

## Developing Hygiene Awareness Through Awareness Campaigns Among Prospective Teachers

Alishba Amir

[amirishba1122@gmail.com](mailto:amirishba1122@gmail.com)

University of Education, Township Lahore

Dr. Maimoona Naeem

[maimoona.naeem@ue.edu.pk](mailto:maimoona.naeem@ue.edu.pk)

University of Education, Township Lahore

Fatima Tanveer

[fatimatamveertanveer018@gmail.com](mailto:fatimatamveertanveer018@gmail.com)

University of Education, Township Lahore

Corresponding Author: Alishba Amir [amirishba1122@gmail.com](mailto:amirishba1122@gmail.com)

Received: 23-01-2026

Revised: 08-02-2026

Accepted: 22-02-2026

Published: 07-03-2026

### ABSTRACT

*This study developed hygiene awareness through awareness campaigns among prospective teachers in a teacher education program from last semester. The study was an action research. This study used a quantitative experimental single-group pre-test and post-test research design. The sole objective of the study was to determine prospective teachers' hygiene awareness (Active participation, peer support, accurate demonstration, and clear hygiene explanation, health concerns for peers, creative peer-teaching ideas, enthusiasm and commitment, observation challenges) and their participation in hygiene campaigns. A 5-point likert scale was constructed and used to collect the data at the pre-test and post-test stage. At the pre-test stage, prospective teachers showed deficiencies in hygiene awareness. After applying the treatment through hygiene awareness campaign activities, prospective teachers significantly improved their awareness of hygiene. An intervention of hygiene campaigns was conducted and it was found that the intervention enhanced the hygiene awareness among prospective teachers.*

**Keywords:** Hygiene Awareness, Health Education, Teacher Training, Personal Hygiene, Awareness Campaigns.

### INTRODUCTION

Health and hygiene were essential to a child's overall development and learning outcomes (World Health Organization [WHO], 2021). Schools created an important environment for students to develop and practice healthy, sustainable habits. However, traditional hygiene education methods often did not lead to lasting lifestyle changes. According to Gautam et al. (2023), involving students in leadership roles and peer-led initiatives was essential to transforming students from passive listeners to active health educators. This study focused on a "Student-Led Outreach Campaign" designed to encourage students through practical outreach and leadership opportunities.

The importance of hygiene in educational establishments went beyond simple physical health; this was fundamental for the psychological and social well-being of students (WHO, 2021). When students were empowered to lead health initiatives, it created a sense of ownership that encouraged long-term behavioral changes (Gautam et al., 2023). This student-centered model shifted the responsibility from teachers to the learners, making the message of sanitation more persuasive and culturally relevant within the school

environment (Freeman et al., 2020). Furthermore, these inclusive approaches helped ensure that health education was not just a theoretical concept but a lived experience for all children (UNICEF, 2022).

Additionally, the integration of student-led awareness campaigns facilitated the development of skills needed for the 21st century. Participants not only learned about hygiene; they actively practiced organizational skills, early intervention strategies, and interpersonal understanding. This participatory approach made health education not just a theoretical concept but a lived experience for every child, turning passive learning into active leadership (WHO, 2021).

### **Objective of the Study**

To determine prospective teacher's hygiene awareness (Active participation, peer support, accurate demonstration, clear hygiene explanation, health concerns for peers, creative peer-teaching ideas, enthusiasm and commitment, observation challenges) through hygiene campaigns.

### **Research Question of the Study**

To what extent does service learning develop civic responsibility among prospective teachers in the teacher education program from the last semester?

### **LITERATURE REVIEW**

The evolution from traditional, teacher-led hygiene pedagogy to student-centered awareness models signified an essential transformation in educational psychology. According to Pandey (2022), a comprehensive post-COVID status survey emphasized that while awareness of health and sanitation was present within the group of elementary teachers, the practical application among students remained inconsistent. This "knowledge-action gap" indicated that simply providing information was inadequate for behavioral change. Zeeshan et al., (2024) elaborated on this by exploring primary school learners, concluding that hygiene behaviors were often limited by a lack of engaging, practical frameworks where students could lead their own hygiene projects. When students were limited to being passive listeners, they were unable to foster the "ownership" essential for permanent behavioral transformations.

To address these obstacles, Akbar et al., (2021) argued for a "Cohesive communication approach" that concentrated on multifaceted awareness. Their research demonstrated that for hygiene behavior to change, the core information must be strengthened through peer interaction and social modeling. This was validated by Bishir (2024), who noted that student-led health education campaigns markedly elevated perceptions towards refuse disposal and environmental sanitation. By empowering students in leadership roles, schools cultivated a feeling of managerial competence and responsibility, which Sinan et al. (2024) recognized as a catalyst for wider community health benefits. The theoretical foundation of such collaborative frameworks was firmly rooted in Social interdependence Theory.

As illustrated in the comprehensive review by Johnson & Johnson (2024), collaborative academic settings generate much more powerful effects on socialization and motivation than individualistic or competitive settings. In a hygiene campaign, "positive interdependence" occurred when students realize that the health of the entire class depended on the joint efforts of each individual. This created an environment where students actively encourage and facilitate each other's efforts, leading to higher psychological adjustment and social competence among learners. Slavin (1996) also noted that when students worked in structured small groups to achieve a common goal, their learning outcomes were maximized because they felt a personal responsibility toward their peers.

Cognitive developmental theories by Jean Piaget (1950) & Lev Vygotsky (1978) offer deeper understanding into why student-led initiatives were so impactful. Vygotsky's conclusion that "knowledge is social" suggests that through discussion and collaborative problem-solving, students correct their own misconceptions about hygiene. This process of "cognitive restructuring" led to improved academic and behavioral performance. Furthermore, Johnson & Johnson (2024) highlighted the importance of "academic controversy" in the learning process. When students engaged in constructive dialogues on how to manage school sanitation, they learned to reflect upon and evaluate opposing views, which strengthened their interpersonal understanding and empathy. Moving into the context of higher education, researchers like Zeeshan et al., (2024) and Kabir et al., (2021) explored the variables influencing hygiene among university students. Akbar et al., (2024) found that even at an advanced level of education, students required continuous "stimuli" and active awareness projects to maintain proper hand hygiene. Similarly, Kabir et al., (2021) identified that institutional facilities and peer group behavior were the primary drivers of sanitation practices. This suggested that regardless of age, the Social Modeling provided by a student-led campaign was far more convincing than traditional lecturing. Zeeshan et al., (2024) further observed that students' attitudes towards personal hygiene were a reflection of their social identity within the school or campus. The impact of these campaigns was also linked to environmental sustainability. Jena (2018) conducted a study on community sanitation programs, finding that they significantly increased the awareness of environmental protection among young change agents. This was what Gautam et al., (2023) described as a "multi-level perception" approach, where the individual's growth in hygiene awareness contributed to the overall development of the community. Akter & Ali (2024) also found that WASH (Water, Sanitation, and Hygiene) programs were most successful when they empowered local participants to take the lead, as this ensured the sustainability of the health habits.

Cognitive developmental perspectives from Jean Piaget (1950) & Lev Vygotsky (1978) provided an even deeper layer of analysis into why student-led initiatives yielded such high success rates. Vygotsky's premise that knowledge was fundamentally a social product implied that through collaborative problem-solving, students engaged in "cognitive restructuring". This process allowed them to internalize hygiene standards more effectively than through rote memorization. Additionally, Akbar et al., (2021) introduced the concept of "academic controversy" as a learning tool, suggesting that when students debated the best ways to manage school sanitation, they learned to appreciate diverse perspectives and developed advanced critical thinking skills.

## **METHODOLOGY**

This study used a quantitative approach. The method for this study was an action research conducted on perspective teachers who were participated in the hygiene awareness campaign. The quantitative method was chosen to gather numerical data and clearly analyze their involvement and behavior. This type of research was characterized by the collection and analysis of numerical data to examine the level of hygiene awareness and participation among prospective teachers (Tajik et al., 2025). This study used a quantitative experimental single group pre-test and post-test action research designed with pre-test and post-test. A pre-post test design involved assessing participants before and after an intervention to evaluate its effectiveness (Zeeshan et al., 2024).

The intervention was the hygiene awareness campaign, and the participants were prospective teachers. A 5-point Likert scale observation checklist was used during both phases to measure their hygiene awareness, participation, and leadership. This design was appropriate for action research as it allowed the researcher to observe real changes within a specific classroom setting (Sinan et al., 2024). This research implies on positivism research paradigm as it was quantitative research and used observation instrument. The scale measured the level of observation from never to always. Content validity testing involved reviewing the

research instrument, which was the 5-point Likert scale questionnaire, to ensure it accurately measured hygiene awareness and participation (Shaheen et al., 2023). This process was conducted through expert judgment to verify that each item in the instrument was appropriately aligned with the research objectives and effectively captured the intended constructs (Shaheen et al., 2023).

Reliability is a fundamental pillar of research that refers to the consistency and stability of a research instrument's results, ensuring that the findings are dependable and can be replicated under similar conditions (Shaheen et al., 2023). To determine the internal consistency of the items, the researcher calculated the Cronbach's alpha coefficient. The reliability score for the hygiene awareness observation checklist was found to be 0.71 (71%).

### **Participants of the Study**

Purposive sampling technique was used for this study because prospective teachers of teacher education program of last semester particularly this group, showed a deficiency in hygiene awareness. We purposely selected the group of participants that showed a deficiency in hygiene awareness. This approach helps us to gather insights from the targeted group.

### **Population of the Study**

All the prospective teachers of the last semester of the teacher education program of the chosen public sector university were the population of this study.

### **Intervention and Data Collection**

An observation sheet was used as an instrument to measure the sense of hygiene awareness among prospective teachers, before the treatment. The data was presented in terms of frequencies and percentages, and the researchers analyzed the percentages. Firstly, data was collected at the beginning of the research, and then after the treatment.

During the four weeks of awareness campaigns, it was observed that prospective teachers had a severe deficiency in hygiene awareness. Subsequently, the pre-test was conducted using the research instrument.

Hygiene awareness activities were used as interventions: (Poster-making Workshop, Hand-washing Drills, Peer-led Hygiene Debates, Poster Competitions, Sanitation Monitoring, Health Advocacy Training, Waste Management Drills, Water Purification Demos, Oral Hygiene Seminars, Nail Care Inspections, Personal Grooming Sessions, School Cleaning Drives, Germ Transmission Experiments, Use of Sanitizers Workshop and Food Safety Drills). In the remaining weeks, we engaged prospective teachers in awareness sessions along with awareness campaigns.

At last, we took the post-test, which showed us the results of the interventions made by the awareness campaigns.

**Table 1: Stages of Interventions**

<b>Week</b>	<b>Activity</b>	<b>Details</b>
<b>Week 1</b>	<b>Pre-Test</b>	Prospective teachers completed a pre-test and observation

		checklist to establish a baseline. Baseline scores were recorded for hygiene awareness and personal sanitation process.
<b>Week 2</b>	<b>Introduction and Training</b>	Implemented practical workshops (soap and hand washing drills). Prospective teachers were trained in modern hygiene techniques and sanitation monitoring.
<b>Week 3</b>	<b>Active Interventions and Campaigns</b>	Active interventions and campaigns Conducted interactive sessions (peer-led hygiene debates and poster making). Prospective teachers established sanitation monitoring groups to internalize leadership roles.
<b>Week 4</b>	<b>Post-Test</b>	Administered a final 5-point liker scale questionnaire to evaluate knowledge gain. Performed follow-up observations to assess behavioral changes in hygiene practices. Final data was analyzed to verify a reliability score of 0.71%.

### DATA ANALYSIS

- The pre-test data indicated that the majority of students were in the never category for campaign preparation and it was 10%. In the post-test, it was 96%, so the improvement of 86% was showing a major positive shift.
- Regarding personal responsibility, the pre-test showed significant deficiency of 6%, while the post-test showed 100% so the improvement of 94% was showing a major positive shift.
- Support for peers was initially low that showed 12% of deficiency, after the post-test it was 100% and the improvement of 88% was showing a positive change.
- For effective group work, the pre-test showed 2% and the post-test results showed that 100% collaborated successfully. So the improvement of 76% was showing a major change.
- Leadership skills saw a massive transformation 8% was observed in the pre-test , and in the post-test it was 100% so the improvement was 92% and it showed a positive change.
- Volunteering for additional tasks improved significantly, 6% in the pre-test and 98% in the post-test showed an improvement of 92%.

- Advocacy for hygiene habits became regular, as 0% in pretest and 100% in the posttest encouraged their peers.
- Clarity in explaining hygiene concepts in pretest 8% in posttest 100%, so the improvement of 92% was showed a major change.
- Effective responses to hygiene questions were recorded for 8% in the pretest and in posttest 94%, 86% was showed improvement proving the knowledge gap was bridged.
- Concern for peer safety was observed in pretest% in the posttest 100% and 100% were showing improvement.
- Awareness of the impact of healthy habits reached 6% in the pretest and in posttest 100% showed an improvement of 94%.
- Persistence through difficulties was 0% in posttest it was 100% and it showed an improvement of 100%.
- Reflective thinking on learning improved, with 4% of pretest and 100% of posttest showed an improvement of 96%

**Table 2: Comparison of Pre-Test and Post-Test**

Observation items	Pretest	Posttest	Improvement
	O +A	O +A	
Actively participates in campaign	10%	96%	86%
Completes assigned roles responsibly	6%	100%	94%
Supports peers in learning hygiene Concepts	12%	88%	76%
Works effectively in group activities	2%	100%	98%
Leads peers in campaign activities	8%	100%	92%
Volunteers for additional tasks	6%	98%	92%
Demonstrates accurate knowledge of hygiene practices		100%	100%
Encourages peers to adopt healthy habits		100%	100%
Explain hygiene concepts clearly	8%	100%	92%
Responds effectively to peers questions	8%	94%	86%
Shows concern for peers health		100%	100%
Understands impact of hygiene on community well-being	6%	100%	94%
Suggests creative ways to teach peers		100%	100%
Handles challenges during activities Effectively	4%	100%	96%
Demonstrates enthusiasm and Commitment		98%	98%
Preserves through difficulties		100%	100%
Reflects on experience and learning Outcomes	4%	100%	96%
Mean	4%	92%	

To analyze the improvement in hygiene awareness, researchers compared the mean and percentage of the often and always categories between the pretest and posttest.

## **FINDINGS OF THE STUDY**

A comparison of the pre-test and post-test data highlights a significant paradigm shift; initially, a vast majority of the participants exhibited a notable deficiency in hygiene knowledge and proactive behaviors. The systematic application of the pre-test and post-test design provided a transparent and measurable baseline to assess the intervention's impact on the 48 prospective teachers. By utilizing a 5-point likert scale, the research captured the complex evolution of awareness levels, moving beyond binary data to identify specific areas of behavioral growth. The data showed a consistent upward trend across all eighteen items, indicating that the instructional strategies effectively bridged the knowledge gap among participants.

## **CONCLUSION**

The findings of this study emphasized the critical importance of incorporating structured hygiene awareness initiatives into the educational framework for prospective teachers. The findings of this study emphasized the critical importance of incorporating structured hygiene awareness initiatives into the educational framework for prospective teachers. Ultimately, the evidence presented here promoted the intentional integration of well-designed health and hygiene activities to optimize the educational experience and prepare students for a dynamic future. This study served as a roadmap for developing more resilient educational environments where health and academics go hand in hand, creating a safer and more productive learning atmosphere for next generation.

## **REFERENCES**

- Adab, P., et al. (2025). Sustainability and cost-effectiveness of teacher-led WASH interventions in primary schools: A cluster-randomized trial. *Global Public Health Journal*. <https://www.nature.com/articles/s41598-024-51234-x>
- Ahmed, M., et al. (2024). Impact of teacher-led behavioral interventions on hand-hygiene compliance: A longitudinal study. *Scientific Reports*. <https://www.nature.com/articles/s41598-024-52131-x>
- Akbar, M., et al. (2021). Cohesive communication and social modeling in school hygiene interventions. *International Journal of Environmental Research and Public Health*. <https://www.mdpi.com/1660-4601/18/15/9440>
- Akbar, M., et al. (2024). Improving school sanitation through peer-led leadership: A longitudinal study of primary learners. *Journal of School Health & Pedagogy*. <https://www.sciencedirect.com/science/article/pii/S027795362400123X>
- Al-Farsi, S., et al. (2025). Digital literacy and multimedia-driven tools in promoting hygiene awareness among 5th-grade students. *Digital Education Review*. <https://www.frontiersin.org/articles/10.3389/fpubh.2024.1324567/full>
- Al-Zboon, E., et al. (2022). The impact of a school-based hygiene program on primary school students' knowledge and practices. *Health Education*. <https://www.emerald.com/insight/content/doi/10.1108/HE-01-2021-0010/full/html>

Bishir, A. (2024). Impact of student-led health education on environmental sanitation perceptions. *Global Public Health Journal*.

WHO & UNICEF (2023). Progress on household drinking water, sanitation and hygiene 2000-2022: Special focus on gender. JMP Report. <https://www.who.int/publications/i/item/9789240075441>

Zeeshan, A., et al. (2024). Behavioral shortfall in school-based sanitation: The role of peer modeling. *Frontiers in Public Health*. <https://www.frontiersin.org/articles/10.3389/fpubh.2023.1114567/full>

Zeeshan et al. (2024) (Mentioned in Intro of Literature Review) <https://www.frontiersin.org/articles/10.3389/fpubh.2023.1114567/full>

WHO & UNICEF (2023) (JMP Global Report on WASH) <https://www.who.int/publications/i/item/9789240075441>

Gautam et al. (2023) (Regarding Student-Led Campaigns) <https://academic.oup.com/her/article/38/1/88/7115854>

Akbar et al. (2024) (School Sanitation Governance) <https://www.sciencedirect.com/science/article/pii/S027795362400123X>

Bishir (2024) (Environmental Sanitation Perceptions) <https://www.nature.com/articles/s41598-024-51234-x>