



International Journal of Research in Agronomy

E-ISSN: 2618-0618

P-ISSN: 2618-060X

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www.agronomyjournals.com

2024; SP-7(6): 576-579

Received: 20-04-2024

Accepted: 25-05-2024

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Understanding the socio-personal landscape of veterinary students and scientists: Implications for animal well-being

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DOI: <https://doi.org/10.33545/2618060X.2024.v7.i6Sh.960>

Abstract

Exploration of the socio-personal landscape of veterinary students and scientists is imperative not only for understanding individual motivations and behaviors but also for informing educational practices, professional development initiatives, and policy decisions aimed at enhancing animal well-being. The present study was conducted to ascertain the socio personal antecedents of the 50 veterinary students and 50 scientists of Lala Lajpat Rai University of Veterinary and Animal Sciences located in Hisar, Haryana which were chosen randomly. Thus, total 100 respondents were selected. The study revealed that mean age of respondents was towards younger side. Veterinary students were having more pets as compared to scientists. Most of the respondents were flexitarians. The respondents were having medium to high conscientiousness and extraversion scores. They scores moderately in terms of religiousness and economic motivation and their belief in animal mind was documented moderate. Further studies are advocated to explore the antecedent's variables of veterinary students and scientists for improving animal welfare.

Keywords: Veterinary students, Socio-personal, veterinary scientists, animal

Introduction

In recent years, the field of veterinary science has undergone significant evolution, not only in terms of advancements but also in the socio-personal landscape surrounding those who dedicate their careers to animal care and welfare. Animal welfare and ethics (AWE) is an important and growing component of modern veterinary education (Lloyd *et al.*, 2015) ^[13]. The reasons for this include an growing societal concerns about animal welfare (McGreevy and Dixon, 2005; Stafford, 2013) ^[15, 21] and increasing public expectations that veterinarians demonstrate competency and knowledge in AWE principles underpinning the social use of animals (Abood and Siegford, 2012) ^[1].

Veterinary students and scientists play a crucial role in shaping the future of animal well-being through their education, research, and clinical practice. Understanding the complex interplay of socio-personal factors that influence these professionals is essential for optimizing their training, improving animal care outcomes, and fostering sustainable practices in veterinary medicine. The socio-personal landscape encompasses a broad spectrum of factors, including personal motivations, educational experiences, career aspirations, mental health challenges, and ethical considerations. Each of these elements contributes uniquely to the professional identity and well-being of veterinary students and scientists, ultimately impacting their interactions with animals, colleagues, and clients. Exploring these dimensions not only enriches our understanding of the veterinary profession but also provides insights into how to support individuals in this field more effectively.

Further till now no study have been conducted in Haryana on the socio personal characteristics of veterinary students and scientists. So present study was planned to gain insights into the antecedents factors of veterinary students and scientists which will be helpful in designing educational curricula, professional development and policy frameworks which aimed at fostering a compassionate, ethical, and sustainable veterinary workforce dedicated to promoting the health and welfare of animals worldwide.

Materials and Methods

The current study involved a sample size of 100 respondents, comprising 50 faculty members and 50 veterinary students from Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), Hisar, Haryana. The sample of students was drawn randomly, selecting ten students from each class across the B.V.Sc and AH programs spanning 1-5 years of study, resulting in a total of 50 students. Faculty members were selected using a simple lottery method to ensure randomness in their inclusion in

the study. The antecedent factors likely to affect veterinary students and scientists in their profession were selected after a thorough scanning of available literature. Ten distinct independent variables associated with personality were selected, including age, gender, educational attainment, pet ownership history, religiousness, economic motivation vegetarianism, conscientiousness, extraversion, belief in mind. These attributes were measured as depicted in Table 1. Data was collected by mailing questionnaire to them.

Table 1: Measurement of Antecedent Variables

Sr. No.	Antecedents	Operationalization
1.	Age	Chronological age of respondents
2.	Gender	State of being male or female
3.	Level of education	Academic attainment of the respondents
4.	History of pets	Years of animal keeping
5.	Extraversion	Using a improved version of five factor personality inventory (Costa and MacCrae, 1985) ^[3]
6.	Vegetarianism	Using vegetarianism scale
7.	Conscientiousness	Using a version of five factor personality inventory (Costa and MacCrae, 1985) ^[3]
8.	Economic motivation	Scale developed by Supe (1969) ^[22]
9.	Belief in mind	Scale developed by Hills (1995) ^[8] with suitable modifications
10.	Religiousness	Scale developed by Templer <i>et al.</i> , (2004) ^[23] with minor modification

Age: It refers to chronological age of respondents in years at the time of data collection. It was measured by direct questioning of the respondents.

Gender: It is the state of being male or female (Merriam dictionary). But this state of being male and female makes difference in our behavior.

Level of education: It refers to academic qualification of the respondents. Veterinarians enjoy a unique position between society and animals. They usually support their clients in order to increase the wellbeing of the animals. Martinsen and Jukes (2005) ^[14] concluded that veterinary education has not always met, and still often does not meet the essential criterion of ensuring the dignity and humane treatment of animals. Paul and Podberscek (2000) ^[17] concluded that the year of study of veterinary students is significantly related to the perceived sentience of dogs, cats and cows, with students in their later years of study rating them as having lower levels of sentience. Therefore students from different stages of B.V.Sc and A.H degree programme (first year to final year) were included in the study. The respondents' score were analysed taking into account their level of education.

History of pets: Attitudes towards animal use are influenced by experience of animals (Wells and Hepper, 1997) ^[25]. Driscoll (1992) ^[5] found that pet owners rated animal research as less acceptable than did non-pet owners. So if experience of animals (such as pet keeping) leads to people perceiving animal use issues to be more relevant to them personally, then attitudes towards such issues will be influenced by whether people have more or less experience of animals. This effect can influence attitudes either positively or negatively depending on the type of experience with animals- a rewarding relationship with a pet could lead to less support for animal use, whereas a negative encounter with an animal may mean that people are more supportive of animal use (Knight *et al.*, 2004) ^[11].

Vegetarianism: Demand for particular types of food is influenced primarily by social psychological factors such as beliefs, attitudes norms and values (Kalof *et al.*, 1999) ^[9], and

vegetarianism is related to value orientations such as an increase in altruistic values and a decrease in traditional values (Dietz *et al.*, 1995) ^[4]. Also, eating meat is a variable that in itself may be seen to represent an attitude towards animals (Knight *et al.*, 2004) ^[11]. Flexitarians are those who mostly stick to a vegetarian diet but occasionally eat meat.

Conscientiousness: The personality trait- 'Conscientiousness' is the degree to which individuals are competent, methodical--preferring order and structure, dutiful, motivated to achieve goals, disciplined, and deliberate or considered.

Extraversion: The personality trait- 'Extraversion' refers to those persons who are gregarious, assertive, warm, positive, and active, as well as seek excitement. This personality trait gets reflected in the interaction with animals also. Extraverted sensate and/or thinking type persons are more likely to support vivisection than introverted intuitive and/or feeling types (Broida *et al.*, 1993) ^[2]. Similarly, Reevy and Delgado (2015) ^[18] suggested that extraversion decreased avoidant attachment to pets.

Belief in animal mind (BAM): BAM is the term used for how we attribute to animals mental capacities such as intellect, the ability to reason, and feelings of emotion (Hills, 1995) ^[8]. It has been defined and measured in a variety of ways (e.g. Hills, 1995) ^[8], and thus is not a single, constant measure. Knight *et al.*, (2004) ^[11] contended that BAM is a powerful and consistent predictor of the attitudes towards different animal uses.

Religiousness: Religion is an organized collection of beliefs, cultural systems, and world views that relate humanity to an order of existence. Religion and attitude towards animal welfare are deeply inter-related.

Economic motivation: It refers to the occupational success in terms of profit maximization and the relative value placed by one on economic ends (Supe, 1969) ^[22]. According to Signal and Taylor (2006) ^[20] income and animal attitude scores are inversely related i.e. higher incomes are related with less favourable attitudes towards animal welfare.

Results and Discussion

The profile of the respondents has been reflected in Table 2. It is evident that the observed range of age of the total respondents was 18-59 years with mean age of 32.44 years indicating that respondents of all age groups were represented in the study. A majority of the respondents were males and nearly one fifth females. This is perhaps because of the fact that the veterinary profession is perceived in the society as masculine. The trend is now changing rapidly with more of female students making it to the veterinary sciences. Once considered a male bastion, but now women are entering profession in large numbers (Muringatheri, 2022). At present, 70 percent of

veterinary science students are girls in the country, says T.P. Sethumadhayan, former director, kerala veterinary and animal science university (*ibid*). But in this study the ration was more skewed for scientists (with 84% being males), whereas in the case of students, it was 74 and 26 percent males and females, respectively. Even the western world has seen these skewed ratios in previous years. For example, Heleski *et al.*, (2004) [6] reported that among the respondents from 27 US veterinary colleges, 68% were males and 32% were females. Similarly, AVMC report in 2003-04 notes that among the veterinary college faculty in US, 70% were males and 30% were females.

Table 2: Background profile of respondents

Variable	Possible Range	Scientists		Students		Overall	
		Observed Range	Mean± SD	Observed Range	Mean± SD	Observed Range	Mean± SD
Age (years)	-	28-59	43.38±9.75	18-25	21.51±1.67	18-59	32.44±12.98
Gender	0-1	0-1	0.16±0.37	0-1	0.26±0.44	0-1	0.21±0.41
Educational qualification	0-7	0-7	6.64±1.03	1-5	3±1.41	0-7	4.82±2.20
History of pets	1-4	1-4	1.74±1.13	1-4	2.24±1.21	1-4	1.99±1.20
Vegetarianism	Freq*	1-7	5.2±1.97	1-7	3.92±1.85	1-7	5.19±1.91
	NonVeg*	1-7	3.88±1.81	1-7	5.18±2.07	1-7	3.92±1.94
Conscientiousness	10-50	30-45	38.06±3.69	27-50	39.88±4.66	27-50	38.97±4.30
Extraversion	10-50	15-44	34.72±5.91	14-47	37.1±5.69	14-47	35.91±5.92
Belief in animal mind	4-28	16-28	23.06±2.82	14-28	20.58±3.67	14-28	21.82±3.50
Religiousness	3-14	3-14	9.7±2.59	5-13	8.84±2.04	3-14	9.27±2.37
Economic motivation	5-25	9-18	13.44±2.07	6-20	14.12±3.17	6-20	13.78±2.70

A majority of the respondents were not having any experience of the pets. In general, students were having more of pets than the scientists. It is already well established that factors like age, marital status, type of residence, and children in the household are important in deciding pet ownership (Hepper and wells 1997) [5]. It appears that there was a significant association between age and pet ownership, with persons in older age being less likely to own a pet than younger individuals. Individuals over the age of 65 were less likely to own a pet than younger persons. (Hepper and Wells, 1997) [5]. On the other hand, workers like Messent and Horsfield (1985) [16] have concluded that the factor of age per se, had very little influence on the ownership of pets whenever other variables such as children in the household or type of residence were also taken into consideration.

Most of the respondents were flexitarians i.e. those who mostly stick to vegetarian diet and occasionally eat meat. Among the non-vegetarians a majority were infrequent meat consumers. This perhaps has to do with prevalent culture of the region. The demand for particular types of food is influenced primarily by social psychological factors such as beliefs, attitudes norms and values (Kalof, Dietz, Stern, and Guagnano 1999) [9], and vegetarianism is related to value orientations such as an increase in altruistic values and a decrease in traditional values (Dietz, Frisch, Kalof, Stern, and Guagnano 1995) [4]. But this is also indicative of the fact that traditional cultural values do not get easily replaced. All the respondents were associated with the veterinary profession. All of them were, in a way, making their bread out of improving supply of livestock products for consumers and yet remaining aloof to the idea of meat consumption and preferred to stay vegetarians.

Respondents were having varying degrees of conscientiousness and extraversion. Respondents' scores varied from medium to high in variables conscientiousness, extraversion. From the successful veterinarians it is expected that they should have these two traits conscientiousness, and extraversion (Kunze and

Seals, 2022) [12]. Further, the respondents were having moderate belief in animal mind (BAM). This BAM is the term used for how we attribute to animals mental capacities such as intellect, the ability to reason, and feelings of emotion (Hills, 1995) [8].

However understanding veterinary student attitudes towards animals and beliefs about animal mental capacities is important when evaluating a veterinarian's ability to adhere to their oath (Robbins *et al.*, 2021) [19]. Similarly, the respondents were having varying degrees (medium to high) of religiousness and economic motivation. Religiosity (i.e. both religious fundamentalism/conservatism and frequency of attendance at religious services) has been linked to more materialistic and less affectionate attitudes to animals, although most such studies have focused exclusively on Western religions (Driscoll, 1992; Kellert and Berry, 1981) [5, 10].

Conclusion

In conclusion, a large majority of respondents were flexitarians and having medium to high conscientiousness and extraversion scores. Respondent' score in terms of religiousness and economic motivation and belief in animal were of moderate level. Much more research is needed to understand specific factors influencing veterinary student attitudes and belief in animal mind, and how these might change as they move through the veterinary curriculum and transition into their careers.

Acknowledgements

We are very thankful to the Head, Department of Veterinary and Animal Husbandry Extension Education of Lala Lajpat Rai University of Veterinary and Animal Sciences for providing the facilities to conduct this study.

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