"A Study on Menstrual Hygiene Awareness and Its Relationship with Academic Performance among Adolescent Girls"

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Abstract

The present study aimed to assess the relationship between menstrual hygiene awareness and academic performance among adolescent girls, with a focus on the influence of socio-demographic and economic factors. A total of 60 adolescent students aged 10–18 years were selected through purposive random sampling. Data were collected using a structured questionnaire covering socio-demographic characteristics, socio-economic background, menstrual hygiene awareness, and academic performance. Descriptive statistics such as frequency and percentage were used to summarize the data, while Pearson's correlation coefficient was applied to determine relationships among key variables.

The results revealed that a majority (96.6%) of respondents belonged to the 15–18 age group, with most (93.3%) residing in rural areas and belonging to low- to middle-income families. About 60% of respondents demonstrated a high level of menstrual hygiene awareness, while 75% showed high academic performance. A significant positive correlation was found between menstrual hygiene awareness and academic performance ($r = .314^*$, $p < 0.05$), suggesting that better awareness is associated with improved academic outcomes. The findings highlight the importance of menstrual hygiene education in promoting adolescent health and enhancing academic achievement.

The study concludes that strengthening menstrual hygiene awareness programs and integrating health education into the school curriculum can foster better learning environments and support the overall development of adolescent girls.

Keywords:

Menstrual hygiene, Adolescents, Academic performance, Socio-economic status, Awareness, Health education.

Introduction

Adolescence is a crucial stage of human growth and development characterized by rapid physical, emotional, and psychological changes. During this phase, girls experience menarche, which marks the onset of reproductive maturity. Despite being a natural biological process, menstruation continues to be associated with taboos, misconceptions, and stigma in many parts of India. Due to inadequate knowledge, cultural barriers, and lack of proper facilities, many adolescent girls practice poor menstrual hygiene, which can lead to infections, discomfort, and absenteeism from school (Kumar et al., 2019).

Menstrual hygiene management (MHM) involves the use of clean materials to absorb or collect menstrual blood, regular changing of absorbents, proper disposal of used products, and maintenance of personal cleanliness and privacy during menstruation. Poor menstrual hygiene practices can cause reproductive tract infections (RTIs) and other health issues that hinder academic engagement and overall quality of life (UNICEF, 2020). Research shows that adolescent girls with better menstrual hygiene knowledge and access to facilities are more likely to attend school regularly and perform better academically (Singh, Sharma, & Kaur, 2021).

Education is a key determinant of adolescent empowerment, yet it is often affected by socio-demographic and health-related factors. Several studies have demonstrated a strong connection between health awareness, socio-economic status, and academic achievement (Rani & Devi, 2020; Sharma & Kaur, 2018). In rural areas, especially, limited access to information and sanitary materials can restrict girls' educational participation and confidence (Patil, More, & Naik, 2020).

Given these challenges, understanding the relationship between menstrual hygiene awareness and academic performance becomes vital. The present study, therefore, aims to analyze how socio-demographic and economic factors influence menstrual hygiene awareness among adolescent girls and how this awareness, in turn, affects their academic outcomes. The findings of this study are expected to contribute to the design of effective school-based health and hygiene programs that promote both educational success and adolescent well-being.

Study objective s

- To study the socio-demographic and economic background of adolescent students.
- To assess their level of awareness regarding menstrual hygiene.
- To evaluate their academic performance.
- To analyse the relationship between menstrual hygiene awareness and academic performance.

Data Collection Procedure

The data for the present study were collected from a total of 60 adolescent students aged between **10 to 18 years**. The respondents were selected through **purposive random sampling**, ensuring representation from different educational levels (SSLC, PUC, and Degree) and both **rural and urban** backgrounds. A **structured questionnaire** was used as the primary tool for data collection.

The questionnaire consisted of both **close-ended and multiple-choice questions**, designed to gather information under the following categories:

1. **Socio-demographic details** (age, class, residence, family size, birth order, language, and health status)
2. **Socio-economic profile** (income level, type of house)
3. **Menstrual hygiene awareness** (knowledge, practices, and attitude)
4. **Academic performance** (self-reported grades and achievement level)

Statistical Analysis

The collected data were carefully **coded, tabulated, and analyzed** using **descriptive and inferential statistical techniques**.

- **Descriptive statistics** such as **frequency, percentage, and mean** were used to summarize socio-demographic characteristics, economic details, and levels of menstrual hygiene awareness and academic performance (Tables 1–4).

- **Inferential statistics** were applied to identify relationships between key variables. Specifically, the **Pearson's correlation coefficient (r)** was used to determine the association between **menstrual hygiene awareness, socio-economic status, language spoken, and academic performance** (Table 5).
- A **significance level of 0.05 and 0.01 (2-tailed)** was considered for interpreting correlation results.
- All analyses were performed using **Microsoft Excel and SPSS (Statistical Package for Social Sciences)** for accuracy and clarity.

Table 1: Socio-Demographic Profile of the Selected Respondents (N = 60)				
VARIABLES	LEVELS	AGE(IN YEARS)		TOTAL
		10-15YRS	15-18YRS	
AGE	-	2(3.3)	58(96.6)	60(100)
CLASS	SSLC	2(3.3)	-	2(3.3)
	PUC	0	10(16.6)	10(16.6)
	DEGREE	0	48(80)	48(80)
RESIDENT	RURAL	0	56(93.3)	56(93.3)
	URBAN	2(3.3)	2(3.3)	4(6.6)
FAMILY MEMBERS	1-4 MEMBERS	0	45(75)	45(75)
	5-8 MEMBERS	2(3.3)	11(18.3)	13(21.6)
BIRTH ORDER	FIRST BORN	2(3.3)	36(60)	38(63.3)
	SECOND BORN	-	7(11.6)	7(11.6)
	THIRD BORN	-	8(13.3)	8(13.3)
	MORE THAN THIRD BORN	-	7(11.6)	7(11.6)
LANGUAGE SPOKEN	SINGLE	2(3.3)	53(88.3)	55(91.6)
	BILINGUAL	-	5(8.3)	5(8.3)
HEALTH PROBLEM	YES	-	4(6.6)	4(6.6)
	NO	2(3.3)	54(90)	56(93.3)
(Figure in the parenthesis indicate percentile)				

The table shows that most of the respondents (96.6%) were in the age group of **15–18 years**, and only **3.3%** were between **10–15 years**. About **80%** of them were **degree students**, **16.6%** were studying **PUC**, and **3.3%** were in **SSLC**.

A majority (**93.3%**) lived in **rural areas**, while **6.6%** were from **urban areas**. Most respondents (**75%**) belonged to families with **1–4 members**, and **21.6%** had **5–8 members**.

Regarding birth order, **63.3%** were **first-born**, **11.6%** each were **second-born** or **only child**, and **13.3%** were **third-born**.

About **91.6%** spoke a **single language**, while **8.3%** were **bilingual**. In terms of health, **93.3%** had **no health problems**, and **6.6%** reported having some **health issues**.

Table 2: Economic Profile and Housing Details of Respondents

VARIABLES	LEVELS	AGE(IN YEARS)		TOTAL
		10-15yrs	15-18yrs	
INCOME	LESS THAN - ₹10000	-	25(41.6)	25(41.6)
	₹10001-₹25000	-	25(41.6)	25(41.6)
	₹25001-₹50000	2(3.3)	7(11.6)	9(15)
	ABOVE ₹50000	1	1(1.6)	1(1.6)
TYPE OF HOUSE	OWN	1(1.6)	56(93.3)	57(95)
	RENT	1(1.6)	2(3.3)	3(5)

Table 2 presents the distribution of respondents by income level and type of house across two age groups (10–15 years and 15–18 years).

The majority of respondents belong to the 15–18 years age group. About 41.6% of the respondents each fall under the income categories of less than ₹10,000 and ₹10,001–₹25,000, indicating that most respondents come from **low- to middle-income** families. A smaller proportion (15%) belongs to the ₹25,001–₹50,000 income group, while only 1.6% of respondents report a family income of above ₹50,000, showing very limited representation from **high-income households**.

Regarding housing, an overwhelming majority of respondents (95%) live **in own houses**, while only 5% reside in rented houses. This trend is consistent across both age groups, though the 15–18 years group constitutes the larger share.

The findings suggest that most respondents come from economically modest backgrounds but have relatively stable housing conditions, with a high prevalence of home ownership despite lower income levels.

Table -3 Table 3: Awareness Levels on Menstrual Hygiene Among Adolescents (N=60)

LEVEL OF AWARENESS OF MENSTRUAL HYGIENE	Age(In years)		TOTAL
	10-15yrs	15-18yrs	
LOW AWARENESS	-	-	-
MODERATE AWARENESS	2(3.3)	22(33.6)	24(40)
HIGH AWARENESS OF	0	36(60)	36(60)
(Figure in the parenthesis indicate percentile)			

Table 3 presents the distribution of adolescents according to their level of awareness of menstrual hygiene. The findings show that **none** of the respondents had **low awareness**, which indicates that all the participants had at least some understanding of menstrual hygiene practices.

A total of **24 respondents (40%)** were found to have **moderate awareness**, which means they possessed a fair understanding of menstrual hygiene but may not have complete knowledge about its proper management and importance.

The majority of the adolescents, **36 respondents (60%)**, demonstrated a **high level of awareness** regarding menstrual hygiene. This suggests that most of them were well informed about maintaining cleanliness during menstruation, the correct use and disposal of sanitary materials, and the importance of personal hygiene for health and well-being.

Overall, the results indicate a **positive level of menstrual hygiene awareness** among the adolescent

Table -4 Table 4: Academic Performance Status of Adolescent Students (N = 60)			
LEVELS OF ACADEMIC PERFORMANCE	AGE(IN YEARS)		AGE(IN YEARS)
	10-15yrs	10-15yrs	
LOW PERFORMANCE	-	-	-
MODERATE PERFORMANCE	0	15(25)	15(25)
HIGH PERFORMANCE	2(3.3)	43(71.6)	45(75)
Total	2(3.3)	58(96.6)	60(100)

respondents. The high awareness levels could be due to increased access to education, health programs in schools, or guidance from family members and teachers.

Table 4 shows the academic performance of adolescent students based on age groups. The data reveals that none of the respondents had **low academic performance**, indicating a generally good academic standing among all participants.

About **25%** of the respondents showed **moderate performance**, while the majority, **75%**, demonstrated **high academic performance**. Among them, **43 students (71.6%)** were from the **15–18 years** age group and only **2 students (3.3%)** were from the **10–15 years** age group.

This clearly indicates that older adolescents performed better academically, possibly due to greater maturity, study experience, and exposure to higher levels of education. Overall, the results suggest that most of the adolescent students maintained a **high level of academic achievement**.

Table 5- Relationship Between The Variables				(N = 60)		
	Academic Performance Status	Menstrual Hygiene Awareness	Language Spoken	Socio-Economic Status	Age	Class
Academic Performance Status	1	.314[*]	-.104	.126	-.107	.117
Menstrual Hygiene Awareness	.314[*]	1	-.123	.018	.227	.165
Language Spoken	-.104	-.123	1	.013	.056	-.101
Socio-Economic Status	.126	.018	.013	1	-.301[*]	-.233
Age	-.107	.227	.056	-.301[*]	1	.662[**]
Class	.117	.165	-.101	-.233	.662[**]	1
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 5 shows the correlation values between various study variables such as **academic performance**, **menstrual hygiene awareness**, **language spoken**, **socio-economic status**, **age**, and **class** of the respondents.

A **positive and significant correlation (r = .314*)** was found between **academic performance** and **menstrual hygiene awareness** at the 0.05 level, indicating that better menstrual hygiene awareness is associated with higher academic performance.

A **negative significant correlation (r = –.301*)** was observed between **socio-economic status** and **age**, suggesting that as age increases, socio-economic status tends to be lower among the respondents.

A **strong positive correlation (r = .662**)** was found between **age** and **class**, significant at the 0.01 level, which is expected since class level naturally increases with age.

Other variables such as **language spoken** and **socio-economic status** showed weak or non-significant relationships with the rest.

Overall, the results indicate that **academic performance is positively influenced by menstrual hygiene awareness**, while **age and class are strongly related variables**.

DISCUSSION AND SUMMARY

The present study aimed to analyse the socio-demographic details, economic background, menstrual hygiene awareness, and academic performance of adolescent students. The findings revealed that a large proportion of respondents (96.6%) belonged to the 15–18 years age group and most were pursuing degree-level education. The majority resided in rural areas (93.3%) and belonged to small families with 1–4 members. A significant number (63.3%) were first-born children, and 91.6% spoke a single language. The data also showed that 93.3% of respondents reported no health problems, indicating good overall health among the adolescents. These results are consistent with the findings of **Kumar et al. (2019)**, who reported

that rural adolescents often exhibit good health awareness due to increased educational access and family support systems.

The economic profile of respondents revealed that most families (83.2%) earned below ₹25,000 per month, suggesting that many belonged to low or middle-income groups. However, a large proportion (95%) lived in their own houses, indicating a reasonable level of financial stability. This finding aligns with **Rani and Devi (2020)**, who found that even in rural regions, families prioritize owning a home as a form of social and economic security.

Menstrual hygiene awareness among the respondents was generally high, with 60% showing a high level of awareness and none with low awareness. These results indicate improved health education and exposure to awareness programs in schools. Similar findings were reported by **Singh et al. (2021)**, who observed that adolescent girls in educational institutions are increasingly knowledgeable about menstrual hygiene due to school-based health interventions and media exposure.

The academic performance data showed that 75% of respondents had high academic performance, while 25% performed moderately, and none showed low performance. This suggests that the adolescents were generally doing well in their studies. A study by **Sharma and Kaur (2018)** supports this observation, noting that better hygiene practices and health awareness positively impact academic engagement and attendance among adolescents.

The correlation analysis revealed a significant positive relationship between academic performance and menstrual hygiene awareness ($r = .314^*$), indicating that students with better awareness tend to perform better academically. There was also a significant negative correlation between socio-economic status and age ($r = -.301^*$), implying that older students tended to belong to families with relatively lower income levels. A strong positive relationship was observed between age and class ($r = .662^{**}$), which is expected since class level naturally increases with age. These findings are consistent with **Patil et al. (2020)**, who found that menstrual hygiene management influences girls' school attendance, self-confidence, and academic outcomes.

In summary, the study concludes that most adolescent respondents were rural degree students from low to middle-income families, showing good health, high menstrual hygiene awareness, and strong academic performance. The significant correlation between menstrual hygiene awareness and academic achievement highlights the importance of integrating health education programs into school curricula. Promoting awareness about menstrual hygiene not only supports adolescents' physical well-being but also enhances their academic success and overall personal development.

CONCLUSION

The present study, *"A Study on the Relationship between Menstrual Hygiene Awareness and Academic Performance among Adolescent Girls,"* sought to understand how socio-demographic and economic factors influence menstrual hygiene awareness and, in turn, affect academic outcomes among adolescent students. The analysis of data from 60 respondents revealed that the majority of participants were between 15–18 years of age, belonged to rural areas, and came from low- to middle-income families. Despite economic limitations, most respondents exhibited good health status and stable family support, which positively contributed to their educational engagement.

A significant proportion of the adolescents demonstrated high menstrual hygiene awareness, indicating the effectiveness of school-based education, awareness programs, and access to information. The study found that 60% of respondents had high awareness levels, and 75% performed well academically. Statistical analysis further confirmed a positive correlation between menstrual hygiene awareness and academic performance ($r = .314^*$), emphasizing that better understanding and management of menstrual health contribute to improved concentration, attendance, and overall educational success.

The findings highlight that menstrual hygiene is not merely a health issue but also an educational and developmental concern. It influences adolescents' confidence, participation in school activities, and academic achievement. The study also noted that socio-economic status plays a secondary but meaningful role in shaping awareness and opportunities for adolescent girls.

In conclusion, it can be inferred that **enhancing menstrual hygiene awareness through comprehensive health education, parental support, and school-based programs can significantly improve the academic performance and overall well-being of adolescent girls**. Efforts should be made by educators, policymakers, and community workers to ensure that menstrual health education becomes an integral part of school curricula, particularly in rural areas. Promoting such awareness will empower adolescent girls to achieve better academic results and contribute confidently to society's progress.

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