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Awareness among Different Stakeholders Towards Dairy Animal Welfare

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ABSTRACT

Background: Animal welfare is a complex subject with scientific, ethical, economic, cultural and political dimensions. The ever-growing consumer interests in animal welfare have called for changes in farming practices. The aim of the study was to find out awareness among stakeholders towards dairy animal welfare.

Methods: This study was conducted on four stakeholders *viz*; dairy farmers (160), traders (80), Veterinary Officers (40) and dairy product consumers (160) from two districts (Jaipur and Udaipur) of Rajasthan. A structured interview schedule duly pre-tested and validated was used to elicit information from the respondents.

Result: The findings of the study revealed that most of the dairy farmers and consumers were having medium levels, while traders had low levels of awareness towards dairy animal welfare. Only Veterinary Officers were quite aware of welfare standards that should be followed while rearing the dairy animals and the dairy products got from them.

Key words: Animal welfare, Awareness, Consumers, Dairy farmers, Stakeholders, Traders, Veterinary officers,

INTRODUCTION

Animal welfare involves the incorporation of sensible and sensitive animal husbandry practices into the livestock on the farm (Bech *et al*., 2008). The welfare of production animals remains a subject of wider social discussions among the public (Sarita and Singh, 2017). There is nationwide support and demand for having a strong base of animal welfare education in India. Over the years animal welfare has risen to prominence owing to commercial and ethical reasons. It has gained recognition by governments, national and international bodies, academic institutions and individuals the world over (Mogoa *et al*., 2005). Five freedoms of animal welfare form the cornerstone of good practices of animal welfare. FAWC have framed these freedoms-UK (Farm Animal Welfare Committee) to describe an animal's fundamental needs (Gregory and Grandin, 1998; Bech *et al*., 2008; Vessier *et al*., 2008). Increasing public concern about certain production practices not in tune with animal welfare has been under pressure for change in some existing production systems (Rollin, 2004).

Also, consumer demands for higher standards of animal protection have incumbently led policy-makers and legislators to respond accordingly (Horgan, 2005). The scientific assessment of animal welfare is a key element in efforts to implement good animal welfare practices (FAO, 2009) and should employ an aim approach. Animal welfare is a concept that can be studied scientifically but value-based ideas influenced our understanding of this concept about what is important or desirable for animals to have a good life. Therefore, a better understanding of underlying attitudes towards animal welfare is of paramount importance. An attitude scale is designed to provide a valid, or accurate, measure of an individual's attitude towards a real or psychological object. The present article describes the development of a scale to measure the attitude of consumers toward dairy animal welfare.

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MATERIALS AND METHODS

This study was carried out in two districts of Rajasthan (Jaipur and Udaipur) which were randomly selected from a list of the top five districts of the state in terms of population of dairy animals. From each district, two blocks were selected randomly and from each block, two villages were selected on a random basis. Thus, a total of 8 villages (4 from each district) were selected for the study and from each village, 20 dairy farmers who owned a minimum of two dairy animals were selected randomly, making a total sample size of 160 respondents. Personal interviews method was used to collect the desired data through a structured interview schedule. After that, the collected data were analyzed as per the nature of the data through suitable statistical techniques such as mean, standard deviation, Man-Whitney test (Mann and Whitney, 1947) using SPSS software (SPSS 2008).

RESULTS AND DISCUSSION

Awareness among dairy farmers

Table 1 depicts that the majority of the dairy farmers in Jaipur were aware of dairy animal welfare practices with 68.75 per cent of respondents under a medium level of awareness, followed by high and low with 16.25 and 15 per cent of the respondents respectively. In Udaipur, the majority of the dairy farmers (55.00%) have a low level of awareness about dairy animal welfare, followed by 41.25 and 3.75 per cent in medium and high levels, respectively.

The pooled data revealed that more than half of the total (55%) dairy farmers had a medium level of awareness about dairy animal welfare, while 35 per cent were less aware. Only 10 per cent of the dairy farmers had a high level of awareness about dairy animal welfare. However, Dwivedi (2013) found that majority of the dairy farmers were not aware of dairy animal welfare while Kumar (2008) reported that farmers were aware of some basic aspects of animal welfare like different components of “Five Freedom”.

The mean awareness score of the dairy farmers in the Jaipur district was 23.15, which is significantly higher than the mean score of Udaipur (19.9). This difference in mean awareness score between the two districts might be because of the difference in education status among them. The overall average awareness score of the dairy farmers was 21.53.

Awareness among dairy animal traders

As clear from Table 2, most of the traders in Jaipur had a medium level of awareness of dairy animal welfare, followed by low and high levels with 27.50 and 17.50 per cent of the respondents, respectively. Further, it has been revealed that the awareness level among the traders of Udaipur was less among 65 per cent of respondents, who had a low level of awareness. A medium level of awareness was found among 27.50 per cent of the traders in Udaipur and 7.50 per cent of respondents had a high level of awareness.

The pooled data in the table depicts that 46.25 per cent of the total traders were having a low level of awareness while 41.25 per cent had a medium level. Only 12.50 per cent of the traders were highly aware of dairy animal welfare with a mean awareness score of 18.33. In contrast to this, Dwivedi (2007) reported that the majority of the traders were aware of fundamental aspects of animal welfare.

The average awareness score of traders of Jaipur was found significantly higher than that of Udaipur. This difference in awareness might be because of less education and less exposure to information sources among traders of Udaipur.

Awareness among Veterinary Officers

Table 3 reveals that Veterinary Officers in Jaipur, Udaipur and altogether had a high level of awareness about dairy

Table 1: Distribution of dairy farmers according to their awareness regarding dairy animal welfare.

Level of awareness	Jaipur (n=80)	Udaipur (n=80)	Pooled (N=160)	Test of significance
Low (up to 19)	12 (15.00)	44 (55.00)	56 (35.00)	Man-whitney test
Medium (19 to 25)	55 (68.75)	33 (41.25)	88 (55.00)	Z = -4.875* (Significant)
High (25 to 31)	13 (16.25)	3 (3.75)	18 (10.00)	
Total	80 (100.00)	80 (100.00)	160 (100.00)	
Mean±Std.	23.15±3.92	19.9±3.62	21.53±4.10	

Table 2: Distribution of dairy animal traders according to their awareness score regarding dairy animal welfare.

Awareness score	Jaipur n = 40	Udaipur n = 40	Pooled N = 80	Test of significance
Low (up to 17.33)	11 (27.50)	26 (65.00)	37 (46.25)	Man-whitney test
Medium (17.33 to 21.67)	22 (55.00)	11 (27.50)	33 (41.25)	Z =.-4.75* (Significant)
High (21.67 to 26)	7 (17.50)	3 (7.50)	10 (12.50)	
Total	40 (100.00)	40 (100.00)	80 (100.00)	
Mean±Std.	19.93±2.46	16.73±2.80	18.33±3.08	

Table 3: Distribution of Veterinary Officers according to their awareness score about dairy animal welfare.

Awareness score	Jaipur n = 20	Udaipur n = 20	Pooled N = 40	Test of significance
Low (up to 29.33)	2 (10.00)	0 (0.00)	2 (5.00)	Man-whitney test
Medium (29.33 to 31.67)	4 (20.00)	3 (15.00)	7 (17.50)	Z =.-1.543 (Non-significant)
High (31.67 to 34)	14 (70.00)	17 (85.00)	31 (77.50)	
Total	20 (100.00)	20 (100.00)	40 (100.00)	
Mean±Std.	31.8±1.48	32.65±1.79	32.23±0.93	

animal welfare with 70, 85 and 77.50 per cent of respondents, respectively. A medium level of awareness was reported among 20 and 15 per cent of the Veterinarians in Jaipur and Udaipur, while overall 17.50 per cent of the total veterinarian falls under this category. Only 10 per cent of the veterinarians in Jaipur and 5 per cent overall had a low level of awareness about dairy animal welfare. Dwivedi (2013) also reported similar findings with the overwhelming majority of the veterinary officers in the category of a high level of awareness about dairy animal welfare.

The mean awareness score of veterinarians in Jaipur and Udaipur was 31.8 and 32.68 per cent respectively with a pooled mean score of 32.23.

Although, the mean score of Veterinarians in Udaipur was higher than that of Jaipur but the difference was found non-significant. Overall, we can say that the awareness level among Veterinarians was high that is because of their education and knowledge about animals they had during their graduation.

Awareness among consumers

The welfare of the dairy animals is important not only in the case of farmers and traders but consumers' awareness of welfare standards is also equally important as they are the final customers of these animal products. In this situation, they should know about the dairy animal welfare status of the farm from where their product has come. Table 4 indicates the level of awareness among different consumers of urban as well as rural areas in both the districts. It was found that urban consumers of Jaipur district were well aware of dairy animal welfare with 52.50 per cent of respondents having a high level of awareness, followed by medium (37.50%) and low level (10%). Whereas, the majority of the rural consumers in Jaipur were having a medium level of awareness, followed by low (32.50%) with only 15 per cent of respondents at a high level.

In Udaipur, it was seen that in both urban and rural consumers, the majority of them had medium-level awareness with 52.50 and 55 per cent of the respondents, respectively. High-level awareness was reported among 30 per cent of urban and 5 per cent of rural consumers. Awareness about dairy animal welfare was of low level among 17.50 per cent of urban and 40 per cent of rural consumers.

The mean awareness score of the urban and rural consumers in Jaipur district was 15.83 and 12.38 whereas it was 13.95 and 11.43 among urban and rural consumers in Udaipur district. A significant difference was found among urban and rural consumers in Jaipur (Z = -4.799*) as well as Udaipur (Z = -3.958*).

Overall, it can be seen in Table 4 that the majority of the consumers in Jaipur were well aware about the animal welfare concept and 45 and 33.75 per cent of respondents were in medium and high-level categories of awareness respectively, whereas only 21.25 per cent of the respondents had a low level of awareness. Further, in Udaipur most of the consumers fall in medium (53.75%) to low (28.75%) level of awareness and 17.50 per cent had high level of awareness about dairy animal welfare it may be due to the fact that animal husbandry department and other responsible agencies might not have started any campaign for the public to make them aware about animal welfare practices, animal welfare law, animal welfare guidelines, animal welfare acts *etc.*

The pooled data of respondents depicts that almost half of the consumers had a medium level of awareness while the remaining half were equally distributed in low and high categories of awareness. The respondents who had high awareness score , they were only about 33 per cent in Jaipur and 25 per cent in Udaipur and majority of the respondents fall in categories of "Illiterate, can read and write and Primary Education" which make altogether about 44 percent of the respondents. So, here the low education level among the respondents may be the reasons of low awareness among them about animal welfare practices. Further, the mean awareness score of consumers in Jaipur, Udaipur and altogether was 14.10, 12.69 and 13.39, respectively. Regarding awareness about dairy animal welfare, a significant difference was found between the Jaipur and Udaipur district consumers with a Z value of -2.728*. This difference in awareness level was probably due more family education status among the consumers of Jaipur. Ouden *et al.* (1997) reported that in recent years animal welfare has become a major concern for consumers while Blandford and Fulpony (1999) reported that there are growing number of consumers concerned about the impact of intensive production systems on the environment, animal welfare (AW) and the safety of the food. Alonso *et al*. (2021) reported

Table 4: Distribution of consumers according to their awareness score about dairy animal welfare.

Awareness score	Jaipur (n = 80)			Udaipur (n = 80)			Pooled (N = 160)
	Urban n = 40	Rural n = 40	Total N = 80	Urban n = 40	Rural n = 40	Total N = 80	
Low (up to 11.33)	4 (10.00)	13 (32.50)	17 (21.25)	7 (17.50)	16 (40.00)	23 (28.75)	40 (25.00)
Medium (11.33 to 15.67)	15 (37.50)	21 (52.50)	36 (45.00)	21 (52.50)	22 (55.00)	43 (53.75)	79 (49.37)
High (15.67 to 20)	21 (52.50)	6 (15.00)	27 (33.75)	12 (30.00)	2 (5.00)	14 (17.50)	41 (25.63)
Total	40 (100.00)	40 (100.00)	80 (100.00)	40 (100.00)	40 (100.00)	80 (100.00)	160 (100.00)
Mean±Std.	15.83±2.91	12.38±2.32	14.10±3.14	13.95±2.96	11.43±2.05	12.69±2.83	13.39±3.06
Test of significance	Between urban and rural Z = -4.799*			Between urban and rural Z = -3.958*			

Z = -2.728* (between districts), Man whitney test.

that consumers perceived the need to have awareness about welfare in farm animals, despite the fact that their level of knowledge about farming and animal welfare issues is relatively low. It advocates in food chain that veterinarians, farmers and consumer need to be informed and educated about the welfare standards that will help to improve the sustainability, their societal outlook, public credibility as far as dairy animal welfare is concern.

CONCLUSION

The paper concludes that the education level of respondents played an important role in the awareness of animal welfare practices. The Veterinary Officers who were more educated as compared to the other respondents were more aware of the welfare of the dairy animals. The awareness among farmers and consumers was found to be of the medium level while traders were having a low level of awareness towards dairy animal welfare which should be further enhanced. However, awareness should translate into higher adoption of animal welfare practices.

Conflict of interest: None.

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