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Knowledge, Attitude and Practice of Personal Hygiene among Grade Nine and Ten Students in Government School of Jumla

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ABSTRACT

Background: Personal hygiene is crucial for a healthy life, especially for school children who are more susceptible to diseases due to poor hygiene. This study was design to determine the existing knowledge, attitude and practice of personal hygiene among secondary students of grade nine and ten of a government school of Jumla.

Methods: A school-based cross-sectional study was conducted in a Government Secondary school situated in a rural area of Jumla. A total of 368 adolescent girls and boys from classes nine and ten were included. Data were collected using pre-tested, self-administered questionnaires and analyzed with SPSS version 16. The Chi-square test was applied to compare the proportions of quantitative variables.

Results: Among the 368 students, 43.3% were male and 52.7% were female, with a mean age of 14.98 ± 1.34 years. The study found that 94.8% had good knowledge, 82.3% had a positive attitude towards personal hygiene, and 63.6% practiced good personal hygiene. Participants with a positive attitude towards personal hygiene demonstrated a higher percentage of good hygiene practices. However, there was no statistically significant association between knowledge and attitude on personal hygiene.

Conclusions: The study revealed that the majority of the students had a good level of personal hygiene knowledge. Boys appeared to be more knowledgeable than the girls; though these knowledge and attitude were not reflected in their practices. The study proposed that health education should focus on enhancing the attitude and practice to improve hygiene among rural youth.

Keywords: Attitude; knowledge; personal hygiene; practices; rural government school.

INTRODUCTION

Hygiene, the science of health and well-being, covers daily activities affecting individual health.[1,2] In developing countries, inadequate hygiene practices are major concerns, as maintaining proper hygiene prevents the spread of disease through water, food, contact, and the environment.[3,4]

In developing regions annually, 1.5 million children under five die from diarrhea and communicable diseases due to unsafe water, poor sanitation and hygiene.[5-7] In Africa, 62% in Southeast Asia 31% and in Europe 5% death are from respiratory infections, and worm infestations. Poor hygiene in school children increases disease vulnerability, leading to health issues like anemia, malnutrition and vitamin deficiencies.[8,9]

Insufficient research on personal hygiene in Jumla, emphasizes the need to prioritize improving hygiene practices among students.[10] Study provides valuable insights for policymakers, educators, and healthcare professionals to develop hygiene interventions for school children.[11]

This study aimed to assess the knowledge and practices of personal hygiene among government school students of Jumla.

METHODS

A school-based cross-sectional study was conducted in a Government Secondary school situated in a rural area of Jumla. Five schools were selected randomly using by lottery method with complect enumeration. The study

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period was three months from Feb-April 2023. A total 368 adolescent girls and boys of class nine and ten were included. Information was collected by using a pre-tested, self-administered questionnaire. A pre-test was conducted with 10% of the students from a different school who were not included in the main study. Before conducting the research, changes were made to increase clarity based on feedback and analysis.

A total of 11 questions evaluated participants' knowledge and practices related to personal hygiene, with each question scored 1 for "yes" and 0 for "no" or "don't know," resulting in scores from 0 to 11. Additionally, 6 questions assessed attitudes, scored 1 for desired and 0 for undesired responses. Below 50% score indicated negative KAP indicated a negative score, while of 50% or above indicated a positive KAP.

The study collected completed questionnaires, which were then entered into SPSS 16.0 for analysis using descriptive statistics. The Pearson chi-square test was utilized for comparisons, with a significance level set at $p < 0.05$.

Ethical clearance was obtained from Institutional Review Committee (IRC No. 078/079/01) KAHS, Jumla, Nepal. Parental consent and necessary permission were taken from the school authorities. The students were explained about the research objectives before conducting the study and confidentiality of personal identity were assured.

RESULTS

Among 368 participants, 55.4% were studying in class nine and 44.6 % were in class ten. Nearly 53% were female and 47% were boys. Participants age ranged from 12 to 20 years. Mean age of the participants was 14.98 ±1.34 (Table 1).

The majority (93%) knew poor personal hygiene impacts health. Most (76%) believed daily showers keep us clean, and over two-thirds knew microbes cause food poisoning. Most (78%) understood that human feces contain germs causing infections, and 72% recognized poor hygiene and sanitation as major causes of diarrhea (Table 2).

The majority (83.7%) agreed to cover their mouths while coughing to prevent infection. Only 8.4% disagreed about the importance of toothpaste, and 5.2% did not prefer washing hands before eating. Most (91.0%) agreed that touching food without washing hands causes infection, while 34.0% believed bathing was more importance for beauty than for health. (Table 3).

Only 13.6% of respondents bathed daily. The majority (87.0%) brushed their teeth daily, Of all participants, 77.4% used soap to wash their hands, 83.0% washed hands before and after meals, 50.3% regularly washed their hair, 88.6% washed hands after using the toilet, and 47.8% washed feet daily after outings. (Table 4).

Study found that 94.8% of grade 9 and 10 students had good knowledge, 5.2% had poor knowledge. Whereas 82.3% of them had positive attitude, only 17.7% had negative attitude towards personal hygiene. Regarding practice 63.6% of them had good personal hygiene practice and still 36.4% had poor practice (Table 5).

There was no significant association between knowledge and attitude on personal hygiene. However, both knowledge and attitude were significantly correlated with their hygiene practices. Students with a positive attitude tended to exhibit better hygiene practices. (Table 6).

Table 1. Socio Demographic Characteristics of Secondary School Grade Nine and Ten Students.

Characteristics (N= 368)		
Class	**Frequency (N)**	**Percentage (%)**
9	204	55.4
10	164	44.6
Mean age ± SD = 14.98 ± 1.34		
Sex		
Male	174	47.3
Female	194	52.7

Table 2. Knowledge on Personal Hygiene Among Secondary School Grade Nine and Ten Students.

S.N	Statement	Yes N (%)	No N (%)	Don't know N (%)
1	Poor personal hygiene has an impact on your health	342 (93)	16 (4.3)	10(2.7)
2	Showering everyday keeps us clean	280 (76)	76(20.7)	12 (3.3)
3	Washing hands with soap is a healthy behavior	355 (96.5)	8 (2.2)	5(1.4)
4	Biting nails is an unhealthy behavior	234(63.6)	128(34.8)	6 (1.6)
5	Maintaining personal hygiene includes regular and proper hand washing	314(85.3)	38 (10.3)	16(4.4)
6	Brushing teeth regularly prevents teeth problems	297(80.7)	58(15.8)	13(3.5)
7	Regular dental checkup is important	171(46.5)	162(44.0)	35 (9.5)
8	Sweets and soft drinks could affect teeth	296 (80.4)	41(11.2)	31 (8.4)
9	Microbes causes food poisoning	269 (73.1)	34 (9.2)	65 (17.7)
10	Human faces contain germs that can cause infection	287 (78.0)	25 (6.8)	56 (15.2)
11	Diarrhea is the major cause of poor personal hygiene and sanitation	265 (72.0)	49 (13.3)	54 (14.7)

Table 3. Attitude on Personal Hygiene among Secondary School Grade Nine and Ten Students.

SN	Characteristics	Agree N (%)	Disagree N (%)
1	Cover your mouth while coughing or sneezing to prevent the spread of infection.	308 (83.7)	60 (16.3)
2	Using tooth paste is important for cleaning tooth	337 (91.6)	31(8.4)
3	Prefer to wash your hands before having food	349 (94.8)	19 (5.2)
4	Wash your hands and feet after touching garbage and after playing	347 (94.3)	21(5.7)
5	Touching food without washing your hands causes infection	335 (91.0)	33 (9.0)
6	Bathing is more important for health than for beauty	243 (66.0)	125 (34.0)

Table 4. Practice on Personal Hygiene Among Secondary School Grade Nine and Ten Students.

SN	Questions	Always N (%)	Sometimes N (%)	Never N (%)
1	Bathing every day	50 (13.6)	318 (86.4)	0
2	Regularly trimming nails	49 (13.3)	317 (86.2)	2 (0.5)
3	Brushing teeth every day	320 (87.0)	46 (12.5)	2 (0.5)
4	Using soap for washing hands	285 (77.4)	80 (21.8)	3 (0.8)
5	Regularly washing hands before and after meal	305 (83.0)	60 (16.2)	3 (0.8)
6	Regularly washing hair	185 (50.3)	183 (49.7)	0
7	Washing hands after playing	261 (70.9)	96 (26.1)	11 (3.0)
8	Washing hands after using toilet	326 (88.6)	36 (9.8)	6 (1.6)
9	Washing hands after handling garbage	323 (87.8)	42 (11.4)	3 (0.8)
10	Washing hands after handling animal	228 (62.0)	124(33.7)	16 (4.3)
11	Washing feet every day after outing	176 (47.8)	177 (48.1)	15 (4.1)

Table 5. Overall Knowledge, Attitude and Practice on Personal Hygiene.

Characteristics	Frequency	Percentage
Overall Knowledge		
Poor	19	5.2
Good	349	94.8
Overall Attitude		
Negative	65	17.7
Positive	303	82.3
Overall Practice		
Poor	134	36.4
Good	234	63.6

Table 6. Association between knowledge, Attitude and practice on personal hygiene.

Knowledge	Attitude		x2 Value	P value
	Positive (≥50%)	Negative (<50%)		
Good	63 (18.1%)	286 (81.9%)	0.702	0.402
Poor	2 (10.5%)	17 (89.5%)		
Knowledge	**Practice**			
	Good (> 50%)	Poor (< 50)		
Good (> 50%)	227 (65.0%)	122 (35%)	6.189	0.013*
Poor (< 50%)	7 (36.8%)	12 (63.2%)		
Attitude	**Practice**			
	Good (> 50%)	Poor (< 50)		
Positive (> 50%)	49 (75.4%)	16 (24.6%)	4.746	0.029*
Negative (< 50%)	185 (61.1%)	118 (38.9%)		

Note: *Significant association at p value is < 0.05

DISCUSSION

In the present study the mean age of the participants was 14.98 ± 1.34. Similar findings was observed in Ethiopia 14.5, Kolkata and Bangladesh.[1,6,12] Our research revealed that 44.6% of participants belonged to joint families, this finding was supported by a study conducted in India.[1, 11]

The study conducted in Jumla found that the majority (94.8%) of students demonstrated good knowledge of personal hygiene, in contrasts 52% was observed in Angolela, Ethiopia [6] Furthermore, the research revealed that more than three-quarters of the children had a positive attitude towards personal hygiene, which was similar to the findings from an Egyptian study.[3] About two-thirds of students in Jumla exhibited good practices in personal hygiene, aligning with a similar study conducted among students in North Chennai.[17]

Regarding hygiene practices, the most common practice observed in the present study was consistently washing hands after using the toilet, 88.6%, this was consistent with findings from Colombia and the Philippines.[16,17] Moreover, a high percentage (86.9%) of students in Jumla reported regularly washing hands before and after meals, which was higher than a study in the Philippines but lower than a study in Japan.[19,20] This discrepancy may suggest that cultural factors and the availability of handwashing facilities influence hand hygiene practices.

Regarding soap usage, 77.4% of participants in Jumla always used soap to wash their hands, similar findings was observed the study done in Bhaktapur higher compliance compared to a study in Kolkata but lower than studies and in different regions.[1,2,10] Regarding bathing and hair washing practices, the study found that a considerable percentage of poor practices, similar to findings from the Philippines, possibly due to challenges

in accessing water resources in rural settings.[17]

The study indicated no significant association between knowledge and attitude, but there was a statistically significant association between knowledge and attitude with the practice of personal hygiene. This finding supported by study done in Spain.[15] This suggests that attitude towards personal hygiene is not solely determined by knowledge, Furthermore, the study did not find a significant association between gender and certain hygiene practices, such as brushing teeth daily and washing hands, similar to findings from Bhaktapur, Nepal.

Several limitations should be considered when interpreting the findings of this study. Firstly, the study relies on self-reported information, which may lead to over-reporting of actual hygiene practices (self-report bias). Secondly the data was gathered using self-administered questionnaires, and only students in grades 9 and 10 were involved, as it was assumed they could complete them independently. Thirdly, the findings may not be generalizable to other secondary school students because our sample was from the rural area of Jumla district.

CONCLUSIONS

The study found that majority of the participants had good knowledge about personal hygiene. Less than one fourth of them have negative attitude and about two third had good practices on personal hygiene. There was no any significant association between knowledge and attitude on personal hygiene. But the knowledge and attitude had statistically significant association with personal hygiene practices.

The results highlight the need for targeted health education interventions to improve personal hygiene practices among adolescents, particularly in rural areas through changing their knowledge and attitude.

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CONFLICTS OF INTEREST

Author declares no conflict of interest.

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