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## Knowledge and practice regarding personal hygiene among students of government schools of Bikaner, Rajasthan

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### Abstract

**Introduction:** If good personal hygiene since childhood is not maintained, it will leads to various contagious diseases like gastroenteritis, skin infections etc. So present study was done to assess knowledge and practice regarding personal hygiene in school going children.

**Methodology:** this cross sectional study was conducted on 1008 students of 6<sup>th</sup> to 12<sup>th</sup> class from government schools of Bikaner. A semi-structured Performa was used.

**Result:** More than 90% students had knowledge about body, clothes and teeth hygiene, 46% about use of toilet paper and 29.8% about sanitary pad. More than 90% bath, brush teeth every day, hand wash before meal and after using toilet. Less than 70% hand wash after handling animal, cutting nails. Major source of knowledge in students was schools (71%).

**Conclusion:** A good knowledge and practice was found regarding certain points but still more awareness and promotion are necessary for better personal hygiene in students.

**Keywords:** Knowledge, Practice, hygiene, hand wash, sanitary pad

### Introduction

Personal hygiene is self-care practices that people carry out in order to maintain their health. These practices are fundamental to the prevention of many diseases, especially contagious diseases. Personal hygiene includes hand, face hygiene, regular bathing, hair care and washing and using own clothes, towels, shoes and slippers. In Africa and South Asia, it has been reported that 62% and 31% of all death respectively are due to infectious disease <sup>[1]</sup>. According to WHO 3.8 million children under five year die from diarrhea and acute respiratory tract infection per year <sup>[2]</sup>. Out of total diarrheal death 88% death were estimated due to unsafe water, inadequate sanitation and poor hygiene <sup>[3]</sup>. In developing countries people are living in extreme conditions like poverty, peri-urban dwelling, poor availability of drinking water and improper sanitation. Among the important problems that are responsible for this kind of situation is poor hygiene behavior. Majority of health problems affecting children like diarrheal disease, skin disease, worm infestation and dental disease are preventable by promotion of hygienic practices through proper health education by the teachers, who are the first contact in schools as school children are vulnerable to neglect of basic personal hygiene <sup>[4]</sup>. Hence the current study was planned to find out the knowledge and practices regarding personal hygiene among school children for promotion of good hygienic behavior by health education.

**Material and Method:** It was a cross sectional, observational type of study. Proper approval was taken from the institutional research review board and ethical committee.

**Study Period:** data collection was carried out from 28th August to 30th November 2018

**Study Participants:** students of class 6th to 12th of randomly selected government schools of Bikaner city.

**Sample Size:** it was calculated 816 at 95% confidence and 7% relative error to verify

expected minimum 50% students had knowledge about use of toilet paper as per seed article.<sup>5</sup> this sample size was round off to 1000.

**Sampling Technique:** A complete list of government school with  $\geq 500$  students were taken from department of Education of Bikaner city. Two government schools from all four zone were randomly selected using simple random sampling technique i.e. 8 schools in total. The 126 students from each school were randomly selected to cover sample size of 1000; hence 18 students from each class (6th to 12th) were included. In case where more than one sections present in a class, section was selected by chit in box method and then 18 children were selected by simple random method from the list of class rolls by using random numbers table method. All randomly selected eligible students were distributed a pre-designed and semi structured Performa after explaining them the purpose of study and promise of anonymity.

**Inclusion Criteria:** selected school students of class 6th - 12th class and those were present on the day of visit.

**Exclusion Criteria:** those who do not give consent or whose parents have not given consent.

The data was summarized in MS excel worksheet in the form of the master chart. Qualitative data were expressed in percentages.

**Results**

The present study reveals that majority (62.3%) of students were in age group of 10-15 years followed by 16-20 years age group with slight male preponderance i.e. 55.6% v/s 44.4%. The majority were Hindus (75.3%) and of general caste (37.8%). Majority (60.8%) of students belongs to nuclear family and Class IV (79.3%), according to latest modified kuppuswami classification. (Table 1).

**Table 1:** Socio-demographic distribution of students (N=1008)

Variables	Subgroups	Total	%
Age (years)	10-15	628	62.3
	16-20	380	37.7
Sex	Male	560	55.6
	Female	448	44.4
Religion	Hindu	759	75.3
	Muslim	243	24.1
	Sikh	4	0.39
	Others	2	0.19
Cast	General	381	37.8
	OBC	346	34.3
	SC	152	15.1
	ST	129	12.7
Socio-economic-status	Class I	10	0.99
	Class II	75	7.4
	Class III	105	10.4
	Class IV	799	79.3
	Class V	19	1.9
Type of family	Nuclear	613	60.8
	Joint	395	39.2

The present study showed that source of knowledge regarding personal hygiene in students was school (71.1%),

followed by media (9.7%), parents (9.2%), books (5.8%) and friends (4%). (Table 2)

**Table 2:** Distribution of students according to source of knowledge regarding personal hygiene

Source of knowledge	No of Students	%
School	717	71.1
Media	98	9.7
Book	58	5.8
Friend	40	4
Parents	93	9.2
Others	2	0.2
Total = 1008		

The present study showed that 97.6% students had knowledge about body and clothes hygiene, 93.1% had knowledge about teeth brushing, 95.7% had knowledge about regular clothes washing, 87.9% had knowledge about

soap use in personal hygiene, 46.3% had knowledge about use of toilet paper, 72.6% had knowledge about use of nail cutter and 29.8% knowledge about sanitary pad. (Table 3)

**Table 3:** Distribution of students according to knowledge of personal hygiene (N=1008)

Knowledge Variables	Boys (%) N=560	Girls (%) N=448	Total (%)
Knowledge about body and clothes hygiene	550(98.2)	434(96.9)	984(97.6)
Knowledge about teeth brushing	520(92.9)	418(93.3)	938(93.1)
Knowledge about regular clothes washing	540(96.4)	425(94.9)	965(95.7)
Knowledge about soap use in personal hygiene	501(89.5)	385(85.9)	886(87.9)
Knowledge about toilet paper	257(45.9)	210(46.9)	467(46.3)
Knowledge about nail cutter	409(73.0)	323(72.1)	732(72.6)
Knowledge about sanitary pad	121(21.6)	179(40)	300(29.8)

The present study showed that 98.2% students take bath and 96.9% brush teeth every day. 94.8% students hand wash before meal, 92.5% after using toilet, 88.1% after handling garbage and 72.3% after handling animal. The 68.2% cut

their nails in < 7 days, 82.6% take hair cut out in < 1 month, 74.3% use soap, 37.2% use facial tissue and 44.7% use cotton swab as hygiene product. (Table 4)

**Table 4:** Distribution of students according to practice of personal hygiene (N=1008)

Practices	Boys (%) N=560	Girls (%) N=448	Total (%)
Practice for bath every day	553(98.8)	437(97.5)	990(98.2)
Practice to brush teeth every day	545(97.3)	432(96.4)	977(96.9)
Practice for hand wash before meal	528(94.3)	428(95.5)	956(94.8)
Practice for hand wash after meal	502(89.6)	426(95.1)	928(92.1)
Practice for hand wash after using toilet	514(91.8)	418(93.3)	932(92.5)
Practice for hand wash after handling garbage	493(88.0)	395(88.2)	888(88.1)
Practice for hand wash after handling animal	412(73.6)	317(70.8)	729(72.3)
Practice for cutting nails in < 7 days	365(65.2)	322(71.9)	687(68.2)
Practice for hair cut in <one month	519(92.7)	314(70.1)	833(82.6)
Practice to use Soap as hygiene product	413(73.8)	336(75.0)	749(74.3)
Practice to use Facial tissue as hygiene product	207(37.0)	168(37.5)	375(37.2)
Practice to use Cotton swab as hygiene product	246(43.9)	205(45.8)	451(44.7)

### Discussion

The present study was carried out to assess personal hygiene in school going children of Bikaner city of Rajasthan. In present study, 55.6% were male and 44.4% were female students. It was similar to other studies [6-7]. The present study observed that maximum students gained knowledge about personal hygiene from schools i.e. 71% followed by media and parents. It was contrary to other studies where maximum source of knowledge was from parents or family [8-9].

In present study more than 90% students had knowledge about body and clothes hygiene, about teeth brushing, about regular clothes washing, 87.9% had knowledge about soap use in personal hygiene, 46.3% had knowledge about use of toilet paper, 72.6% had knowledge about use of nail cutter and 29.8% knowledge about sanitary pad. A study conducted in Jaipur reported almost similar finding regarding knowledge about body, teeth, clothes hygiene and use of soap but knowledge about sanitary pad was more (37.1%) compared to present study [5]. A study in Ethiopia country reported that majority of the students (99.7% and 85.7%) had knowledge of hand washing before and after meals while only 75% of students felt need of hand washing after defecation [10].

The present study observed that 98.2% take bath and 96.9% brush teeth every day [6, 8, 11-13]. The total 94.8% students practiced for hand wash before meal and 92.1% hand wash after meal [6-7, 13-14]. The study showed that 92.5% practiced for hand wash after toilet [6-7, 12-13]. However Priyanka *et al.* reported them only 18.1% [14]. The hand wash was practiced after handling garbage and after handling animals by 88.1% and 72.3% [8]. In this study 68.2% students practiced for cutting nails which was lower than other studies [5-6, 8], but hair cutting practice was found better (82.6%). The use of facial tissue and cotton swab as hygiene product were less than soap [5].

### Conclusion

The present study observed that regarding knowledge about body and clothes hygiene, about teeth brushing, about regular clothes washing, about soap use in personal hygiene and about use of nail cutter, was good in children but knowledge about use of toilet paper and about sanitary pad was not satisfactory.

Regarding practice, bathing & brushing teeth every day, hand washing before and after meal, hand washing after using toilet, hand washing after handling garbage, hand washing after handling animal, regular hair cutting and using soap as hygiene product were found good while practice of regular nail cutting, using of facial tissue and cotton swab as hygiene product were not satisfactory.

**Recommendation:** At school level, quality of services like toilets, drainage and safe drinking water facility should be improved and maintained properly. Regular monitoring of personal hygiene activities of students should be done by teachers. There should be involvement of medical department for educating students about personal hygiene, hand washing techniques and its importance.

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