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Students' knowledge and attitude towards school hygiene: A micro study in Murshidabad district

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Abstract

School hygiene is a crucial practice in educational settings, involving personal hygiene practices, environmental factors, and regular cleaning to ensure the health and well-being of students and staff. This study has aimed to assess students' knowledge and attitudes towards hygiene in schools, aiming to inform targeted educational programs and policies to improve children's health and wellbeing. The researcher used a descriptive survey approach and a micro survey method among XI graded students in Murshidabad district, West Bengal, India. The study focuses on XI graded students in Murshidabad district, West Bengal, India, using a random sampling method to select 498 students. The researcher used a standardized scale and closed-ended questionnaire to collect data on knowledge and attitude towards school hygiene. The study revealed that significant differences in knowledge about school hygiene among male and female XI-graded students in Murshidabad district, West Bengal. Girls performed better than boys in terms of knowledge, with urban students having better knowledge than rural students. There are also differences in knowledge between arts and science faculties. The lack of hygiene promotion materials and supplies affects learners' attitudes and practices. Girls have a better attitude towards school hygiene, while rural and urban students have different attitudes. The positive attitude towards school hygiene depends on increasing knowledge among students. It has suggested educational interventions, awareness campaigns, and collaboration among schools, parents, and authorities to promote cleanliness and health consciousness.

Keywords: Attitude; Knowledge; XI Graded Students; School Hygiene

1. Introduction

Health encompasses physical, mental, and social well-being, an inalienable right for all people, regardless of their background or social status. Social science research has broadened the definition of health to encompass social, economic, and psychological well-being, in addition to the presence or absence of illness (Kathleen, 2010). The World Health Organization defined 'health' in 1948 as a state of total physical, mental, and social well-being, not just the absence of illness or infirmity (WHO, 1948). Health education is a holistic approach to living a healthy life, aiming to enhance physical, mental, and spiritual strength (Dash & Dash, 2008). Schools significantly influence adolescents' health and happiness, impacting adulthood, and the link between health and education in schools is becoming increasingly evident (Pal, 2014). Schools play a crucial role in children's education, influencing their community and promoting sanitation, health, and hygiene behavior. Hygiene is crucial for daily life, protecting us from infectious diseases and fostering future generations. It should be taught from an early age, focusing on our bodies and surroundings.

School hygiene involves maintaining health and preventing diseases among students and staff in educational settings, encompassing personal hygiene practices like handwashing and dental care, as well as environmental factors (APHA, 2016). School hygiene is a crucial practice in educational settings to ensure the health and well-being of students and staff. School hygiene promotes cleanliness, health, and a safe environment, including personal hygiene habits like

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handwashing and dental care, fostering healthy behaviors among students for their well-being and academic success. It involves maintaining clean and sanitized facilities, proper waste disposal, regular cleaning schedules, and adequate ventilation. Personal hygiene habits like handwashing, covering mouth and nose when coughing or sneezing, and maintaining cleanliness of personal belongings contribute to overall hygiene standards. These practices not only reduce absenteeism but also foster a conducive learning environment. Implementing comprehensive hygiene protocols based on evidence-based guidelines ensures schools remain safe and healthy environments for all involved (UNICEF, 2020; CDC, 2021).

Effective school hygiene plays a crucial role in reducing the spread of infectious diseases and improving overall student attendance and performance. According to the World Health Organization (WHO), promoting hygiene in schools can significantly contribute to achieving better health outcomes and enhancing learning outcomes among children (WHO, 2020). Research also indicates that schools with comprehensive hygiene programs experience lower absenteeism rates due to illness and create a more conducive learning environment (UNICEF, 2019)

The students' good knowledge scores can be attributed to their potential access to personal hygiene information through the actions of others, such as their peers, parents, and other members of society (Khamaiseh & Leimoon, 2024). It is essential for school-age children's general health and wellbeing that they maintain good hygiene habits. The World Health Organization (WHO, 2020) states that good hygiene practices, like washing your hands and using the restroom, greatly lower the spread of infectious diseases in educational environments. Notwithstanding the acknowledged advantages, there is still a knowledge vacuum regarding students' attitudes and knowledge of school hygiene procedures. Previous research suggests that knowledge gaps and varying attitudes towards hygiene can impact the effectiveness of hygiene interventions in schools (Smith & Jones, 2018). Understanding students' perceptions and behaviors is crucial for designing interventions that are effective and culturally appropriate (Brown et al., 2019). This study aimed to assess students' knowledge and attitudes towards hygiene in schools to inform targeted educational programs and policies.

2. Material and methods

2.1. Method

The descriptive survey approach (Parvez & Shakir, 2013; Sharma & Kalia, 2015; Ray, et al., 2023; Baidya, et al., 2024) was used in the present study A micro survey method (Schneider, 2017; Schneider & Haigner, 2018) has been employed among the XI graded students of Murshidabad district, West Bengal, India.

2.2. Participants

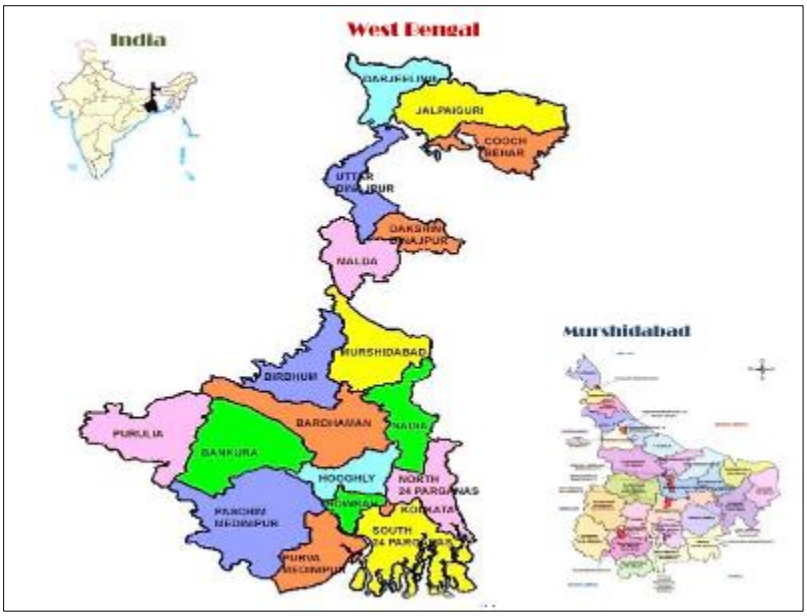
Total XI graded students of Murshidabad district are the population of the present study. The researcher was selected 498 sample comprising of XI graded Students by employing random sampling method from Murshidabad District, West Bengal, India.

2.3. Instrument Used

A previously standardized knowledge and attitude scale about school hygiene was employed by the researcher. The knowledge scale regarding school hygiene consisted of a standardized set of 17 statements with two possible answers: "Yes" or "No". For each statement, a positive score of "1" was assigned, while negative statements received a score of "0". The scale's minimum score was 0 and its maximum was 17. There were 21 items on the attitude scale towards school hygiene. Eleven items make up the attitude scale, which is based on Likert's five-point scales: strongly agree, agree, neutral, disagree, and strongly disagree (Likert, 1974). Negative statements scored '1,'2,'3,'4,'5,' and '1'; positive statements scored '5,' '4,', '3', '2', and '1'. The Cronbach's alpha values for the knowledge and attitude scales are 0.79 and 0.783, respectively, indicating a significant level of reliability (Duzgun & Kirkic, 2023; Hinkin, 1995).

2.4. Data collection

The researcher created a closed-ended questionnaire to collect data on knowledge and attitude towards school hygiene. Participants were asked to select one response from options and complete all dimensions. Their statements were kept private and used only for research purposes. After providing their response, participants were acknowledged.



(Source: https://en.wikipedia.org/wiki/Murshidabad_district)

Figure 1 Location of Murshidabad district in West Bengal, India

2.5. Statistical Analysis

Descriptive statistics were calculated using the standard deviation, arithmetic mean, frequency, and percentage (Senol & Akdag, 2018; Ray, et al., 2023). In the current study, inferential quantitative technique was given priority in order to compare the various variables (Pancholi & Bharwad, 2015). To determine the significance of the difference between the groups, the mean, standard deviation, and "*t*" test were employed.

3. Results and discussion

3.1. Descriptive statistics of the data

The study's sample size consisted of 498 students in the XI grade from the Murshidabad district in West Bengal, India. The three demographic variables are: Gender (Male and Female), Stream (Science and Arts), and Locality (Rural and Urban). Table 1 has been listed the demographic characteristics along with how frequently they occur.

Table 1 Descriptive data of Socio-demographic information of the participants

Variables	Frequency (n=498)	Percentage (%)
Gender		
Male	273	54.82
Female	225	45.18
Locality		
Urban	351	70.48
Rural	147	29.52
Stream		
Science	219	43.98
Arts	279	56.02

Table 2 Descriptive statistics of Knowledge and Attitude Data

	Knowledge	**Attitude**
Mean	11.81325301	94.96586345
Standard Error	0.105592425	0.389174267
Median	12	100
Mode	11	101
Standard Deviation	2.356391424	8.684779313
Sample Variance	5.552580544	75.42539171
Kurtosis	-0.187408189	0.624599613
Skewness	-0.188322021	-0.92187047
Range	12	48
Minimum	5	57
Maximum	17	105
Total Sample	498	498

3.2. Comparison of Knowledge

An independent sample *t* test was used to compare independent variables with two categories. Table 3 provides a summary of the results obtained. The independent sample t test yielded the following results: p =0.002, t = 2.88, and df = 496 for the male and female categories. It suggests that XI graded students, male and female, have distinct in knowledge about School hygiene at 0.01 level of significance.

The result of the independent sample *t* test between the urban and rural groups are df = 496; t = 1.83, p = 0.033. It suggests that XI graded students in rural and urban areas have distinct in Knowledge about School hygiene at 0.05 level of significance.

Another result of the independent sample *t* test between the arts and science groups are df = 496; t = 3.77, p = 0.000. It suggests that XI graded students of arts and science stream have distinct in Knowledge about School hygiene at 0.01 level of significance.

Table 3 Comparison of knowledge scores about school hygiene through independent sample *t* test

Variables	**Mean (SD)**	***df***	***t***	***p***
Gender				
Male	11.04 (2.61)	496	2.88	0.002**
Female	11.67(2.18)			
Locality				
Urban	12.33 (2.35)	496	1.83	0.033*
Rural	11.93 (2.12)			
Stream				
Science	12.63 (2.14)	496	3.77	0.000**
Arts	11.87 (2.26)			

*0.05 level of significance; **0.01 level of significance

3.3. Comparison of Attitude

An independent sample t test was used to compare independent variables with two categories. Table 4 provides a summary of the results obtained. The independent sample t test yielded the following results: p =0.000, t = 6.07, and df = 496 for the male and female categories. It suggests that XI graded students, male and female, have distinct in attitude towards School hygiene at 0.01 level of significance.

Similarly, the independent sample t test between the urban and rural groups are df = 496; t = 2.14, p = 0.016. It suggests that XI graded students in rural and urban areas have distinct in attitude towards School hygiene at 0.05 level of significance.

Another result of the independent sample t test between the arts and science groups are df = 496; t = 2.27, p = 0.011. It suggests that XI graded students of arts and science stream have distinct in attitude towards School hygiene at 0.05 level of significance.

Table 4 Comparison of attitude scores towards school hygiene through independent sample *t* test

Variables	**Mean (SD)**	***df***	***t***	***p***
Gender				
Male	87 (8.65)	496	6.07	0.000**
Female	92 (9.53)			
Locality				
Urban	89.99 (9.43)	496	2.14	0.016*
Rural	88 (8.54)			
Stream				
Science	90.36 (8.88)	496	2.27	0.011*
Arts	88.45 (9.68)			

*0.05 level of significance; **0.01 level of significance

3.4. Correlation of Knowledge and Attitude towards School Hygiene

The Pearson product moment correlation (r) between knowledge and attitude has been found to be statistically significant and somewhat positive (r =0.141, p<0.01). The correlation analysis's outcome was shown in Table 5.

Table 5 Correlation between knowledge and Attitude towards School Hygiene

Correlation			
		Knowledge	Attitude
Knowledge	Pearson Correlation	1	0.141**
	Sig. (2-tailed)		0.002
	N	498	498
Attitude	Pearson Correlation	0.141**	1
	Sig. (2-tailed)	0.002	
	N	498	498

**Correlation is significant at the 0.01 level (2-tailed).

Figure 2 illustrates a scattered plot of the relationship between attitude and knowledge regarding school hygiene. Here, it is clear that attitudes toward school hygiene are improving in tandem with knowledge growth.

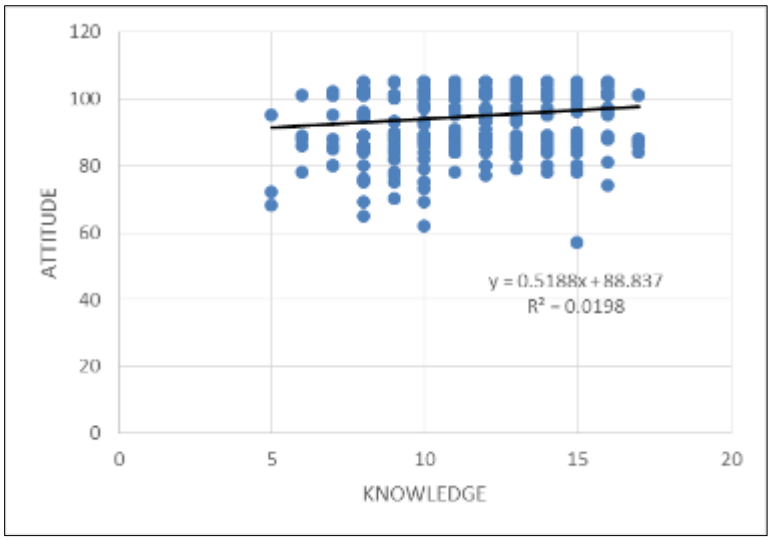


Figure 2 Scatter Plot present the correlation between Knowledge and attitude score towards School Hygiene

4. Discussion

In the present study, there is significant difference in knowledge regarding school hygiene between male and female XI-graded students of Murshidabad district, West Bengal. Chutia (2023) investigated that the knowledge of males and females were compared; the p-value for knowledge was 0.004 which is supported the above result (Chutia, 2023). the girls performed significantly better than boy in the current study in terms of knowledge (khamaish & Leimoon, 2024). There have a distinct in knowledge between urban and rural students. It is observed that urban students have better knowledge of hygiene than the rural students of Murshidabad district. There have also a significance differences in knowledge between arts and science. It was known that students from science faculties have better knowledge than students than others faculties (Rahaman, 2021) which supported the above result.

Lack of hygiene promotion materials and supplies implicate learners' attitudes and practice of hygiene at school (Shilunga, et al., 2018). There are significant differences in attitude towards school hygiene with respect to gender. The girl's attitude is better than boys towards school hygiene in Murshidabad district of West Bengal. The fact that girls are more concerned with their appearance than boys (Khamaiseh & Leimoon, 2024). There is a significant difference in attitude between rural and urban students towards school hygiene. Similarly, it is observed a distinct in attitude between science and arts stream students of Murshidabad district, West Bengal.

There has a significant correlation between knowledge and attitude towards school hygiene. The result proved that the positive attitude depends on increasing knowledge about school hygiene among the students of Murshidabad district, west Bengal.

The study, conducted at a micro level in Murshidabad, West Bengal, India, has limitations, including potential generalizations and students' fear of social stigma during data collection due to fear of publication in newspapers, affecting its validity.

5. Conclusion

In conclusion, this study sheds light on the critical issue of knowledge and attitudes towards school hygiene among XI grade students in Murshidabad District, West Bengal. Through rigorous analysis and research, it has been revealed that while there is a notable level of awareness regarding hygiene practices among students, there are still significant gaps in knowledge and attitude that need to be addressed. The findings have suggested that educational interventions and awareness campaigns focusing on school hygiene are imperative to bridge these gaps and foster a culture of cleanliness and health consciousness among students. Additionally, there is a need for collaborative efforts involving schools, parents, and local authorities to ensure the implementation of proper hygiene practices and the maintenance of hygienic environments in schools.

This study has emphasized the importance of considering socio-cultural factors and contextual nuances in designing interventions for improving school hygiene. It aims to develop tailored approaches to promote positive hygiene behaviors among students in Murshidabad District. The research contributes to public health and education discourse, emphasizing the significance of hygiene issues for students' well-being and academic success. The recommendations aim to serve as valuable resources for policymakers, educators, and stakeholders in creating healthier learning environments in schools.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] American Public Health Association. (2016). School hygiene and the prevention of diseases. Retrieved from https://www.apha.org/-/media/files/pdf/factsheets/school_hygiene.ashx

[2] Baidya, S., Ray, S., & Sikdar, D. P. (2024). Parental Perception and Attitude towards Private Tuition: A Cross-Sectional Study among Daily Wage Earners. RESEARCH REVIEW International Journal of Multidisciplinary, 9(6):279-288. http://dx.doi.org/10.31305/rrijm.2024.v09.n06.034

[3] Brown, A., Smith, B., & Jones, C. (2019). Factors influencing hygiene practices among school-aged children: A systematic review. Journal of Public Health and Hygiene, 7(2), 123-135. https://doi.org/10.1007/s43234-019-00012-3

[4] Centers for Disease Control and Prevention. (2021). Cleaning and disinfecting your facility. Retrieved July 13, 2024, from https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility.html

[5] Chutia, L. (2023). Personal hygiene: Knowledge, attitude and practice among higher primary school children in Urban Bengaluru, India. Journal of Emerging Technologies and Innovative Research, 10(4), f295-f304.

[6] Dash, M., & Dash, N. (2008). Health Education. Atlantic Publishers and Distributors (P) Ltd, New Delhi.

[7] Duzgun, G. & Kirkic, K. A. (2023). A Developmental Study of the Attitude Scale towards Teaching Arabic Language (ASTTAL): Reliability and Validity Analysis. International Journal of Psychology and Educational Studies, 10(2): 406-421.

[8] Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. Journal of Management, 21(5), 967–988. https://doi.org/10.1177/014920639502100509

[9] Kathleen, M. H. (2010). An Integrative Approach to Health. Demography, 47(1), 1-22.

[10] Khamaiseh, A., & Leimoon, H. (2024). Knowledge, attitude, and practice of personal hygiene among primary school students in southern Jordan: A cross-sectional school-based study. Research Square,1-15.

[11] Likert, R. A. (1974). Method of constructing an attitude scale. Scaling: A sourcebook for behavioral scientists, 1, 233-243.

[12] Pal, Y. K. S. (2014). Health Education. A.P.H. Publishing Corporation, New Delhi.

[13] Pancholi, A., & Bharwad, A. B. J. (2015). Student Teachers' Attitude towards Teaching Profession. International Journal of Research in Humanities and Social Sciences, 3(8), 40-43

[14] Parvez, M., & Shakir, M. (2013). Attitudes of Prospective Teachers towards Teaching Profession. Journal of Education and Practice, 4(10), 172-178.

[15] Ray, S., Samaddar, R., & Sikdar, D. P. (2023). EXPLORATION OF PROSPECTIVE TEACHERS' ATTITUDE TOWARDS TEACHING. Global Journal of Arts Humanity and Social Sciences, 3(11), 1319-1324

[16] Rahaman, (2021). Correlation of Knowledge, Attitude, and Practice Toward Probiotics for the Digestive System Among Health Science Students. Journal of Multidisciplinary Healthcare, 021:14 1135–1144.

[17] Schneider, F. (2017). Implausible large differences in the sizes of underground economies in highly developed European countries? A comparison of different estimation methods, Working Paper, No. 1709, Johannes Kepler University of Linz, Department of Economics, Linz.

[18] Schneider, F. & Haigner, S. D. (2018). Implausible Large Differences in the Sizes of Underground Economies in Highly Developed European Countries? A Comparison of Different Estimation Methods. Johannes Kepler University of Linz, Department of Economics, Linz.

[19] Senol, C., & Akdag, M. (2018). The Relation between Prospective Teachers' Attitudes towards Uncertainty and Motivation in Teaching. Education Science, 8, 1-11. http://dx.doi.org/10.3390/educsci8030122

[20] Sharma, S., & Kalia, A. K. (2015). A study of attitude of parents towards private tuition at senior secondary level. International Journal of Applied Research, 1(8), 722-725.

[21] Shilunga, K. P. A,Amukugo, J.H,&Mitonga, H. K. (2018). Knowledge, attitudes and practices of primary schools' learners on sanitation and hygiene practices. International Journal of Community Medicine and Public Health, 5(8),3197-3204.

[22] Smith, D., & Jones, E. (2018). The impact of hygiene knowledge on school-based hygiene interventions. Journal of Health Education Research, 5(1), 45-56. https://doi.org/10.1080/21507752.2018.1433289

[23] UNICEF. (2019). Promoting WASH in Schools: Monitoring and Evaluation Measures for Water, Sanitation, and Hygiene in Schools. Retrieved from https://www.unicef.org/reports/promoting-wash-schools-monitoring-and-evaluation-measures-water-sanitation-and-hygiene-schools

[24] UNICEF. (2020). WASH in schools. Retrieved July 13, 2024, from https://www.unicef.org/wash/schools

[25] World Health Organization (WHO). (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 10-22 June, 1946.

[26] World Health Organization (WHO). (2020). Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19. Retrieved from https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-IPC_WASH-2020.4

[27] World Health Organization. (2020). Hand hygiene for health care including global guidelines for health care settings. WHO Press.

[28] https://en.wikipedia.org/wiki/Murshidabad_district