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Personal Hygiene Practices of Day Laborer during COVID-19 Pandemic

Sreekanto Kumar[1], Tipty Shaha[2], Most. Rabeya Khatun[3], Mohammad Sohag Mia[4], Professor Dr. Baizid Khoorshid Riaz[5]

[1,2]Nursing officer, National Institute of Cancer Research and Hospital, Mohakhali, Dhaka. Bangladesh.

[3]Nursing officer, Sheikh Russel National Gastroliver Institute and Hospital, Mokhali, Dhaka, Bangladesh.

[4]Nursing officer, Shaheed Syed Nazrul Islam Medical College Hospital, Kishoreganj, Bangladesh.

[5]Ex-Director and Head, Department of Public Health and Hospital Administration, NIPSOM, Mohakhali, Dhaka, Bangladesh.

ABSTRACT

Background: Personal hygiene is deemed a necessary precautionary measure against different communicable diseases. Its importance is further reiterated during the current COVID-19 global pandemic.

Method: A descriptive cross-sectional study was conducted among 309 day-laborer using convenient sampling technique. The study was conducted from 1st January 2021 to 31st December 2021. An interviewer-guided semi structured questionnaire with questions on knowledge, practices and barriers to personal hygiene was used in data collection. The chi-squire test was applied to evaluate the correlations among the respondents between knowledge and practices. A 95% confidence interval was used and statistical significance was P<0.001.

Result: Research findings showed that most the respondents had good knowledge regarding COVID-19 in term source, transmission, wearing mask, hand wash, social distance, coughing etiquette, avoiding touching of face and nose. Additionally, most of the respondents having moderate practices on personal hygiene during COVID-19 was 58.9%. Furthermore, most of the respondents were wear face mask while going to outside or meet with someone. Only 1.9% respondents wearing mask all time. 83.8% noted lack of soap and water in their workplace as a barrier to maintain personal hygiene.

Conclusion: The study revealed that overall maximum proportion of respondents with good knowledge but having moderate practices with some barrier. Findings indicates there is need for optimizing personal hygiene practices through the addressing barriers and promoting public health education.

KEYWORDS: Day laborer, Personal Hygiene, Hygiene, Practices, COVID-19.

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INTRODUCTION

Nowadays, coronavirus disease 2019 (COVID-19) has become a major concern as a pandemic around the world. A novel coronavirus is also known, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This virus was firstly identified as an outbreak in Wuhan, Hubei, China on 31 December 2019 [1]. On 30 January 2020, the World Health Organization (WHO) designated COVID-19 as a Public Health Emergency of International Concern (PHEIC) [2]. Sustainability Based on several studies, the causative agent of emergence of COVID-19 was a bat reservoir that can infect human health [3]. In addition, COVID-19 transmits from human to humans in several ways, namely droplets and contact routes [4].

Indonesia, for instance, is one of the countries affected by COVID-19. The government confirmed the first case of COVID-19 on 2 March 2020 (Kemlu.go.id.,2020). The president of Indonesia issued a policy related to this disease under Presidential Decree No. 12 of 2020 about the determination of coronavirus disease 2019 (COVID-19) as national disaster. In addition, the president has formed the Task Force for Rapid Response to COVID-19, known as Gugus Tugas Percepatan Penanganan COVID-19 [5]. In Japan high case fatality rate and uncertainties about the

convergence of COVID-19 outbreaks necessitate an urgent need to establish a practical method to prevent SARSCoV- 2 transmission and maintain the health and wellbeing of the older adults. On April 7, 2020, Japan declared a state of emergency in seven prefectures, including the Greater Tokyo Area It aimed to reduce social contact among people by 80% and continued it until May 25, 2020. With some countries experiencing the third wave of COVID-19 cases starting from November 2020, Japan declared the second state of emergency for Tokyo and its neighboring prefectures on 7 January 2021[6]. Social distancing and stay-at-home order for extended periods is a serious public health concern as it can increase the risk of adverse mental and sedentary health outcomes, particularly in a vulnerable population, such as very old people and those who are not technology-driven [7].

Bangladesh is still in a grave condition where thousands of people are getting affected every day. The government of Bangladesh is doing its best to improve the situation and trying implementing various measures to make the people aware of the situation. The general holidays were taken up to May 31, 2020, for the sixth time [8]. Novel coronavirus disease 2019 (COVID-19) has emerged as an unknown fallacy that forced into a global pandemic. Only a few vaccines are available for a limited number of people, and most of the population are not vaccinated yet. So, social distancing, proper personal hygiene, and sanitization concepts are the main factors to prevent the spread of this disease. For a densely populated country like Bangladesh, the concepts of social distancing are unpopular, and people are reluctant to follow community health guidelines.

There are limited observations on personal hygiene, knowledge, awareness and practice concepts among the Bangladeshi population regarding COVID-19. This research served to identify gaps in the knowledge, practices and barriers regarding personal hygiene among the day laborer and slum residents. The results from this study are very useful in paving a way for comprehensive intervention for successful behavior change programs on measures for the implementation of proper personal hygiene and helps to develop national hygiene policies.

MATERIALS AND METHODS

Study design: This study was descriptive type of cross-sectional study.

Study setting: The study was conducted at Sat tata slum, Korail slum and Mohakhali zone of Dhaka city.

Study population: The study population was day laborer (Construction workers, dig and move soil workers, porters, brick breakers, cleaners and others).

Inclusion criteria

• Respondents who participated willingly in the study and gave consent.

• Respondents whose age were above 18 years and, in both sexes,

Exclusion criteria

• Respondents who did not want to participate in the study.

• Physically and mentally illness

Study period and duration: The study was conducted within time frame. It was started from 1st January 2021 to 31st December 2021.

Sample size and sampling: The laborer was selected by using convenient sampling technique and estimated sample size was 309.

Data collection technique: The data were collected using semi-structured questionnaire with face-to-face interview. The questionnaire included sociodemographic characteristics, knowledge, practices and barriers of personal hygiene during COVID-19. Knowledge assessing questionnaire were included 19 items based on 'Yes' or 'No' answered. The correct answer of yes was valued 1 point and no for 0 point. The total knowledge score range was from 1-19. The overall knowledge score was categorized based on Bloom's cut off point, good if the score was between 80 to 100 % (13-19 points), and moderate if the score was between 60 to 79 % (7-12 points) and poor if the score was less than 60% (0-6.99 points). Whereas, the assessing of practices items was containing of (16 question). Among sixteen items, the nine of them were containing three stems where always practicing indicate of 2 points, sometimes practicing of 1 point and never practicing of 0 points. Rest of the seven items were containing "yes" or "no" where for each correct answer receiving point 1 and each wrong answer of 0 [9].

Data analysis: The analysis was carried out using the statistical software namely SPSS (Statistical Package for Social Sciences) (version 23). Descriptive data were analyzed by simple frequency distribution (mean, standard deviation, percentage) and cross tabulation.

Ethics:

- Prior to the commencement of this study ethical approval of the research protocol from the Institutional Review Board of National Institute of Preventive and Social Medicine (NIPSOM) was taken.
- The aim and objectives of the study along with its procedures and benefits were explained to the respondents in easily understandable local language and inform written consent was taken.
- Model of consent form was included in annexure.
- Each respondent was interviewed separately.
- The privacy and confidentiality of the respondents was maintained strictly
- Any query regarding questions and answers were clarified to the respondents as per their demand and desire

The respondents were informed about their full freedom to participate or refuse to involve in the study.

RESULTS

A cross sectional study was conducted among day laborer at Mohakhali zone (Sat-tala slum, Korail slum, Railgate, Bustand). Total respondents 309 were enrolled and interviewed by questionnaire. The objective of the study was to assess the state of personal hygiene practices of day laborer during COVID-19 pandemic. Collected data were cleaned and analyzed with the help of software SPSS windows version 23 and Microsoft Excel 2016. The analyzed data have been presented in this chapter through tables and appropriate graphs. The results of the study have been described as follows

- Information of socio-demographic profile of the respondents
- Information related to knowledge of day laborer about personal hygiene practices during COVID-19 pandemic.
- Information related to practices of day laborer regarding personal hygiene practices during COVID-19 pandemic.
- Information related to barrier of maintaining personal hygiene practices during COVID-19 pandemic.

Table 1. Socio-demographic characteristics of the respondents (n=309)

Age category of the respondents (year)	Frequency	Percentage (%)
18-27 years old	87	28.2
28-37 years old	92	29.8
38-47 years old	81	26.2
Above 47 years	49	15.9
Mean age: 35.62 years	Std. Deviation: ±11.228	Minimum:18 Maximum:76
Gender of the respondents		
Male	243	78.60
Female	66	21.40
Level of education		
No formal education	49	15.50
Elementary knowledge	58	18.10
Primary education	89	29.10
Junior level	44	14.90
Secondary level	49	15.50
Higher Secondary	20	6.80
Occupations		
Construction Worker	125	40.5
Dig and move soil worker	47	15.2
Porters	33	10.7
Brick breaker	28	9.1
Cleaner	66	21.4
Others	10	3.2
Family Income		
Less than 3000	8	3.0
3000-10000	147	48.2
10000-20000	125	41.4
More than 20000	29	10.0
Total	**309**	**100**

Table 1 shows that majority 29.4% respondents belonged to (28-37) years of age. Mean age of the respondents was 35.62 and Std. Deviation was ±11.22. Minimum age 18 years and maximum 76 years. Among them, majority were male 78.60 % and 21.40% were female. Most of the respondents 29.1% (89) completed primary (I-V class), 18.1% (58) were elementary knowledge, 15.5% (49) respondents were secondary (IX-X class), whereas 15.5% (49) had no formal education. From total respondents, 40.5% were construction worker, 21.4% respondents were cleaner, 15.2% respondents were dig and move soil worker, 10.7% respondents were porters, 9.1% were brick breaker and others occupation were 3.2%. Out of 309 respondents, 48.2% respondents were earned 3000 to 10000 BDT/month, 41.4% respondents were earned in between the range of 10000 to 20000 BDT /month,10% were earned more than 20000 BDT /month and rest of .3% were earned less than 3000 BDT /month.

Table 2. Information related to knowledge of day laborer about personal hygiene practices during COVID-19 pandemic (n=309)

Heard about COVID-19	**Frequency**	**Percentage (%)**
yes	309	100
Heard about COVID-19 from where		
Health workers	6	1.9
Mass media (social media, television, radio and taps)	176	57.0
Printed or electronic media	10	3.2
Friends and family	97	31.4
Others	20	6.5
knowledge about spread of COVID-19 virus		
Yes	299	96.8
No	10	3.2
If yes, mention spread of COVID-19 virus by		
Coughing and sneezing	169	56.5
Air	64	20.7
Touching	59	19.1
Others	7	2.3
Knowledge about wearing mask		
Yes	293	94.8
No	16	5.2
Knowledge of hand washing		
Yes	287	92.9
No	22	7.1
Knowledge on hand sanitizer		
Yes	104	33.7
No	205	66.3
Knowledge on Social distancing		
Yes	271	87.7
No	38	12.3
If yes, how long distance		
1 meter	181	58.6
2 meters	74	23.9
3 meters	14	4.5
Others	2	.6
Knowledge about touching of nose and face		
Yes	266	86.1
No	43	13.9
Knowledge on isolation measure		
Yes	208	67.3
No	101	32.7
Knowledge on stay at home		
Yes	195	63.1
No	114	36.9
Total	**309**	**100**

Table 2 shows that out of 309 respondents, 100% respondents heard about COVID-19 virus. Among them 57% respondents heard about COVID-19 virus from Mass media (social media, television, radio and taps), 31.4% respondents by friends and family members and 6.5% respondents from were known by different way and most 96.8% respondents said that knows about spread of COVID-19 virus. Here, 56.9% respondents said that COVID-19 virus spread by coughing and sneezing, majority 94.4% respondents said that wearing a mask protect from COVID-19 infection, 92.9% respondents had knowledge about hand washing with soap and water is the most important measure to avoid the transmission of this virus and 7.1% respondent weren't knowledge about it. Out of 309 respondents, most 66.3% respondent weren't knowledge on using hand sanitizer is important measure to avoid the transmission of

this virus, 87.7% respondents said they knows about social distancing is important to protect from COVID-19 infection 58.6% respondents said that 1 meter, 23.9% respondents said that 2 meter and only 4.5% respondents said 3 meter distance to protect from COVID-19 infection. Among the 309 respondents, majority 86.1% had knowledge on avoiding touching of nose and face is important measure for infection prevention, 67.3% respondents were knowledge about isolation measure to limit the spread of COVID-19 infection and 63.1% respondents had knowledge about stay at home helps to reduce the spread of this virus.

Table 3. Information related to practices of day laborer regarding personal hygiene practices during COVID-19 pandemic (n=309)

earing face mask	**Frequency**	**Percentage (%)**
Yes	298	96.4
No	11	3.6
Timing use of face mask		
While going outside	140	45.3
When meet with someone	91	29.4
When at work	61	19.7
All time	6	1.9
Type of mask use		
Surgical mask	175	56.6
KN95	4	1.3
Cloth making mask	120	38.8
Practices hand wash		
Yes	309	100
Material use for hand washing		
Normal soap	286	92.6
Anti-bacterial soap	9	2.9
Hand sanitizer	2	.6
Liquid soap	11	3.6
Others	1	.3
Number of wash hand in a day		
Less than 5 times	1	.3
6 - 10 times	159	51.5
11 - 15 times	149	48.2
Duration while washing hand		
10 Sec	74	23.9
20 Sec	147	47.6
1 minute	86	27.8
Others	2	.6
Use hand sanitizer and gloves		
Always	5	1.6
Sometimes	61	19.7
Never	243	78.6
Avoid going to crowded places		
Always	26	8.4
Sometimes	188	60.8
Never	95	30.7
Avoid touching of mouth, nose and eyes with unwashed hand		
Always	143	46.3
Sometimes	144	46.6
Never	22	7.1
Cover mouth and nose when coughing and sneezing into the elbow or within clothing		
Always	163	52.8
Sometimes	131	42.4

Never	15	4.9
Total	309	100

Table 3 shows that, out of 309 respondents, majority 96.4% respondents were practices face mask, 45.3% respondents were use mask while going outside, 29.4% respondents were use when meet with someone, 19.7 % respondents were use when at work and rest of 1.9% respondents were use mask all time and among them 56.6% respondent's practices wearing surgical mask, 38.8% wearing cloth making mask and rest of 1.3% respondents wearing KN95 mask. All of respondents said they do practices of hand wash and 92.6% respondents washed their hand with normal soap and among them 51.5% respondents said that they have washed their hand 6-10 times per day and 47.6% respondents said that they washed their hand 20 seconds duration.

Majority of the respondents 78.6% said they never use of hand sanitizer and gloves, 60.8 % respondents said sometimes they had avoided crowed places, 46.6 % respondents sometimes avoided to touching of mouth, nose and eyes with unwashed hand and 52.8 % respondents always maintained coughing etiquette.

Table 4. Information related to barrier of maintaining personal hygiene practices during COVID-19 pandemic (n=309).

Barriers of using face mask	**Frequency (%)**	**Frequency (%)**
	Yes	No
Irritation while wearing face mask	126 (40.8)	183 (59.2)
Difficulty in breathing while wearing face mask	61 (19.7)	248 (80.3)
Face any social embarrassment while wearing face mask	50 (16.2)	259 (83.8)
Available facilities	**Frequency (%)**	**Frequency (%)**
	Yes	No
Sufficient clean water and soap for hand washing	50 (16.2)	259 (83.8)
Personal protective equipment's (PPE)supply in workplace	33 (10.7)	276 (89.3)
Space for self- isolation in home	154(49.8)	155(50.2)
Available time to maintain personal hygiene	152 (49.2)	157 (50.8)
Protective measure items are costly	**Frequency**	**Percentage (%)**
Yes	98	31.7
No	211	68.3
Total	309	100

Table 4, it appears that out of 309 respondents, 40.8% respondents had felt irritation, 80.3% respondents hadn't difficulty in breathing and 83.8% respondents didn't face any social embarrassment while wearing face mask. Majority 83.8% respondents said there hadn't sufficient clean water and soap for hand washing and 89.3% respondents said that there hadn't available personal protective equipment's (PPE) supply in their workplace. Among them 50.2% respondents said that they have available space for self- isolation in home and 50.8% respondents said they haven't available time to maintain personal hygiene and 31.7% respondents said that protective measure items are costly

Table 5. Association between level of knowledge and practices of the respondents on personal hygiene during COVID-19 pandemic (n=309)

Knowledge category	**Practice category Frequency (%)**			**Total**
	Poor	Moderate	Good	
Poor	2 (28.6%)	5 (71.4%)	0 (0.0%)	7
Moderate	6 (7.6%)	58 (73.4%)	15 (19%)	79
Good	5 (2.2%)	119 (53.4%)	99 (44.4%)	223
Total	13 (4.2%)	182 (58.9%)	114 (36.9%)	309
χ^2=28.24			P-value <0.001	

From the table 5 it appears that association between level of knowledge and practices of the respondents on personal hygiene out of 309 respondents, 223 respondents had good knowledge, among them 119 (53.4%) having moderate practices while 99(44.4%) respondents had good practices and respondents who have moderate knowledge, among them 58(73,4%) had moderate practices. The association between level of knowledge and practices of the respondents

on personal hygiene was found highly significance because P value < 0.05.

DISCUSSION

A cross sectional descriptive type of study was conducted with the aim to assess the personal hygiene practice of day laborer. This study reveals the laborer knowledge and practices on personal hygiene during COVID-19 pandemic. This study also finds out the socio-demographic characteristics of the respondents and determine the association between knowledge and practice.

Regarding knowledge background of the respondents of this study showed that, out of 309 respondents, 91.3% respondents had knowledge about preventive measure to avoid the transmission of COVID-19 virus and 8.7% had not knowledge about it. Whereas 94.4% respondents said that wearing a mask protect from COVID-19 infection and 5.2% respondents hadn't knowledge about wearing a mask protect from COVID-19 infection. Another result showed, 55% respondents hadn't knowledge on perform hand hygiene for minimum of 20 seconds is important measure to prevent COVID-19 infection and 45% respondents were knowledge about it. In my study 86.1% respondents had knowledge on avoiding touching of nose and face is important measure for infection prevention and 13.9% respondents weren't knowledge about it. In the current study 89% respondents had knowledge on avoiding handshaking and hugging to prevent transmission of COVID-19 virus and 11% respondents hadn't knowledge about it.

Where another study regarding the knowledge and practice towards COVID-19 pandemic prevention among residents of Ethiopia. An online cross-sectional study. In the study reported, from all respondents, the majority (91.8%) had information about COVID-19. The analysis showed that although the majority of the respondents thought to avoid touching the nose, eye, and face with an unwashed hand to protect themselves from getting COVID-19, about 11.4% of the respondents did not agree with this preventive measure. Besides, 286 (83.9%) out of all the respondents thought that wearing the mask could protect them from getting off the COVID-19, and the rest of 16.1% of the respondents did not believe that wearing a face mask could protect from getting off the COVID-19. Furthermore, the majority of the respondents are three-fourths, reported that avoiding hugging with people can protect them from getting the infection of COVID-19. 90% of them thought that frequent hand washing for 20 seconds can protect them from getting an infection with the virus [10].

Regarding practices in this current study showed, 96.4% respondents said that they had practice face mask while among them, 45.3% respondents practiced when going outside, 29.4% respondents were practiced when meet with someone, 19.7 % respondents were practices when at work and rest of 1.9% respondents had practice all time and rest of 3.6% respondents hadn't practice face mask. Similar findings of another study 96.8% respondents were practice facemask and 3.2% respondents did not practice [11]. In this study showed that all respondents said they do practices of hand wash and majority 92.6% respondents washed their hand with normal soap. Another study findings showed that 91.8% respondents practices mask while going outside and 4.4% respondents were practice when meet with someone [12]. Among them 56.6% respondent's practices wearing surgical mask, 38.8% wearing cloth making mask and rest of 1.3% respondents wearing KN95 mask. This study showed, 48.9% respondents said they sometimes properly disposed of facemask, 36.2% respondents said that never disposed of facemask and only 11.7% respondents practiced always.

Regarding barrier of wearing facemask in this study showed that, 59.2% respondents addressed they did not feel irritation and 40.8% respondents had felt irritation, 80.3% respondents weren't difficulty in breathing and 83.8% respondents didn't face any social embarrassment while wearing face mask. Barrier regarding of available facilities to maintain personal hygiene in this study showed that, 83.8% respondents said that there haven't sufficient clean water and soap for hand washing and 89.3% respondents said that there is not available personal protective equipment's (PPE) supply in their workplace. Another study related to Assessment of knowledge, Practice and Barrier in use of Facemask among University Students reported that facemask presented 43.3% had irritation,21.7% had breathing difficulty and 11.7% had mentioned social embarrassing as barriers of using mask [13, 14].

Finally, in this study showed that association between level of knowledge and practices of the respondents on personal hygiene out of 309 respondents, 223 respondents had good knowledge, among them 119 (53.4%) having moderate practices while 99 (44.4%) respondents had good practices and respondents who have moderate knowledge, among them 58(73,4%) had moderate practices. The association between level of knowledge and practices of the respondents on personal hygiene was found highly significance because P value < 0.01

CONCLUSION

From this study, it can be concluded that most of the day laborer had good knowledge regarding personal hygiene measure against COVID-19 infection. However, the practices of these preventive measure were moderate among the respondents. Good knowledge and moderate personal hygiene practices were relatively 44.4% and 53.4% respectively. Findings from my study can give scientific reference for policy makers to optimize pandemic management decision-making and for improving the subsequent publicity and education on COVID- 19 prevention, especially for community healthcare professionals to identify priority needs, determine target

populations and design more tailored public education programs. Due to the sample limitation, further studies, including expanding the research scope and survey populations, especially the day laborer are needed to support for better improvement. The final result may help to gather information gaps regarding this issue, which may further contribute to understand the present condition of the people of Bangladesh and develop national hygiene policies.

RECOMMENDATIONS

1. Finding of the study clearly indicate the importance of improving health education with practical demonstration among the day labor population through mass media as well as engaging the health workers across the country.
2. Assure availability of sufficient and appropriate supplies necessary adherence to standard precautions (e.g., facemask, hand hygiene product, clean water supply).
3. Mass campaign with clear, complete and specific information to improve awareness among day labor or lower socio-economic groups.
4. The final result may help to gather information gaps regarding this issue, which may further contribute to understand the present condition of the people of Bangladesh and develop national hygiene policies.
5. Need community-based awareness creation and education to change the prevention knowledge into practices to combat the spread of the COVID-19 pandemic.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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