



A Study On Knowledge And Awareness Of Hygiene Among Children In The Context Of Covid-19 In Muzaffarpur, Bihar

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Abstract: This research paper is related to children, so that if a disease like COVID-19 and ensure their well-being. Maintaining personal hygiene is crucial for overall health, and health children are the building blocks of healthy society. This study aims to promote hygiene awareness and knowledge among children, empowering them to lead healthier lives. For the study a sample of children for this research was drawn from five private and government schools in Muzaffarpur, Bihar, India. Using systematic random sampling, data was collected. The data for this study was collected in June 2025, the self-administered questionnaire was used as a data collection tool. The study reveals that while most children appreciate hygiene, those from low-income families, face some challenges in maintaining hygiene. Concluding for the study, Hygiene is significantly associated with increased children's knowledge and awareness. These findings provide insights into the effectiveness of health education during the pandemic and offer guidance for future preparedness.

Key-words: Children, Knowledge, COVID-19, Hygiene, Awareness.

I. INTRODUCTION :

The best way to prevent pandemics like COVID-19 is to in still good hygiene habits in children's. The pandemic is not yet over, and even in June 2025, COVID-19 has resurfaced, with cases reported in Patna, the capital of Bihar, and deaths across India. The fear of COVID-19 is still lingers, in the post-COVID era, it's crucial to develop cleanliness habits in children. It's a harsh reality that educating children about new problems and how to overcome them is challenging. Hygiene habits play a vital role in preventing person-to-person transmission and controlling outbreaks. Empowering children with hygiene knowledge is essential to prepare them for future battles against pandemics like COVID-19. According to Ogunbamowo, Waliu Babatunde, (MPH, Ph.D); Oladipupobasirat Olusola, (PhD) & Ashon D, O's research paper, one of the most Important commitments we can make a prevent COVID-19 is practicing hygiene to reduce transmission and keep ourselves and our communities safe. Personal hygiene practices include regularly washing our faces, hands and bodies, cutting nails, washing clothes and hair, combing hair regularly and maintaining dental hygiene. Currently, regular cleaning especially hand hygiene is crucial.

According to researchers like Peter Walger, Ulrich Heininger, Markusknuf, Martin Exner and others in their paper "children and adolescents in the COVID-19 pandemic, "children can be taught basic hygiene rules such as washing Hands before meals and after using sanitary facilities, and practicing careful Hygiene behaviour when interacting with others. This can help prevent the spread of COVID-19. For children, this

should be possible without excessive restrictions, such as clustering into very small group, implementation of barrier precautions, maintaining appropriate distance from others or wearing masks. Attitudes, knowledge and beliefs are some of the measures which are thought to be on the causal pathway to behaviour. Poor knowledge and practice of, and attitudes to personal hygiene has negative consequences for a child's long term overall development, Scott Brt (2007). Some important habits that should be regularly emphasized to children include—

- Hand washing before meals and after using the bathroom.
- Keeping fingernails clean and trimmed.
- Bath regularly, especially after exercising or playing outside.
- Wear a mask when stepping out.
- Avoid close contact with people who have a cold.

By instilling these habits in children, we can help them develop good hygiene practices that will benefit them throughout their lives. The COVID-19 pandemic highlighted the urgent need for widespread hygiene Awareness, especially in school where transmission risks are high. Governments, health authorities, and educational institutions introduced hygiene protocols to curb the spread of the virus. This study focuses on how students perceived these measures, their comfort levels with implementation (like wearing masks), and their ability to internalize and advocate for hygiene related awareness during the pandemic.

II. METHODOLOGY :

Study Design: A descriptive cross-sectional survey was conducted to assess hygiene awareness and practices among school-aged children during the COVID-19 pandemic.

Sampling and Participants: A total of 194 students participated in this study, drawn from five different schools in Muzaffarpur, Bihar. The schools were selected to represent a mix of urban and semi-urban settings, ensuring diversity in the sample. Students ranged from primary to secondary levels.

VARIABLES		NUMBERS.(%)
SEX	MALE	106 (54.6)
	FEMALE	88 (45.3)
AGE	6 -8 years	58 (29.8)
	8 - 10 years	60 (30.9)
	10 - 12 years	76 (39.1)

Data collection tool: structured questionnaire with 4-point Likert scale responses: Not at all, Not quite true, somewhat yes, Absolutely yes.

Analysis method: descriptive statistics using percentage-based interpretation.

Statistical Analysis: Responses were compiled and analyzed using descriptive statistics (mean, standard deviation) and inferential statistics, including a one-sample t-test to evaluate the significance of hygiene awareness and knowledge levels.

III. RESULTS :

A total **194 participants** responded to a hygiene knowledge and awareness survey using a 4-point **Likert-scale** (Not at all, Not quite true, Somewhat yes, Absolutely yes). Below is the detailed distribution.

Survey Question	Not at all (%)	Not quite true (%)	Somewhat yes (%)	Absolutely yes (%)	Total Responses
Do you like the habit of hygiene?	21 (10.8%)	45 (23.12%)	50 (25.78%)	78 (40.20%)	194
Do you know about hygiene?	11 (5.68%)	42 (21.64%)	60 (30.92%)	81 (41.76%)	194
Do you use hand wash to wash your hands?	15 (7.73%)	30 (15.46%)	70 (36.08%)	79 (40.72%)	194
Do they use hand wash in school?	10 (5.15%)	30 (15.46%)	65 (33.50%)	89 (45.88%)	194
Do you use a handkerchief while sneezing?	20 (10.30%)	40 (20.61%)	55 (28.35%)	79 (40.72%)	194
Do you and your friends find wearing masks comfortable?	25 (12.88%)	47 (24.22%)	68 (35.05%)	54 (27.85%)	194
Do you explain hygiene to other children?	15 (7.73%)	32 (16.49%)	59 (30.41%)	88 (45.36%)	194
Do you think hygiene-related matters are important?	15 (7.73%)	22 (11.34%)	42 (21.64%)	115 (59.27%)	194
Do you follow the hygiene advice given by parents, teachers, and doctors?	26 (13.40%)	29 (14.94%)	44 (22.68%)	95 (48.96%)	194

- *Hygiene habit preference*: 40.20% of students “absolutely” liked hygiene habits; only 10.8% didn’t like them.
- *Hygiene awareness*: 41.76% said they “absolutely” know about hygiene combined with “somewhat”, awareness reaches 72.68%.
- *Use of hand wash*: 40.72% “absolutely” use hand wash, 36.08% “somewhat” use it-total of 76.8% practice proper hand washing.
- *Hand wash availability in school*: 45.88% said school “absolutely” provided hand wash, while another 33.50% said “somewhat”.
- *Using handkerchief while sneezing*: 40.72% “absolutely” do so, 28.35% “Somewhat”-indicating 69.07% follow this hygiene practice.
- *Mask comfort*: Only 27.85% found masks “absolutely” comfortable, 35.0% “somewhat” –suggesting 62.9% have moderate-to-full comfort.
- *Explaining hygiene to others*: 45.36% “absolutely” help teach peers about hygiene; a total of 75.77% engage in hygiene education.
- *Belief in hygiene importance*: 59.27% believe hygiene matters are “absolutely” important; only 7.73% say “not at all”.
- *Following parents/teachers/doctor’s advice*: 48.96% “absolutely” follow advice; 22.68% “somewhat” –showing strong about influence (71.64%).

To calculate the Mean and Standard deviation (SD) for each survey question, We'll treat the responses as ordinal values;

- **Not at all** = 1
- **Not quite true** = 2
- **Somewhat yes** = 3
- **Absolutely yes** = 4

Then we compute the weighted average (mean) and standard deviation for each Question.

Survey Question	Mean	Standard Deviation (SD)
Do you like the habit of hygiene?	2.96	0.95
Do you know about hygiene?	3.09	0.84
Do you use hand wash to wash your hands?	3.10	0.88
Do they use hand wash in school?	3.20	0.84
Do you use handkerchief while sneezing?	2.99	0.97
Do you and your friends find wearing masks comfortable?	2.78	0.97
Do you explain hygiene to other children?	3.13	0.87
Do you think hygiene-related matters are important?	3.32	0.88
Do you follow hygiene advice from parents/teachers/doctors?	3.07	1.02

IV. DISCUSSION

The data collected from the survey reveals a generally positive outlook, Knowledge and awareness towards hygiene practices among the respondents, with notable variations across specific behaviours.

- **Awareness and attitude:** A significant portion of participants (over 40%) indicated that they are aware of hygiene and value its importance. This reflects an encouraging trend in health education efforts during the pandemic. More than half (59.27%) believe hygiene matters are important, which suggests that hygiene consciousness has become an integral part of daily life, possibly due to targeted public health messaging during COVID-19.
- **Hygiene behaviour:** practical implementation of hygiene habits like hand washing and using a handkerchief while sneezing shows promising engagement. Around 40-46% consistently reported "absolutely yes" to such Practices. This suggests that while many have incorporated good habits, a considerable proportion remain inconsistent or only partially compliant. Parental and institutional influence seems to play a role, as almost half (48.96%) follow hygiene advice from authority figures.
- **Peer influence and advocacy:** Notably, nearly half (45.36%) of the respondents said they explain hygiene to others. This indicates a ripple effect in behaviour reinforcement, with students actively influencing peers.
- **Comfort with precautions:** comfort with wearing masks is less definitive-only 27.85% felt "absolutely comfortable", while 37.10% leaned towards discomfort. This could be reflect behavioural fatigue or challenges in adapting to sustained preventative measures.

V. CONCLUSION

The survey indicates that hygiene awareness and knowledge practice level are generally high among respondents reflecting successful public health interventions during the COVID-19 period. However, there remains a gap between awareness and consistent behaviour particularly in areas like mask comfort and universal hand hygiene adherence. To bridge this gap, continued reinforcement through schools, families, and community leaders is essential. Health education programs should also focus on comfort and accessibility aspects – like mask fitting and availability of hygiene supplies – to ensure behavioural consistency. Encouraging peer – led advocacy can be a powerful tool in fostering a culture of hygiene beyond the pandemic. The study reveals that during the COVID-19 period, children from both economically well-off and economically disadvantaged families faced numerous challenges in the aftermath of the pandemic. In Bihar's government schools, a large number of children come from economically disadvantaged backgrounds. Their homes often lack basic amenities, which makes it extremely important to raise knowledge and awareness among them.

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