

People's Perception, Attitude in Relation to Animal Welfare and Constraint of Livestock Rearing in Bangladesh

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ABSTRACT

Objective: Farmers' perception and attitudes are reflected management decisions and behavior towards animals, which, affects animal behavior, welfare and productivity. The aim of this study is to analysis of farmer's attitudes and perception towards animal welfare in relation of owners' educational status, as well as the constraint of livestock rearing system in Bangladesh.

Materials and Methods: The study was conducted randomly different part of Bangladesh during the period from July to September, 2019. A total of 551 livestock farmer's data were collected randomly by using a pre-tested interview schedule. All of the farmers were classified according to their educational background that was illiterate to graduate.

Results: It was found that 80.69% illiterate people thought that 'provide the animals with favorable environment' is important. About 43.75% HSC and above educated people thought that is very important whereas, 52.08% owner perceived that it is easy to provide animals. In case of farmer's intention to provide improve animal welfare on their farms in the near future, it was found that 48.82% farmers were averagely interested to provide suitable environment during according to environmental changes, 70.78% were likely interested to take care of animals health and treat disease more intensively, 80.58% were averagely interested to take time off for leisure time and holidays. It is also found that 'degradation of common grazing resources' is the major constraint of livestock farming.

Conclusion: These findings suggest that the government and different stakeholder should come forward to encourage farmers about the animal welfare, very urgently.

Keywords: Animal welfare, attitude, Bangladesh, constrains, perception

INTRODUCTION

Animal farming has gone through considerable changes during last decades. Average farm size has been increased, resulting in farmers spending less time with individual animals and making it more difficult to detect abnormal behaviour and illnesses in livestock. [1] On the other hand, farming has become increasingly mechanized, further reducing everyday interactions between farmers and animals and increasing animals' fear of humans. [2] The quality of management system has thus become an ever more important factor in good animal husbandry practices. Now-a-days, farm animal welfare has been a vital topic in social discussion in the media and among citizens. Consumers are concerned about the welfare of animals on farms. However, farmers' voices and their representations of animal welfare are seldom heard. Austin et al. [3] noted that research on farmers' traditions of conceptualizing animal welfare has been lacking until relatively recently. Especially from the perspective of improving animal welfare as an action, few studies have been published elsewhere. [4,5] It is debatable

whether farmers, consumers and other stakeholders are talking about the same issue when discussing improving animal welfare. Understanding how different actors perceive animal welfare is a precondition for the successful improvement of welfare. Animal welfare is a complex and multidimensional concept and there are a number of definitions associated with it. [6] Therefore, the emphasis of this study lies in how farmers perceive improving animal welfare, what it means to them, and how is it constructed in their speech. The interpretation of Appleby, [7] who represents animal welfare as a state of well-being brought about by meeting the physical, environmental, nutritional, behavioral and social needs of the animals under the care or influence of people.

Animal welfare is scientifically proven to impact animal productivity, [8] a fact that seems to be appreciated by farmers. The quality of stockmanship naturally impacts animal welfare. Farmers' attitudes are reflected in their behaviour towards animals, which, in turn, affects animal behaviour, welfare and productivity. Eagly and Chaiken [9] has been defined attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour". Attitudes can, in principle, be studied qualitatively and quantitatively. The methods might strengthen and supplement each other by suggesting various views on a topic, or they might point out respective flaws. [10] Kauppinen et al. [11] stated that the welfare of production animals provokes wide social discussion among the public, yet, despite this, farmers' voices and their representations of animal welfare are rarely heard, even though farmers are the ones actually able to improve animal welfare. Aierqing et al. [12] stated in his experiment that the temperament is one of the factors when handling livestock. It is essential to improve work conditions as well as productivity and animal welfare in farm. It is necessary to improve work conditions as well as productivity and animal welfare in

farm. Farmers' perceptions of what constitutes animal welfare and how it may be improved can differ from those of consumers and other stakeholders, and therefore it is crucial to understand what farmers mean when they talk about improving animal welfare. Attitudes can affect the way farmers treat their animals, the environment they provide the animals and even their own job satisfaction through the feedback received from the animals. However, to our knowledge, there is no published research in Bangladesh aspect regarding the people's perception and attitude for animal welfare. Therefore, the objective of our study was to analysis of farmer's attitudes and perception towards animal welfare in relation of educational status as well as the constraint of livestock rearing in Bangladesh.

MATERIALS AND METHODS

Study area and period

The study was conducted randomly different part of Bangladesh during the period from July to September, 2019.

Collection of data

A total of 551 livestock farmer's data were collected randomly by using a pre-tested interview schedule. All of the farmers were classified according to their educational status i.e. Illiterate, up to secondary school certificate (SSC) and higher secondary school certificate (HSC) and above.

In the questionnaire, we had asked the farmer how importance's do you perceive? And how easy do you perceive? Of these two questions, we mentioned four statements that were provide the animals with favorable environment, taking care of the animals' health, treating the animals humanely and investing in your own motivation and well being at work. The answer of first questions was categorized as very important, important, poorly important, not important and not important at all. The answer of second question were categorized as very easy, easy, average easy, not easy and not easy at all.

In case of assessment of general attitude, we have mentioned eight statements that were animal welfare is the most important issue in my work, I always do my best to improve the welfare of my animals, Improving animal welfare is economically profitable, it is mentally rewarding to improve animal welfare, a farmer is obligated to treat her/his animals well, a high yield is evidence of good animal welfare Animal welfare should not cost too much money, a farmer must not become attached to her/his animals, talking to the animals is unimportant. The answer of these statements were categorized as strongly agreed, agreed, average, disagreed and strongly disagreed.

Statistical analysis

The data were classified in to different categories and subjected to calculation of percentage by using excel spread sheet.

RESULTS AND DISCUSSION

People's perception towards animal welfare

In table 1, it was found that among 435 illiterate people 84(19.31%) thought that provide the animals with favorable environment and is very important and 351 people (80.69%) thought that it is important. Among 68 people up to SSC, 27(39.71%) thought that it is very important and 38(55.88%) people thought that it is important and 3(4.41%) people thought that it is poorly important. Among 48 people upto HSC and above, 21(43.75%) people thought that provide the animals with favorable environment is very important, 26(54.17%) people thought that is important and 1(2.08%) people thought poorly important. We found that among 435 illiterate people 106 (24.83%) thought that taking care of the animals' health is very important, 326 (74.94%) people thought that is important and 1(0.23%) thought that is poorly important. Among 68 people up to SSC, 29 (42.65%) thought that is very important and 37(54.41%) people thought that is important, 1(1.47%) people thought that is poorly important and 1(1.47%)

people thought that is not important. Among 48 people HSC and above 22(45.83%) thought that taking care of the animals' health is very important, 37 (54.41%) people thought that is important, 1(1.47%) people thought poorly important and 1(1.47%) people thought that is not important.

It was found that among 435 illiterate people 37(8.51%) thought that treating the animals humanely is very important, 387 (88.97%) people thought that is important and 11(2.53%) thought that is poorly important. Among 68 people up to SSC, 3 (4.41%) thought that is very important and 60 (88.24%) people thought that is important, 1(1.47%) people thought that is poorly important and 5(7.35%) people thought that is not important. Among 48 people HSC and above 12(25%) thought that treating the animals humanely is very important, 35(72.92%) people thought that is important and 1 (2.08%) people thought poorly important. It is found that among 435 illiterate people 35(8.05%) thought that investing in your own motivation and well-being at work is very important, 390(89.66%). People thought that is important and 10(2.30%) thought that is poorly important. Among 68 people up to SSC, 4 (5.88%) thought that is very important and 62(91.18%) people thought that is important and 2(2.94%) people thought that is poorly important. Among 48 people HSC and above 10(20.83%) thought that Investing in your own motivation and well-being at work is very important and 37(77.08%) people thought that is important, 1(2.08%) people thought poorly important.

In table 2, it was found that among 435 illiterate people, 115(26.44%) people thought that it is easy to provide the animals with favorable environment, 258(59.31%) take it average easy, 60(13.79%) people said that it is not easy and 2(0.46%) commented that not easy at all. Among 68 people up to SSC, 2(2.94%) people commented that it is very easy, 27(39.71%) people thought easy, 32(47.96%) people take it average easy,

7(10.29%) people thought not easy. Among, 48 people HSC and above, 3(6.25%) people thought that it is very easy, 25(52.08%) people commented easy, 16(33.33%) people said average easy, and 3(6.25%) people said that not easy and 1(2.08%) people said not easy at all. We found that among 435 illiterate people, 4(0.92%) people thought that taking care of the animals' health, 359(82.53%) take it average easy, 61(14.02%) people said that it is not easy, 8(1.84%) commented that not easy at all and 3(0.69%) people thought that is not easy at all. Among 68 people up to SSC, 8(11.76%) people commented that it is very easy, 49(72.06%) people thought easy, 10(14.71%) people take it average easy, 1(1.47%) people thought not easy. Among, 48 people HSC and above, 7(14.58%) people thought that it is very easy, 33(68.75%) people commented easy, 7(14.58%) people said average easy and 1(2.08%) people said that not easy.

It is found that among 435 illiterate people, 1(0.23%) people thought that treating the animals humanely, 66(15.17%) take it average easy, 367(84.37%) people said that it is not easy and 1(0.23%) commented that not easy at all. Among 68 people up to SSC, 2(2.94%) people commented that it is very easy, 23(33.82%) people thought easy, 41(60.29%) people take it average easy, 2(2.94%) people thought not easy. Among, 48 people HSC and above, 5(10.42%) people thought that it is very easy, 16(33.33%) people commented easy, 26(54.17%) people said average easy and 1(2.08%) people said that not easy. It is found that among 435 illiterate people,

11(2.53%) people thought that investing in your own motivation and well-being at work is easy, 394(90.57%) take it average easy, 30 (6.9%) people said that it is not easy and 1(0.23%) commented that not easy at all. Among 68 people up to SSC, 1(1.47%) people commented that it is very easy, 8(11.76%) people thought easy, 53(76.94%) people take it average easy, 5(7.35%) people thought easy and 1(1.47%) people thought that it is not easy at all. Among, 48 people HSC and above, 5(10.42%) people thought that it is very easy, 5(10.42%) people commented easy, 36(75%) people said average easy and 2(4.17%) people said that not easy.

Perception is closely related to opinions, attitudes and behaviours Haryadi et al. [5] Velde et al. [13] indicated that the farmer's perceptions seem to be based on a collective tradition with shared convictions, values, norms and interests and on knowledge that is derived from comparable rearing, schooling and daily experiences on the farm. Furthermore, it has been reported that farmer's perceptions of animal welfare are affected by professional background, experience, society and the market, while farmer's attention to animal welfare is related with different factors such as additional cost, decline in competition, high standards for welfare, education and knowledge. [14, 4] We determined that the educational level and farmer's enjoying the job had effect on welfare perception. Kling-Eveillard [15] noted a positive relationship between farmer's educational level and attitude towards animal.

Table 1. How importance's do you perceive?

Statement	Educational status	Very important % (n)	Important % (n)	Poorly important % (n)	Not important % (n)	Not important at all % (n)
Provide the animals with favorable environment	Illiterate (435)	19.31 (84)	80.69 (351)	0	0	0
	Up to SSC (68)	39.71 (27)	55.88 (38)	4.41 (3)	0	0
	HSC and above (48)	43.75 (21)	54.17 (26)	2.08 (1)	0	0
Taking care of the animals' health	Illiterate (435)	24.83 (108)	74.94 (326)	0.23 (1)	0	0
	Up to SSC (68)	42.65 (29)	54.41 (37)	1.47 (1)	1.47 (1)	0
	HSC and above (48)	45.83 (22)	52.08 (25)	2.08 (1)	0	0
Treating the animals humanely	Illiterate (435)	8.51 (37)	88.97 (387)	2.53 (11)	0	0
	Up to SSC (68)	4.41 (3)	88.24 (60)	7.35 (5)	0	0
	HSC and above (48)	25 (12)	72.92 (35)	2.08 (1)	0	0
Investing in your own motivation and well being at work	Illiterate (435)	8.05 (35)	89.66 (390)	2.30 (10)	0	0
	Up to SSC (68)	5.88 (4)	91.18 (62)	2.94 (2)	0	0
	HSC and above (48)	20.83 (10)	77.08 (37)	2.08 (1)	0	0

Table 2. How easy do you perceive?

Statement	Educational status	Very easy % (n)	Easy % (n)	Average easy % (n)	Not easy % (n)	Not easy at all % (n)
Provide the animals with favorable environment	Illiterate (435)	0	26.44 (115)	59.31 (258)	13.79 (60)	0.46 (2)
	Up to SSC (68)	2.94 (2)	39.71 (27)	47.06 (32)	10.29 (7)	0
	HSC and above (48)	6.25 (3)	52.08 (25)	33.33 (16)	6.25 (3)	2.08 (1)
Taking care of the animals' health	Illiterate (435)	0.92 (4)	82.53 (359)	14.02 (61)	1.84 (8)	0.69 (3)
	Up to SSC (68)	11.76 (8)	72.06 (49)	14.71 (10)	1.47 (1)	0
	HSC and above (48)	14.58 (7)	68.75 (33)	14.58 (7)	2.08 (1)	0
Treating the animals humanely	Illiterate (435)	0.23 (1)	15.17 (66)	84.37 (367)	0.23 (1)	0
	Up to SSC (68)	2.94 (2)	33.82 (23)	60.29 (41)	2.94 (2)	0
	HSC and above (48)	10.42 (5)	33.33 (16)	54.17 (26)	2.08 (1)	0
Investing in your own motivation and well being at work	Illiterate (435)	0	2.53 (11)	90.57 (394)	6.9 (30)	0
	Up to SSC (68)	1.47 (1)	11.76 (8)	77.94 (53)	7.35 (5)	1.47 (1)
	HSC and above (48)	10.42 (5)	10.42 (5)	75.00 (36)	4.17 (2)	0

Table 3. The farmers' intention to improve animal welfare on their farms in the near future

Statement	Very likely % (n)	Likely % (n)	Average % (n)	Unlikely % (n)	Very unlikely % (n)
Provide suitable environment during environment changes	9.23 (51)	23.23 (128)	48.82 (269)	18.15 (100)	0.54 (3)
Take care of animals' health and treat disease more intensively	4.9 (27)	70.78 (390)	20.69 (114)	3.45 (19)	0.18 (1)
Treat the animals more humanely	9.07 (50)	26.32 (145)	63.88 (352)	0.73 (4)	0
Take time off for leisure time and holidays	1.81 (10)	11.62 (64)	80.58 (444)	5.81 (32)	0.18 (1)

Table 4. The general attitudes

Statement	Strongly agreed % (n)	Agreed % (n)	Average % (n)	Disagreed % (n)	Strongly disagreed % (n)
Animal Welfare is the most important issue in my work	2.36 (13)	21.23 (117)	35.03 (193)	41.38 (228)	0
I always do my best to improve the welfare of my animals	6.32 (35)	28.31 (156)	25.05 (138)	39.93 (220)	0.36 (2)
Improving animal welfare is economically profitable	19.96 (110)	62.43 (344)	17.24 (95)	0.36 (2)	0
It is mentally rewarding to improve animal welfare	1.99 (11)	17.97 (99)	78.77 (434)	1.27 (7)	0
A farmer is obligated to treat her/his animals well	2.90 (16)	12.70 (70)	82.21 (453)	2.18 (12)	0
A high yield is evidence of good animal welfare	25.23 (139)	66.61 (376)	6.17 (34)	0.18 (1)	0.18 (1)
Animal welfare should not cost too much money	1.63 (9)	67.33 (371)	29.95 (165)	1.09 (6)	0
A farmer must not become attached to her/his animals	0.73 (4)	4.54 (25)	91.83 (506)	2.9 (16)	0
Talking to the animals is unimportant	0.91 (5)	87.3 (481)	4.54 (25)	5.81 (32)	1.45 (8)

Table 5. Constraints of livestock farming

Items	% (n)
Knowledge gap	6.53 (36)
Feed and fodder scarcity	7.99 (44)
Degradation of common grazing resources	50.45 (278)
Inadequate veterinary services	1.09 (6)
Inadequate housing	7.99 (44)
Credit for inputs	21.78 (120)
Inadequate resources of safe water	0.54 (3)
Vehicle available for transportation	3.63 (20)

The farmers' intention to improve animal welfare on their farms in the near future

According to this study in table 3, it is found that, 9.23% people intended that provide animals suitable environment during environment changes is very likely, 23.23% said likely, 48.82% give their opinion on an average, 18.15% said unlikely, 0.54% said that it is very unlikely to provide suitable environment during environment changes. It is found that, 4.9% people intended that take care of animals'

health and treat disease more intensively, 70.78% said likely, 20.69% give their opinion on an average, 3.45% said unlikely and 0.18% said that it is very unlikely to take care of animals' health and treat disease more intensively. We found that, 9.07% people intended that treat the animals more humanely, 26.32% said likely, 63.88% give their opinion on an average, 0.73% said unlikely to treat the animals more humanely. It is found that, 1.81% people intended that take time off for leisure time and holidays, 11.62% said likely, 80.58% give their opinion on an average, 5.81% said unlikely, 0.18% said that it is very unlikely to take time off for leisure time and holidays. We also found that the farmers perceived the improvement of animal welfare as four specific objectives, practical attitude objects (provide suitable

environment during environment changes, take care of animal's health and treat disease more intensively, treat the animals more humanely, take time off for leisure time and holidays. The farmer's intentions to improve animal welfare were best explained by their attitudes towards the specific welfare improving actions. [16]

Aierqing et al. [12] demonstrated that temperament of animals attributes the behavioral responses to fearfulness, which induces depression or excitability and affect the productivity. The concept of the improvement of animal welfare examined in this study outlines measures to improve animal welfare from the farmer's point of view and discusses their influence.

The general attitudes of farmers

According to this study, in table 4, it is found that, 2.36% people strongly agreed that animal welfare is the most important issue in our work, about 21.23% people agreed, 35.03% people gave their opinion on an average and 41.38% people disagreed. We found that, 6.23% people agreed that they always do his best to improve the welfare of their animal, about 28.31% people agreed, 25.05% people gave their opinion on an average, 39.93% people disagreed and 0.36% people is strongly disagreed. We found that, 19.96% people strongly agreed that improving animal welfare is economically profitable, about 62.43% people agreed, 17.24% people gave their opinion on an average, and 0.36% people disagreed. We found that, 1.99% people strongly agreed that it is mentally rewarding to improve animal welfare, about 17.97% people agreed, 78.77% people gave their opinion on an average, and 1.27% people disagreed.

It was also found that, 2.90% people strongly agreed that a farmer is obliged to treat their animal well, about 12.70% people agreed, 82.21% people gave their opinion on an average, and 2.18% people disagreed. We found that, 25.23% people strongly agreed that a high yield is evidence of good animal welfare, about 66.61% people agreed, 6.17% people gave their opinion on

an average, 0.18% people disagreed and 0.18% strongly disagreed.

It was found that, 1.63% people strongly agreed that animal welfare should not cost too much money, about 67.33% people agreed, 29.95% people gave their opinion on an average and 1.09% people disagreed. We found that, 0.73% people strongly agreed that farmers must not become attached to their animals, about 4.54% people agreed, 91.83% people gave their opinion on an average, and 2.9% people disagreed. It was also found that, 0.91% people strongly agreed that talking to animals is unimportant, about 87.3% people agreed, 4.54% people gave their opinion on an average, 5.81% people disagreed and 1.45% people strongly disagreed.

Although an increasing number of studies deal with farmer's general attitudes towards animal welfare little is known about farmers' willingness to participate in farm animal welfare and programs. [17] Farmers considered taking care of the animal's health and their own well-being as the most important means of improving animal welfare. Treating the animals humanely was the easiest measure to follow. Likewise taking care of the animal's health and treating them humanely were the most favoured intentions. In general, the measures to improve animal welfare were regarded as important but not as easy to put into practice. The farmer's obligation to treat his/her animals well was the most important issue at the level at general attitudes. As prerequisites for taking measures that improve animal welfare, farmers have to be able to consider prevailing conditions critically and be willing to change them if needed. Not all measures necessarily require financial investment though. Improving animal welfare through simple, in expensive means. e.g. talking gently to the animals or regarding them as individuals. It can lead to improved production. [16] In general, farmer's attitudes and attitude related perceptions were strongly correlated with the production of livestock. [18] At this stage,

attitude and behavior of the farmer are obviously influential.

Constraints of livestock farming

The constraints are shown in Table 5. The constraint of livestock farming is degradation of common grazing resources, credit for inputs, feed and fodder scarcity, inadequate housing, knowledge gap, vehicle not available for transportation and inadequate veterinary services. Lack of availability of high-breed animals and also the lack of knowledge and technological know-how of maintaining the high-breed varieties; Animal diseases are also among the most important constraints to livestock development in Bangladesh. The overall livestock production constraints were feed shortages, livestock diseases, low genetic potential of indigenous, livestock diseases, low genetic potential of indigenous livestock, lack of marketing infrastructure and water shortages. [2] Different factors or constraints limit the full exploitation of the agricultural sector in general and the livestock sub sector in particular in the country. Moreover, such constraints are pronounced in the mixed crop- livestock dominated highland parts where the human population growth and natural resource degradation are critical. However, the type of constrain and the extent it affects both the agricultural and the livestock sub-sector would vary depending on the context of the farming system. According to LakewDesta et al. [19] inadequate feed both in quantity and quality, widespread diseases and poor health, poor genetic potential for production traits and land equate or inappropriate livestock politics with respect to credit, extension, marketing and infrastructure have been listed as major constraints affecting the performance of the livestock sub-section in most highland parts of the country. The first constraints of livestock farming are degradation of common grazing resources. The causes are poverty, land shortage and increasing population. [20]

CONCLUSION

Farmer makes actual decisions about what farm animal welfare efforts to provide, so they play a critical role in determining the living conditions of production animals. This study was designed to establish how farmers understand improving animal welfare and how they perceive relationships among their own attitudes, animal welfare and production. Farmer's affirmative perceptions of the importance of their own attitudes to animal welfare and productivity support the formulation of my qualitative study questions and represent an encouraging finding that should be studied further. Their views also support the idea that farmers think animal welfare affects production. The second focus of this study was to explore farmer attitudes related to animal welfare and production. Farmer's attitudes as well as other psycho-socio factors, proved to be significant; treating animals humanely, perceiving it is easy to provide the animals with a favorable environment and others. Farmer's intentions to take care of their own well-being were associated with high total welfare for farms. These results show that farmer's attitudes are important when it comes to animal productivity. The third focus of this study was to find out the constraints of livestock farming in Bangladesh. Gradually decreasing of common grazing resources is the major constraints that the results showed. However, farmers attitudes may be linked to animal housing management and productivity, but welfare and productivity are determined by multiple factors, some of which are related to attitudes, some were not.

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CONFLICT OF INTERESTS

The authors declare that they have no competing interests.

AUTHORS' CONTRIBUTION

Ashit Kumar Paul designed the experiment, supervised the study, analyzed the data and revised the final draft of manuscript. Israt Jahan Sathi directly involved to do the experiment, collection of data and reviewed the literature. Dibyendu Biswas summarized the data and written the draft of this manuscript.

Statement of novelty: It is not published or submits before. To our knowledge, there is no published data in Bangladesh aspect regarding the people's perception and attitude for animal welfare. It was found that 80.69% illiterate people thought that 'provide the animals with favorable environment' is important. About 43.75% HSC and above educated people thought that is very important whereas, 52.08% owner perceived that it is easy to provide animals.

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