3.08
None	60	92.30	49	75.38
<u>Absorbent used</u>				
Sanitary pads	18	27.69	40	61.53
Cloth	19	29.23	0	0.00
Both	28	43.07	25	38.46
<u>Cleaning of genitals</u>				
Plain water	34	52.30	23	35.38
Intimate wash	2	3.08	17	26.15
Soap	29	44.62	25	38.46
<u>Special provision for disposal of used absorbent at school/office/home</u>				
Yes	6	9.23	6	9.23
No	59	90.76	59	90.76
<u>Mode of disposal of used absorbent</u>				
Burn	46	70.76	47	72.30
Dump	6	9.23	17	26.15
Wash and burn	13	20.0	1	1.54

Discussion

In the present study, the mean age of menarche among the mothers and daughters is observed to be 13.5 years and 13.2 years, respectively, which is slightly lower than the other tribes from the same state, like Sartang (13.61) and Galo (13.92), but higher than the Adi (12.3) and Miji (12.98) (Asghar & Amung, 2020; Asghar et al., 2016). The present study reveals generational differences in knowledge, attitudes, and practices regarding menstrual hygiene among mothers and daughters in villages of Tirap district. The findings demonstrate that the daughters generally had greater knowledge of menstruation than their mothers. More than three-fourths (76.92%) of daughters correctly understood menstruation as a biological process, while only 55.38% of mothers shared this awareness. This indicates generational improvement, wherein younger generations are gradually gaining more knowledge, likely due to increased access to education and other awareness-raising platforms. Awareness prior to menarche was also encouraging, with the majority of both mothers (84.61%) and daughters (89.23%) reporting some knowledge before their first menstruation. Also, regarding knowledge of menstrual hygiene, it is evident that a significant proportion of mothers (46.15%) first received information from peers, suggesting that many initially relied on information passed on by peers, which may not always be accurate. In contrast, for the majority of daughters (52.30%), the mothers appeared to be the primary source of knowledge regarding menstrual hygiene. This shows a positive shift towards parental guidance and intra-family communication. With this, there is an increased need to improve maternal knowledge so that accurate information continues to be passed down and misconceptions are minimised across generations.

When considering the attitude towards menstruation, it is encouraging that neither mothers nor daughters viewed menstruation as taboo, and most felt comfortable talking about it. However, a considerable proportion of daughters expressed feelings of low self-esteem during menstruation, highlighting the need for more emotional and psychological support around menstrual health. Regarding practices, the results reflect a generational shift toward using sanitary pads. While only 27.69% of mothers reported using only sanitary pads, a much higher proportion of daughters (61.53%) relied on them. Over 38.46% of daughters use both sanitary napkins and cloth as absorbents during menstruation, whereas 43.07% of mothers use both

cloth and sanitary pads as absorbents during menstruation. This combination usage of both cloth and sanitary pads indicates that traditional practices continue alongside modern methods. The reasons behind this may include economic constraints, product availability, or cultural comfort with familiar practices. Genital hygiene practices also differed between the two groups. For the purpose of cleaning the genitals during menstruation, 35.38% of girls use plain water, 26.15% use intimate wash, and 38.46% use soap to clean the genitals. Among mothers, the majority (52.30%) use plain water, and only 3.07% use intimate wash. This reflects changing preferences driven by modernisation and exposure to newer, more contemporary products. This also raises the need for awareness of safe and healthy cleaning practices.

Overall, the study shows that while daughters demonstrate improved knowledge and hygiene practices compared to their mothers, reflecting the positive changes that have taken place over the past generation. This generational shift indicates greater openness, improved access to menstrual products and wider exposure to modern hygiene-related products among the younger cohort. The study also underscores the pivotal role of mothers as the primary sources of information, and thus empowering them with accurate knowledge will have a direct positive impact on the younger generation. However, the study focuses on the rural area and does not cover the urban area. Comparing rural and urban populations may reveal other important aspects of menstrual hygiene practices.

Conclusion

Menstruation is an essential process that occurs naturally in females after reaching puberty. It is important that every girl receives the right education on the biological factors of menstruation, its significance, and, most importantly, proper menstrual hygiene practices. In this study, it is evident that the knowledge transferred by the mother plays a crucial role in shaping their daughter's knowledge, attitude and practices regarding menstruation. Hence, the mother's education is equally important, and, as the main informant regarding menstruation for most girls, poor education may inadvertently lead her to pass on incorrect or misleading information to her daughter, potentially leading to misconceptions and improper hygiene practices.

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References

- Asghar, M., & Amung, R. (2020). Reproductive Profile of Two Lesser-Known Tribes of Arunachal Pradesh – Miji and Sartang. *Antrocom Journal of Anthropology*, 16(2):153-160.
- Asghar, M., Basar, E., Savetry, M., & Nonang, P. (2016). Preference of Son and Reproductive Profile of Three Endogamous Tribes of Arunachal Pradesh, India. *Eurasian Journal of Anthropology*, 7:29-36.
- Ceylan, B., & Özerdoğan, N. (2015). Factors affecting age of onset of menopause and determination of quality of life in menopause. *Journal of the Turkish-German Gynecological Association*, 16(1), 43–49. <https://doi.org/10.4274/jtgga.79836>
- Dasgupta, A., & Sarkar, M. (2008). Menstrual hygiene: How hygienic is the adolescent girl? *Indian Journal of Community Medicine*, 33(2), 77. <https://doi.org/10.4103/0970-0218.40872>
- Devi, I., & George, S. (2023). Menstrual health and hygiene management among female college students and their mothers in Thoothukudi district, Tamil Nadu, India. *International Journal of Community Medicine and Public Health*, 10(10), 3815–3821. <https://doi.org/10.18203/2394-6040.ijcmph20233121>
- Esmaelpour, A., Sharma, M., Mirghafourvand, M., Pourrazavi, S., & Allahverdipour, H. (2022). Mother-Daughter's relationship with menstrual hygiene and premenstrual symptoms in Iranian teenage girls. *Journal of Education and Community Health*, 9(3), 140–147. <https://doi.org/10.34172/jech.2022.21>
- Khanna, A., Goyal, N. R., & Bhawsar, R. (2005). Menstrual practices and reproductive problems. *Journal of Health Management*, 7(1), 91–107. <https://doi.org/10.1177/097206340400700103>
- Shah, S. F., Punjani, N. S., Rizvi, S. N., Sheikh, S. S., & Jan, R. (2023). Knowledge, attitudes, and practices regarding menstrual hygiene among girls in Ghizer, Gilgit, Pakistan. *International Journal of Environmental Research and Public Health*, 20(14), 6424. <https://doi.org/10.3390/ijerph20146424>
- Sumpter, C., & Torondel, B. (2013). A systematic review of the health and social effects of menstrual hygiene management. *Plos One*, 8(4), e62004. <https://doi.org/10.1371/journal.pone.0062004>
- World Health Organization. (2022). WHO statement on menstrual health and rights: 50th session of the Human Rights Council Panel discussion on menstrual hygiene management, human rights and gender equality.
- Yadav, R. N., Joshi, S., Poudel, R., & Pandeya, P. (2018). Knowledge, attitude, and practice on menstrual hygiene management among school adolescents. *Journal of Nepal Health Research Council*, 15(3), 212–216. <https://doi.org/10.3126/jnhrc.v15i3.18842>