# Factors Associated with the Current State of Food Safety Knowledge and Practices among the 'Doi' Workers in Bogura, Bangladesh: A Cross-sectional Study

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## ABSTRACT

'Doi,' or yogurt, is a traditional dairy product in Bangladesh. Bogura's 'Doi' is the most popular of all 'Doi' items throughout the country. The state of food safety in the 'Doi' business is of great concern because this product is consumed by a vast number of people. The current study aims to evaluate the food safety knowledge and practice of the 'Doi' workers in Bogura as well as the associated factors. In this cross-sectional study, 150 people participated voluntarily and answered a structured questionnaire. The final result showed that the current state of their food safety knowledge (4.7±2.9; scale=15) and practices (21.5±6.2; scale=60) was not satisfactory. It was also observed that level of education, job hours, and training experience all had a substantial impact on knowledge and practices. Participants with a high level of food safety knowledge had 5.5 times more desired food safety practices than their peers. Therefore, the current findings emphasize the need of food safety trainings, certification, and employing educated personnel in the 'Doi' sectors.

**Keywords:** dairy, food safety, food handlers, KAP, yogurt.

I. INTRODUCTION

Bangladesh has an eclectic collection of traditional food products which are well known for their unique taste and nutritional value and certainly, these products are very suitable for the global market. 'Doi' (Yogurt) of Bogura is one of them. 'Doi' is a completely fermented dairy product made from cow's milk or skim milk, with sugar or in some special cases without sugar. Generally, yogurt is regarded as ready-to-eat food that is regularly consumed around the world for energy production and good health [1]. It is a well-balanced diet that contains nearly all of the nutrients present in raw milk and is a strong source of probiotics [2]. Due to its physiological, nutritional, and beneficial properties, it is considered a highly demanded and widely accepted popular drink [3]. When people of Bangladesh think about any type of yogurt, the 'Doi' of Bogura comes first to mind and all over the country it is commonly recognized as 'Bogurar Doi' as it is the best in taste and quality. This product has 250 years of strong historical Submitted: October 19, 2021 Published: November 09, 2021

ISSN: 2684-1827

**DOI**: 10.24018/ejfood.2021.3.6.397

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background behind its birth. It is anticipated that skilled artisans and the environment (weather, water, and soil) of Bogura which is favorable for producing good quality milk, are the reasons for the uniqueness of 'Doi' of Bogura.

The production and commercialization of Bogurar Doi in Bangladesh are rapidly growing on a regular basis along with its increasing demand and popularity. 'Doi' (Yogurt) is produced and consumed throughout the country, but 'Doi' of Bogura is the best in terms of taste and acceptance. Because of the inimitable savors and distinctive characteristics, the product has a huge possibility of capturing the global market. But various factors such as lack of research to extend the shelf-life of the product, inappropriate handling during processing, absence of a proper hygienic condition, and so on make this task quite difficult. In fact, the significance of food safety knowledge both from the producers' and workers' points of view in the processing of dairy products is inevitable. A study showed that the microbiological quality of the raw milk and 'Doi' samples collected from different regions of Bangladesh were not satisfactory because of their high bacterial loads and precaution is needed to the management of raw milk and yogurt [4]. On the other hand, milk and yogurt, are very susceptible to bacterial contamination and thus readily perishable [5]. Dairy products are also considered potentially hazardous if the processing occurs in nonconforming conditions. Thus, they are classified as a highrisk food commodity. Microorganisms from different sources including personnel, water, equipment, additives, and packaging materials can contaminate dairy products during processing [6]. As a result, milk and milk-derived products can contain a wide range of microorganisms and serve as implicated food vehicles of foodborne diseases. In the case of yogurt, it was found that in Nigeria yeast and mold are considered primary contaminants, and fungi thrive in acidic environments and multiply rapidly [7]. Another study reveals that Campylobacter, Brucella, Salmonella, Listeria monocytogenes, Escherichia coli, and Shigella are only a few bacteria that have the ability to contaminate different dairy products and may lead to death [8].

A fundamental prerequisite for human health is access to adequate safe food. Food contamination and adulteration have become serious public health concerns; hence, food safety is an unceasing public health issue today [9,10]. The risks of contaminated and unsafe food are substantial and responsible for many life-threatening diseases, ranging from diarrhea to different variants of cancer [10,11]. In Bangladesh, foodborne disease is considered an alarming problem because a growing number of consumers suffer from a variety of health problems by consuming adulterated food [12]. As food production operators are the first line of defense to provide safe food to consumers, the employees play a vital role in different stages of processing in preventing foodborne disease outbreaks. Lack of ample knowledge related to food safety can make the person handle the food in an improper way which results in producing unsafe food. Along with this, improper food handling techniques can lead to foodborne disease and contamination, which can harm consumers' health in the long run [13]. The study also discovered that a considerable percentage of foodborne diseases emerge as a result of workers' improper food handling practices and illness, and that these are the fundamental causes of foodborne disease outbreaks [14]. Therefore, ample knowledge regarding food safety issues and hygiene practices is very important for food industry personnel. However, in the current aspect of Bangladesh and for commercial food entities here, this is a matter of great concern. According to the author acquaintance, limited researches have been conducted on dairy farm workers and no research on food safety knowledge and hygiene practices among 'Doi' sector employees occurs in Bangladesh. To enable and facilitate the management of this important 'Doi' sector, we feel an urge to comprehend and evaluate the worker's current condition of food safety knowledge and practices. We believe that this study will support the higher management as well as the government to set standards and develop useful strategies to uphold Bangladesh's 'Doi' sector globally. Hence, the objectives of this present research were to evaluate the food safety knowledge and practices among the 'Doi' workers in the Bogura district of Bangladesh, as well as to determine the factors contributing to the current situation.

# II. METHODS

## A. Study Place and Period

The majority of 'Doi' producers operate within the Bogura city and surrounding areas. So, the current study was carried out in the Bogura district from January to May 2020. Almost all of Bogura's popular 'Doi' enterprises participated in the survey (22 in number). The first six months of the year are peak months for 'Doi' manufacturing, with the greatest number of workers employed in the related companies. When winter approaches, the amount of 'Doi' manufacture decreases, and the number of workers decreases as well. As a result, we chose the pick period for this study in order to interview as many workers as possible.

## B. Study Design and Data Collection

A structured and self-administrated questionnaire was established for conducting the study. For convenience, two versions (English and Bengali) of the questionnaire were prepared. One hundred and fifty (150) people took part in the study. All respondents voluntarily participated in the ongoing study, and enough time (60 minutes) was granted to complete the questionnaire. The questionnaire came with a brief completion instruction explaining the purpose of the study as well as directions on how to fill it out. According to the signed consent, participation in this study remained confidential because a consent form was acquired with a signature from each respondent before the survey. A pilot study was conducted before the main work on 40 workers (chosen at random) to determine the clarity of the questions, time management, and consistency. The first section of the questionnaire was designed to collect demographic information. The second section of the questionnaire was designed to accumulate information about food safety knowledge and practices. There were 15 closed-ended questions in both the knowledge and practice sections. In the knowledge part, three possible response choices were presented (true, false, don't know), and practices (never = 0, rarely = 1, sometimes = 2, often = 3, always = 4). The response options were chosen in this manner to restrict the likelihood of selecting the correct answer by chance. The scores were converted to 0 to 100 points. A score above 60% was considered a good score and below that was considered poor. The final score was computed by adding all of the correct answers together. Participants were considered eligible for the study if they met the following criteria: (i) they had direct contact with the process, (ii) they had at least 6 months of work experience in 'Doi' production, and (iii) they were free of any disability or sickness. The food safety knowledge score varied from 0 to 15, with a score of 8 or above indicating a good level of knowledge and a score of less than 8 indicating a poor level of knowledge. On the other hand, the practices score varied from 0 to 60, with scores below 30 indicating poor practices and scores 30 or higher indicating a satisfactory level of practice.

#### C. Statistical Analysis

SPSS (version 23.0) software was used to analyze the

data. To summarize variables of relevance, descriptive statistics (e.g., response percentage, mean, and standard deviation) were employed. Analytical statistics, including bivariate analyses and multiple logistic regression models, were utilized to discover characteristics related to meat handlers' food safety knowledge and practices. The demographic variables were involved in both univariable (unadjusted) and multivariable (adjusted) logistic regression models, with the exception of gender and health certificates (which were eliminated because of the lack of variance in categories). Odds ratios with 95% confidence intervals (CI) were used to analyze the strength of the connection between independent variables (such as age and education level) and dependent variables (food safety knowledge and practice).

## D. Ethical Approval

The ethical committee of Sylhet Agricultural University approved the design of the study. Respondents were also asked to provide informed consent. There was no use of personal information during the study. All data were kept on a password-protected computer that only the research team had access to.

#### III. RESULTS

### A. Demographic Characteristics

Table I depicts the demographic profiles of the 'Doi' workers, where all 150 food handlers who participated in this study were men. The mean age of the respondents was 32 years (SD = 9.6), with a range of 16 to 66 years. Almost one-fourth of those polled (n = 33, 22.0%) have no formal education. The highest number of respondents (n = 59, 39.3%) showed to have primary education. More than half of respondents (n = 80, 53.3%) had worked for more than 5 years; but none had food safety training and no health certificates. Most of the participants were helper (n = 110, 73.3%), and the rest were cooker (n = 40, 26.7%).

Variables	Categories	Frequency (n)	Percentage (%)
Gender	Male	150	100
Age (years)	<20	12	8.0
	21-30	57	38.0
	31-40	59	39.3
	>40	22	14.7
Field of work	Cooker	40	26.7
	Helper	110	73.3
Education	No	33	22.0
	Primary	59	39.3
	Secondary	39	26.0
	Higher secondary	19	12.6
Work experiences (years)	<5	70	46.7
- '	5-10	45	30.0
	>10	35	23.3

81

69

0

150

0

150

54.0

46.0

0

100.0

0

100.0

# B. Food Safety Knowledge and Its Associated Factors among 'Doi' Workers

<8

>8

Yes

No

Yes

No

Working hour

(hours)

Food safety

training?

Health

certificate?

Table II summarizes the assessment of 'Doi' handlers' food safety knowledge. The majority of participants reported having a fair level of awareness of general hygiene and sanitary procedures in the workplace, such as washing hands before work (96%), wearing gloves (90%), and food storage knowledge (89.3%). Almost all (93.3%) of those polled either did not know or answered wrong regarding the food poisoning problem. Overall, the majority of respondents admitted to being unaware of specific foodborne diseases and pathogens. Approximately 98% of respondents did not answer correctly or did not know much about environmental hygiene-product relationships, and pathogenic bacteria elimination. However, everyone seemed to be knowledgeable about cleaning the process area and equipment before production for safe operation.

TABLE II: FOOD SAFETY KNOWLEDGE OF THE RI	ESPONDENTS		
Knowledge statements	True,	False,	Don't know,
Knowledge statements	n (%)	n (%)	n (%)
Hand washing before starting work is required to reduce the risk of food contamination	144 (96)	0 (0.0)	6 (4.0)
Food poisoning is caused by pathogenic microorganisms	10 (6.7)	3 (2.0)	137 (91.3)
Food storage conditions can have potential effects on human health.	134 (89.3)	0(0.0)	16 (10.7)
Eating and drinking in the work place increase the risk of food contamination	50 (33.3)	18 (12.0)	82 (54.7)
The yellow color of the creamy layer of milk can be caused by Pseudomonas synxantha	2 (1.3)	0 (0.0)	148 (98.7)
Typhoid can be transmitted by food	68 (45.3)	5 (3.3)	77 (51.3)
Raw materials and finished goods are not to be stored together.	52 (34.7)	34 (22.7)	64 (42.7)
Jaundice can be transmitted by food.	68 (45.3)	13 (8.7)	69 (46.0)
Cleaning of processing areas and equipment is a must in order to guarantee food safety before and after production.	100 (66.7)	0 (0.0)	50 (33.3)
Salmonella spp. and Clostridium botulinum Can be spread to humans from milk and dairy products.	21 (14.0)	9 (6.0)	120 (80.0)
Environmental hygiene condition can affect the product.	3 (2.0)	0 (0.0)	147 (98.0)
Using gloves during work reduces the risk of food contamination.	135 (90.0)	0 (0.0)	15 (10.0)
Quality of raw materials should be checked before production.	68 (45.3)	15 (10.0)	67 (44.7)
Most pathogenic bacteria can be destroyed by heat.	2 (1.3)	0(0.0)	148 (98.7)
During infectious disease of skin and eye, it is necessary to take leave from work	51 (34.0)	34 (22.7)	65 (43.3)

TABLE III. FACTORS ASSOCIATED WITH THE FOOD SAFETY KNOWLEDGE

Variables —	Knowledge level			Odds ratio (95% CI)		ME
	good	poor	p-value	unadjusted	adjusted	- VIF
Age						
<20	2 (16.7)	10 (83.3)		reference	reference	
21-30	11 (19.3)	46 (80.7)	0.608	1.19 (0.36-3.82)	0.80 (0.18-3.26)	1.578
31-40	11 (18.6)	48 (81.4)	0.008	1.13 (0.34-3.65)	0.18 (0.18-3.82)	
>40	6 (27.3)	16 (72.7)		1.85 (0.54-6.61)	1.30 (0.22-7.18)	
Field of work						
cooker	9 (22.5)	31 (77.5)	0.377	reference	reference	1.213
helper	21 (19.1)	89 (80.9)	0.377	0.76 (0.41-1.35)	1.55 (0.63-3.80)	
Education						
no education	4 (12.1)	29 (87.9)		reference	reference	
primary	11 (18.6)	48 (81.4)	0.111	1.66 (0.72-4.01)	2.33 (0.73–7.83)	2.427
secondary	9 (23.1)	30 (76.9)		2.17 (0.84-5.25)	1.84 (0.53-6.60)	
higher secondary	6 (31.5)	13 (68.5)		3.33 (1.25-9.11)*	4.55 (1.13–18.77)*	
Work experience						
<5	12 (17.1)	58 (82.9)		reference	reference	1 260
5-10 y	9 (20.0)	36 (80.0)	0.337	1.24 (0.63-2.17)	0.509 (0.15-1.61)	1.368
>10	9 (25.7)	26 (74.5)		1.66 (0.83-3.34)	9.33 (1.93-15.10)**	
Working hour						
<8	9 (11.1)	72 (88.9)		reference	reference	1.067
>8	21 (30.4)	48 (69.6)	0.000	3.88 (2.08– 7.20)***	6.09 (2.61–13.02)***	1.00/
Food safety training				,		
Yes	5 (62.5)	3 (37.5)	0.000	7.78 (2.72– 22.46)***	8.96 (2.15–27.32)**	1.055
No	25 (17.6)	117 (82.4)		reference	reference	

On a scale of 15.0, the mean score for food safety knowledge was 4.7 (SD = 2.9). About 20% (95% CI 15.7-24.7) of the participants had knowledge about good food safety. Working hours per day (p < 0.001), and food safety training (p < 0.001) were found to be significantly linked with food safety knowledge using the Chi-square test (Table 3). Table III contains the findings of multiple logistic regressions that predicted the factors related to high levels of food safety awareness among study participants. According to the adjusted regression model, respondents who had higher secondary education [adjusted odds ratio (AOR) = 4.55, 95% CI 1.13-18.77], had a work experience of > 10years (AOR = 9.33, 95% CI 1.93–15.10), worked for  $\geq 8 \text{ h}$ per day (AOR = 6.09, 95% CI 2.61-13.02), and had food safety training (AOR = 8.96 95% CI 2.15–27.32) were more likely to possess a good level of food safety knowledge compared to their counterparts.

# C. Food Safety Practices and Their Associated Factors among 'Doi' Workers

Table 4 displays an evaluation of the food safety practices of the participants. Approximately half of those surveyed (46-48%) indicated they ate, drank, and smoked in 'Doi' processing floors on occasion. Most of them (93.6%) said they never or rarely donned the apron or wore a hair cover at work. More than half of those polled (53.5%) said they worked while they had diarrhea on occasion (Table IV). We discovered a worrisome fact: very few people acknowledged washing their hands before touching items (n = 12, 8%), washing hands after using the toilet (n = 17, 11.3%), and using sanitizer after washing hands (n = 4, 2.7%).

The mean score of food safety practice was 21.5 (SD = 6.2) on a scale of 60.0. Merely 16.3% (95% CI 12.3-20.7) of the workers stated a good level of food safety practices (Table V). The number of hours worked per day (p < 0.001), food safety training (p = 0.018), and level of food safety knowledge (p < 0.001) were found to be significantly related with food safety practices (Table V). The findings from the multiple logistic regression analyses can be observed from table 5. According to adjusted regression analyses, the likelihood of getting a satisfactory level of practice were nearly 8.5 times greater among survey participants who worked 8 hours per day contrasted to those who worked 8 hours per day (AOR = 8.47, 95% CI 3.13-22.95). When compared to their counterparts, individuals with a high level of food safety knowledge had 5.5 times higher food safety practice (AOR = 5.63, 95% CI 2.29–13.81).

TABLE IV: FOOD SAFETY PRACTICES OF THE RESPONDENTS

Practice statements	Never,	Rarely,	Sometimes, n	Often,	Always, n
Tractice statements	n (%)	n (%)	(%)	n (%)	(%)
In the processing area, do you eat or drink anything?	8 (5.3)	34 (22.7)	73 (48.7)	32 (21.3)	3 (2.0)
Do you wash your hands before and after touching raw and processed foods?	52 (33.5)	8 (5.2)	40 (25.8)	38 (25.3)	12 (8.0)
Are you wearing wrist watch while you're working?	29 (18.7)	32 (20.6)	32 (20.6)	19 (12.7)	38 (25.3)
Do you wear mask all the time while working in the production floor?	74 (47.7)	49 (31.6)	23 (14.8)	1 (0.7)	2(1.3)
Do you wash your hand every time you have a restroom break?	24 (15.5)	45 (29.0)	42 (27.1)	22 (14.7)	17 (11.3)
Do you work in a condition when you have diarrhea?	27 (17.4)	33 (21.3)	83 (53.5)	6 (4.0)	1 (0.7)
Do you wear a hair cover during work?	113 (72.9)	7 (4.5)	26 (16.8)	2 (1.3)	2 (1.3)
Are you cutting your nails regularly?	0 (0.0)	2(1.3)	28 (18.1)	22 (14.7)	98 (65.3)
Do you always use the sanitizer after washing your hands?	140 (90.3)	2(1.3)	3 (1.9)	1 (0.7)	4 (2.7)
Do you smoke inside meat processing areas?	29 (18.7)	9 (5.8)	69 (44.5)	32 (21.3)	11 (7.3)
Do you wear gloves during work?	78 (50.3)	47 (30.3)	22 (14.2)	1 (0.7)	2(1.3)
Do you wear an apron during work?	143 (92.3)	2 (1.3)	1 (0.6)	2 (1.3)	2 (1.3)
"Do you handle/process milk when you have cuts, wounds, bruises, or injuries on your hands?"	19 (12.3)	22 (14.2)	96 (61.9)	13 (8.7)	0 (0.0)
Do you remove your work equipment when using the toilet?	6 (3.9)	12 (7.7)	72 (46.5)	35 (23.3)	25 (16.7)
Do you properly clean the storage area before storing new products?	9 (5.8)	6 (3.9)	45 (29.0)	43 (28.7)	47 (31.3)

TABLE V: FACTORS ASSOCIATED WITH THE FOOD SAFETY KNOWLEDGE

Variables Practice level p-value good poor	Practice level		1	Odds ratio (95% CI)		- VIF
	- p-value	unadjusted	adjusted			
Age	-	-		-	-	1.588
<20	2 (16.7)	10 (83.3)	0.485	reference	reference	
21-30	8 (14.0)	49 (86.0)		0.77 (0.22-2.50)	0.49 (0.12-2.17)	
31-40	12 (20.3)	47 (79.7)		1.27 (0.41-4.10)	0.85 (0.17-3.18)	
>40	3 (13.6)	19 (86.4)		0.78 (0.20-3.12)	0.32 (0.05-2.19)	
Field of work						1.238
cooker	6 (15.0)	34 (85.0)	0.964	reference	reference	
helper	19 (17.2)	91 (82.8)		1.04 (0.53-1.82)	1.11 (0.40-3.03)	
Education						1.748
no education	3 (9.0)	30 (91.0)	0.057	reference	reference	
primary	10 (16.9)	49 (83.1)		2.22 (0.77-6.26)	2.43 (0.72-8.44)	
secondary	8 (20.5)	31 (79.5)		3.04 (1.05-8.93)*	3.15 (0.82-12.43)	
higher secondary	4 (20.9)	15 (79.1)		4.33 (1.35-13.95)*	2.48 (0.55–11.13)	
Work experience						1.377
<5	10 (14.2)	60 (85.8)	0.405	reference	reference	
5-10 y	7 (15.6)	38 (84.4)		1.10 (0.52-2.30)	0.43 (0.12-1.51)	
>10	8 (22.8)	27 (77.2)		1.64 (0.76–3.42)	0.18 (0.03-1.84)	
Working hour						1.144
<8	5 (6.2)	76 (93.8)	0.000	reference	reference	
>8	20 (29.0)	49 (71.0)		7.10 (3.30-15.22)***	8.47 (3.13-22.95)***	
Food safety training						1.112
Yes	3 (37.5)	5 (62.5)	0.018	3.36 (1.16-9.73)	1.29 (0.29-5.74)	
No	22 (15.5)	120 (85.5)		reference	reference	
Food safety knowledge						1.164
Good	14 (46.7)	16 (53.3)	0.000	9.10 (4.61-17.91)***	5.63 (2.29-13.81)***	
Poor	11 (9.1)	109 (90.9)		reference	reference	

## IV. DISCUSSION

In this current research, the features linked with food safety knowledge and practices among 'Doi' workers in Bogura, Bangladesh were evaluated. Consequently, 'Doi' handlers in this study had low food safety knowledge and practice. Respondents were, however, more aware of certain food safety issues than others within the particular areas. For example, the majority of responders were conscious that hand washing prior to work, wearing gloves and aprons, and thoroughly cleaning instruments reduce the hazard of food contamination. They were, however, less knowledgeable with high-risk food poisoning categories, as well as specific foodborne diseases and microorganisms. A survey of dairy workers in northern China found that they have low levels of knowledge but acceptable attitudes and behavior [15]. However, the Bogura 'Doi' workers' understanding of several pathogenic microorganisms differs from the study of Young [16]. In addition, a study of small-scale dairy producers in Tajikistan's urban and peri-urban areas indicated that the farmers were similarly unaware of the causal microorganisms [17].

In terms of food safety knowledge-related factors, our findings discovered that education, work experiences, and training were all strongly accompanying to food safety knowledge. According to our findings, 'Doi' handlers with higher secondary education and some form of food safety training were more likely to have a high level of food safety awareness. Some comparable studies conducted in China and Canada found that the educational level and professional relevant training of dairy and cheese handlers was substantially related to their level of knowledge and food safety practices [15], [16], [18]. 'Doi' handlers may be subjected to food safety issues such as washing hands, using gloves and aprons, proper cleaning of the instruments, and identifying the pathways through which milk may be contaminated during the handling process through education and professional training. As a result, people who have received more education and training may have a better grasp of food safety. This finding stresses the importance of increasing higher education in Bangladesh, as well as providing regular training for 'Doi' handlers. The great majority of 'Doi' employees stated that they had no food safety or hygiene training. Given the scarcity of 'Doi' handler training programs in Bangladesh, it is vital that all 'Doi' handlers get such food safety and hygiene training. 'Doi' handlers with more than ten years of experience were more likely to be informed about food safety. However, this conclusion contradicts a comparable study [19], which found no significant relationship between years of experience and food safety knowledge. According to our findings, having a high degree of food safety knowledge can lead to good food safety practices. This study discovered that people who were aware about food safety were 5.7 times more likely to practice food safety. These findings strongly suggest that raising food safety awareness is a key component of encouraging appropriate food handling practices (e.g., hygienic and safe 'Doi' production).

#### V. CONCLUSION

According to the current study, 'Doi' workers in Bogura, Bangladesh currently lack adequate food safety knowledge, and relevant practices are subpar. As a result, it is obvious that some efforts must be taken to improve their knowledge and habits. We discovered that educational status, food safety trainings, and working hours are all significantly related to their knowledge level, and that good food safety knowledge influences food safety practices. To some extent, employing educated people in the 'Doi' companies can overcome this problem. Furthermore, the companies must provide comprehensive food safety training to their personnel on a regular basis. In order to improve the competencies of 'Doi' workers of Bogura, this training program should be structured with specific guidelines that indicates the food safety and hygiene issues. This will necessitate the Bangladesh Food Safety Authority (BFSA) incorporating regular training sessions for dairy handlers into their main missions of regulating and managing the dairy industries. On the other hand, "Doi" enterprises must pursue multiple food safety certification systems like HACCP, ISO, HALAL etc. in order to make their products employable in worldwide markets. This 'Bogurar Doi' may be qualified for the geographical indication (GI) act as a traditional product with special attributes.

#### ACKNOWLEDGMENT AND FUNDING

This work was supported by the University Grants Commission (UGC) of Bangladesh. Beside this, we sincerely acknowledge the participation of the 'Doi' workers of different manufacturers in Bogura, Bangladesh.

## DECLARATION OF INTEREST

We declare that there are no conflicts of interest.

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