DOI: https://doi.org/10.54393/nrs.v5i2.169

NURSEARCHER
https://www.nursearcher.com/index.php/nrs
ISSN (P): 2958-9746, (E): 2958-9738
Volume 5, Issue 2 (April - June 2025)

Original Article

OPEN ACCESS

Assessment of the Personal Hygiene Practices among Primary School Children in Swat

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ARTICLE INFO

Keywords:
Personal Hygiene, School Children, Handwashing, Hygiene Practices, Parental Education

How to Cite:
Sadiq, M., Bibi, A., Bibi, S., Kainat, ., & Khan, S. (2025). Assessment of the Personal Hygiene Practices among Primary School Children in Swat: Personal Hygiene Practices among Children. NURSEARCHER (Journal of Nursing & Midwifery Sciences), 5(2), 48-52. https://doi.org/10.54393/nrs.v5i2.169

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Received Date: 11th May, 2025
Revised Date: 20th June, 2025
Acceptance Date: 26th June, 2025
Published Date: 30th June, 2025

ABSTRACT

Personal hygiene plays a pivotal role in maintaining and promoting health, especially among school-going children. Inadequate hygiene practices contribute significantly to the global burden of infectious diseases and school absenteeism. **Objective:** To assess the personal hygiene practices among Class 3 students of a government primary school in Shakari, Manglawar. **Methods:** A cross-sectional study was conducted from February to April 2025 among 50 students aged 8-10 years. A structured questionnaire was used to gather data on demoFigureic details and hygiene practices. The responses were analyzed using SPSS version 27.0, with results presented in frequencies and percentages. **Results:** Findings revealed that 78% of children always brushed their teeth, 44% always cut their nails, 56% wore clean clothes daily, and 44% bathed daily. Handwashing habits were strong, with 88% always washing hands before eating and after using the toilet. Maternal education was low, with 48% illiterate and 40% having only basic education. Household unemployment was 56%, and 46% of families had more than six members. **Conclusions:** While hand hygiene was well-practiced, other aspects like nail trimming and daily bathing showed room for improvement. Findings highlight the need for reinforced hygiene education and parental involvement to instill lifelong healthy habits in children.

INTRODUCTION

Everything that supports a healthy life is included in hygiene, which is the study of health. The factors that impact health and well-being are included in personal hygiene, which also enhances health [1, 2]. In the same way, the ancient Greek goddess of healthy living, Hygeia, is the source of the word hygiene. The term "hygiene" describes the behaviors related to maintaining good health and leading a healthy lifestyle [3]. Moreover, body cleaning and bathing, clothing washing, tooth brushing, hair and nail trimming, hand washing before meals and after using the restroom, and other practices are all part of daily personal hygiene. The development of children is harmed by a high incidence of infectious illnesses brought on by poor personal cleanliness [1]. According to studies, there is a greater risk of diarrhea in slum environments because of the near proximity of sanitary facilities to dwellings, the sharing of sanitary facilities, and the unsanitary conditions of the housing compounds and sanitation facilities [4]. One of the main issues facing the world today is sanitation, and hygiene [5]. In addition, poor personal hygiene adds to the burden of disease worldwide. Better hand and face hygiene may help avoid respiratory infections like influenza and pneumonia, ocular diseases like trachoma, and enteric infections including shigellosis, cryptosporidiosis, and soil-transmitted helminthiases [6]. Furthermore, teachers, who are the first people schoolchildren interact with, can promote hygienic practices and provide appropriate health information to help prevent the majority

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of health issues that impact schoolchildren [7]. Additionally, developing a habit of personal hygiene is one of the finest strategies to preserve children's health [8]. Furthermore, ill health may hinder elementary school students' cognitive and physical development Children [9]. Furthermore, practicing good personal hygiene, such as washing your hands and face, can help lower the worldwide burden of infectious diseases [10]. Additionally, gastrointestinal and respiratory tract infections the two main causes of childhood morbidity and mortality worldwide have been successfully decreased by up to 50% as a result of increased knowledge and hand hygiene habits, particularly among youngsters. Also, research has demonstrated that students who practice and understand personal hygiene better receive higher scores and miss fewer sick days [11, 12]. Food-borne infections can have a variety of causes. The main causes of food-borne illnesses include a lack of public knowledge, food contamination, cross-contamination, incorrect storage and preparation temperatures, inappropriate food handling, and poor personal hygiene [13, 14].

Despite strong evidence that personal hygiene practices are essential for preventing infectious diseases among school-aged children, gaps persist between knowledge and daily practice, particularly in low-resource and rural settings. In Pakistan, limited school-based data are available on hygiene behaviors of primary school children, especially in remote areas such as Swat. Furthermore, the influence of parental education and household characteristics on children's hygiene practices remains underexplored. Addressing this gap is necessary to guide targeted school and community-based hygiene interventions. Therefore this study aims to assess the practices of personal hygiene among school-going children.

METHODS

This cross-sectional study was conducted among 50 students in govt primary school Shakari in Manglawar from 1st Feb 2025 to 30th April 2025. Sample size was calculated using online software for sample size calculation.The study was conducted at a Government Primary School in Shakari, an area renowned for its diverse socioeconomic population.The entire study period ran from February 1st until May 30th. Children in Class 3 at a government primary school in Shakari made up the study's target population. In order to guarantee gender representation in the study, participants included both male and female students. Participants ranged in age from 8 to 10 years old. The eligibility criteria were carefully established to ensure that only appropriate participants both cognitively and ethically suitable for the research were included in the study. The inclusion criteria they were enrolled in Shakari's Government Primary School's third grade. They were in the age range selected for this study, which was 8 to 10 years old. Also after being given a basic explanation of the study, they expressed curiosity and willingness to participate. The exclusion criteria were those who didn't understand the questions, even after the researcher tried to explain and they refused to participate or were unwilling to complete the questionnaire. The questionnaire had two main parts: 1st DemoFigureic Information including the education of the mother, Occupation of the household, and Number of family members 2nd Knowledge-Based Questions. The second part of the questionnaire has 8 questions about the main topic of the study. Such as daily brushing, cutting nails, Daily bathing, cleaning hair, washing hands before eating, Washing hands after toilet, and Wearing clean clothes. Researchers were present to help explain any part that the students did not understand so that every child could answer confidently and correctly. Before the data collection formal approval was secured from the appropriate school authorities, REF.No: (146/DCNS/25) to ensure institutional support and access. Moreover, researchers visited classrooms and provided an introduction their self and to the study. They explained the purpose and objectives to students. In addition, informed consent was obtained from all participating students. The participants were assured that their participation was voluntary and confidential. After that, the hard-copy questionnaires were then distributed to the students. Along with that, clear instructions were provided, and assistance was given to help students understand any difficult questions. Besides, completed questionnaires were collected on the same day to maintain consistency and minimize data loss. Moreover, Participants were fully informed about the purpose, procedures, risks, and benefits of the research. Researchers protected participants' identities and personal information. In addition, data is stored securely and anonymized where possible. Furthermore, researchers have minimized any physical, psychological, or emotional harm to participants. Participants have been informed that they can withdraw from the study at any time without penalty. For the data analysis SPSS version 27.0 was used. Responses of each participant were measured through frequency and percentage.

RESULTS

Figure 1 shows the result of the age of the participants in which the majority 95% were aged 8-10.

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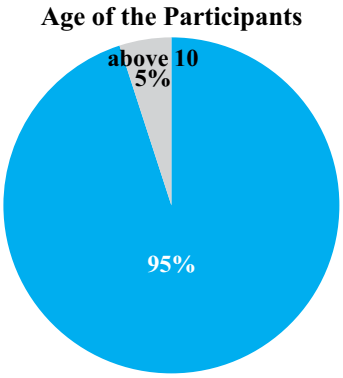

Figure 1: Age of the participants

Figure 2 shows the result of the education of child mothers in which 10 (20%) are graduates, 20(40%) are basic/ secondary school and 24(48%)are illiterate.

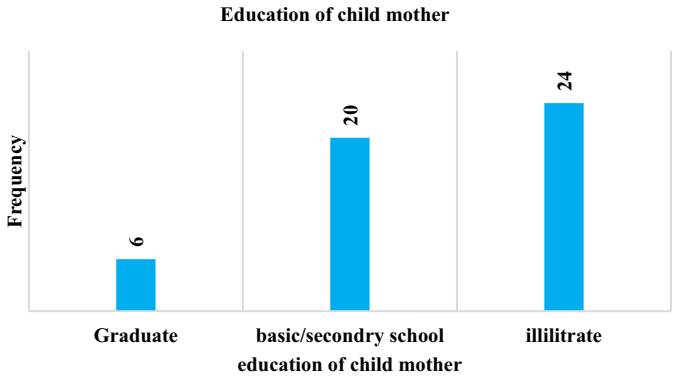

Figure 2: Education of Child Mother

Figure 3 shows the findings of family members number in which 26% have family members less than 6, 10% have 6 members in their family and more than 6 members are 46%.

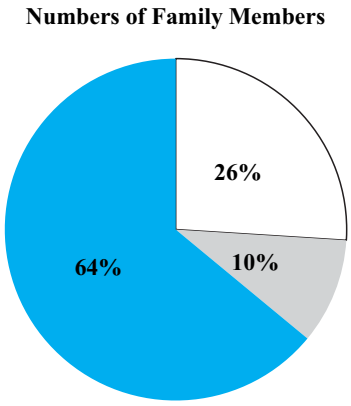

Figure 3: Numbers of Family Members

Figure 4 shows the distribution of household occupation status among the respondents. According to the data, 22 individuals (44%) are engaged in various forms of employment or income-generating activities. On the other hand, 28 individuals (56%) are not involved in any formal occupation or are unemployed.

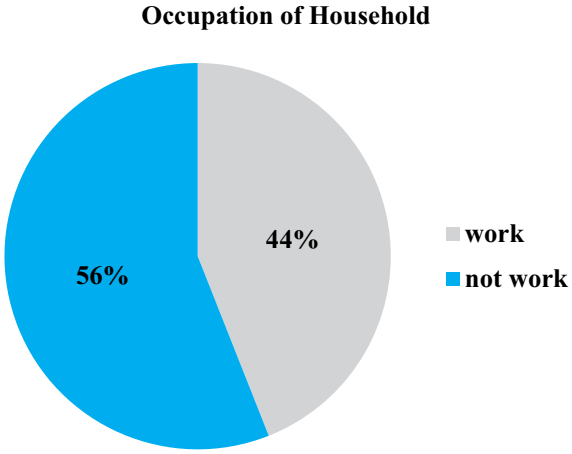

Figure 4: Occupation of Household

The table 1 presents data on personal hygiene practices among the participants. Regarding daily brushing, a significant majority, 78%, reported that they always brush their teeth, 2% do so frequently, 18% sometimes, and 2% never brush their teeth. In terms of cutting nails, 44% of respondents always maintain this hygiene practice, 14% do so frequently, 40% sometimes, and 2% never. When it comes to wearing clean clothes, 56% always wear clean clothes, 22% do so frequently, another 22% sometimes, and none reported never doing so. For daily bathing, 44% of individuals always take a bath daily, 24% bathe frequently, 32% sometimes, and none reported never bathing. In terms of hair cleaning, 64% always clean their hair, 20% frequently, 16% sometimes, and none reported never cleaning their hair. With regard to washing hands after using the toilet, 88% of respondents always follow this essential hygiene practice, while 12% reported doing so sometimes; no one indicated doing it frequently or never. Finally, 88% of participants always wash their hands before and after eating, 6% frequently, 6% sometimes, and again, none reported never practicing this habit.

Table 1: Personal Hygiene Practices

Statement	Always Frequency (%)	Frequently Frequency (%)	Sometimes Frequency (%)	Never Frequency (%)
Daily Brushing	39 (78)	1 (2)	9 (18)	1 (2)
cutting nails	22 (44)	7 (14)	20 (40)	1 (2)
wear clean clothes	28 (56)	11 (22)	11 (22)	0 (0)
daily bathing	22 (44)	12 (24)	16 (32)	0 (0)
cleaning hair	32 (64)	10 (20)	8 (16)	0 (0)
washing hands after toilets	44 (88)	0 (0)	6 (12)	0 (0)
washing hands before and after eating	44 (88)	3 (6)	3 (6)	0 (0)

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DISCUSSION

The importance of personal hygiene, particularly among school-aged children, cannot be overstated, as it plays a crucial role in preventing the spread of infectious diseases. A cross-sectional study conducted in Sudan revealed that while most primary school children demonstrated some awareness of personal hygiene practices, many still lacked proper knowledge and consistent behavior, indicating a need for improved hygiene education stated by Tamomh *et al.*, 2021 [15]. More broadly, hygiene interventions have shown considerable potential in enhancing public health outcomes.Curtis *et al.*, 2011 emphasized that hygiene promotion offers new hopes for controlling infectious diseases, especially in low-resource settings where infrastructural improvements may be slow to implement [16]. This is supported by findings from Aiello *et al.*, in 2008, who conducted a meta-analysis revealing that effective hand hygiene can significantly reduce the incidence of infectious diseases in community settings, underscoring its critical role in public health strategies [17]. Similarly, Freeman *et al.*, in 2014 provided a global perspective through a systematic review, demonstrating that handwashing with soap is associated with substantial health benefits, particularly in reducing diarrheal and respiratory diseases [18]. The quantitative analysis by Rabie and Curtis in 2006 further confirmed this association, reporting that regular handwashing can lead to a marked reduction in respiratory infections [19]. In addition to general hygiene, food handling practices within households also contribute to the transmission of diseases.Scott and Herbold in 2010 highlighted through video analysis and surveys that many individuals do not consistently follow safe food-handling procedures during meal preparation, potentially increasing the risk of foodborne illness [20].Following this the study presents this finding among the families surveyed, 26% have fewer than 6 members, 10% have exactly 6 members, and 46% have more than 6 members another finding shows that no. of family members 3 Persons 108 (43.2%),4 Persons 48 (19.2%) 5 Persons 49 (19.6%) 6 Persons 39 (15.6%) 7 Persons (6 2.4%) [1]. According to an additional study, it is evident that 53.1% have 1 to 4 members,37.9% have 5 to 7 members, and only 9% have above 8 members [4]. Through this study, we observed that the occupations of household members vary significantly.22 individuals representing 44% are engaged in various forms of employment or income-generating activities.On the other hand, 28 individuals, accounting for 56% of the total, are not involved in any formal occupation or salaried employment. According to an additional study, it is evident that 68% of individuals are unemployed, 15% are skilled workers, 7% individual are unskilled workers and the remaining 10% [5]. Collectively, these studies highlight that while hygiene awareness is increasing, especially in educational and community contexts, there remains a substantial gap between knowledge and practice.Continued efforts in hygiene education, behavior change strategies, and infrastructure development are necessary to maximize the health benefits of these simple yet effective practices.

This study is limited by its small sample size and single-school setting, which may restrict the generalizability of the findings. The cross-sectional design also prevents assessment of causal relationships between socioeconomic factors and hygiene practices. Future research should include larger, multi-school studies and longitudinal designs to better understand behavior change over time. Intervention-based studies involving parents, teachers, and school health programs are recommended to strengthen sustainable hygiene practices among children.

CONCLUSIONS

While hand hygiene was well-practiced, other aspects like nail trimming and daily bathing showed room for improvement. Findings highlight the need for reinforced hygiene education and parental involvement to instill lifelong healthy habits in children.

Authors' Contribution

Conceptualization: AB
Methodology: SK
Formal analysis: AB, SB, K
Writing and Drafting: MS, AB, SB, K
Review and Editing: MS, AB, SB, K, SK

All authors approved the final manuscript and take responsibility for the integrity of the work.

Conflicts of Interest

All the authors declare no conflict of interest.

Source of Funding

The authors received no financial support for the research, authorship and/or publication of this article.

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