

Original Research Article

Priority of Career path choices among Veterinary Interns in Tamil Nadu, India

Comment [I1]: Revise the title of the article as:

Priority of Career path preferences among Veterinary Interns in Tamil Nadu state of India

ABSTRACT

Aims: This study aims to identify the career preferences of veterinary interns at Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) and to analyze these preferences to provide insights for educational and policy planning.

Study Design: The study uses a survey-based exploratory and descriptive research design.

Place and Duration of Study: The research was conducted among final-year (Veterinary Interns) B.V.Sc. & A.H. students from four constituent colleges of TANUVAS: Madras Veterinary College, Veterinary College and Research Institute (VCRI), Namakkal, VCRI Tirunelveli, and VCRI Orathanadu, between June 2022 and March 2023.

Comment [I2]: Write full name as Bachelor of Veterinary Sciences and Animal Husbandry (B.V.Sc & A.H.)

Methodology: A sample of 275 final-year veterinary students was selected using simple random sampling. Data were collected using structured and pre-tested questionnaires. The Garrett Ranking Method was used to identify career preferences. Respondents ranked various career options, which were converted into scores and then ranked based on the mean scores obtained.

Results: The most preferred career path among veterinary graduates was Government Veterinary Services, followed by Faculty positions in Indian universities and Research Scientist roles within ICAR and other government sectors. Private practice, positions in private laboratories, and roles in the livestock industry were moderately preferred, while careers in civil services, entrepreneurial ventures, and international opportunities were preferred by few comparatively less numbers of veterinary interns.

Conclusion: The study shows a strong preference for stable roles in the government and academic sectors among veterinary graduates. Understanding these preferences is important for improving educational awareness programs and career guidance, helping to

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better prepare graduates for their careers and ensuring effective use of veterinary manpower in Tamil Nadu.

Keywords: Veterinary Career Preferences, Garrett Ranking Method

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1. INTRODUCTION

The veterinary profession in India offered a wide range of career opportunities, including government services, academic roles in government and private institutions, private practice, research positions, livestock industrial sectors like poultry, pharmaceuticals, animal feed industries and entrepreneurship. Knowing the career preferences of veterinary graduates is important for educational institutions, policymakers and employers. This knowledge will be useful to improve programs and policies to match the career goals of future veterinarians. It is especially important in regions like Tamil Nadu, where there is a high demand for veterinary services due to a significant livestock sector. As per the 20th Quinquennial Livestock Census, Tamil Nadu ranked 1st in poultry, 4th in sheep, 7th in goats, 13th in cattle and 14th in buffalo population in India. The livestock sector contributed about 5.63% to Tamil Nadu's Gross State Value Added (GSVA) and 43.70% to agriculture and allied activities (Animal Husbandry 2023 Policy Note, Government of Tamil Nadu). These statistics emphasized the vital role of the livestock sector in the state's economy and highlighting the need for a well-prepared veterinary workforce.

Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), is the Asia's first veterinary university which was founded in 1989. TANUVAS has been a frontrunner in veterinary clinical sciences and has remained a national leader in veterinary education. With a long history of producing skilled veterinary professionals, TANUVAS is ideally positioned to study the career aspirations of veterinary graduates. Tamil Nadu, known for its diverse and advanced livestock production systems, had a significant number of veterinary institutions, making it an ideal place to conduct this study.

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Understanding the career preferences of outgoing veterinary students was crucial for several reasons. It helped educational institutions design their curricula and training programs to better meet the needs and expectations of students, ensuring that graduates were well-prepared for their chosen career paths. It also assisted policymakers and industry stakeholders in forecasting the supply of veterinary manpower and planning for future workforce needs. Moreover, it provided valuable insights into the factors that attracted

veterinary graduates to certain career paths, informing the development of targeted career counseling and support services.

Despite the diverse career opportunities available, there was limited research on the career preferences of veterinary graduates in Tamil Nadu. Hence, this study aimed to fill this gap by identifying and analyzing the career preferences of veterinary interns at TANUVAS, to gain deeper insights that could help improve educational programs and career counseling services to match the professional goals of veterinary graduates. This research aimed to study the preferences of career path choices among veterinary interns in Tamil Nadu, India. The results of this study were expected to contribute to the development of a well-informed and motivated veterinary workforce that could effectively meet the needs of Tamil Nadu's livestock sector

2. MATERIAL AND METHODS

Study Design

This study employs a survey-based exploratory and descriptive research design. The purpose is to identify the career preferences of final-year veterinary students at Tamil Nadu Veterinary and Animal Sciences University (TANUVAS).

Place and Duration of Study

The study was conducted among final-year B.V.Sc. & A.H. students from four constituent colleges of TANUVAS: Madras Veterinary College, Veterinary College and Research Institute (VCRI) Namakkal, VCRI, Tirunelveli, and VCRI, Orathanadu, from June 2022 to March 2023.

Population and Sampling Frame

The target population for this study included final-year B.V.Sc. & A.H. students from TANUVAS. The sampling frame consisted of students from the four constituent colleges of TANUVAS.

Sample Size Determination

A sample size of 275 final-year veterinary students was determined using Yamane's formula (1967)

Sampling Method

Simple random sampling was used to select the sample of outgoing B.V.Sc. & A.H. veterinary students. This method involved randomly selecting individuals from the sampling

frame, ensuring that every student had an equal chance of being selected. This approach enhanced the representativeness and generalizability of the study findings (Kothari, 2004).

Data Collection

Relevant data were collected using structured and pre-tested questionnaires. The questionnaires were designed to gather comprehensive information on personal details and career preferences. The section on job preferences (government services, private practice, research, teaching, entrepreneurial activities, and others) used a ranking system.

Garett Ranking Method:

To identify the career preferences of veterinary graduates, the study employed the Garrett Ranking Method, as described by Garrett and Woodworth (1969). Veterinary graduates were asked to rank various career options in the veterinary field according to their personal preferences, reflecting their priority and interest in each career path. The ranks assigned by the respondents were converted into scores using the Garrett ranking formula:

$$\text{Percent position} = \frac{100(R_{ij} - 0.5)}{N_j}$$

Where,

R_{ij} :-Rank given for i^{th} choice by j^{th} individual

N_j :-Number of choices ranked by the j^{th} individual

Using this percent position, Garrett scores were obtained from Garrett's table, representing the relative importance of each rank. The scores for each career option were summed up across all respondents to obtain a total score for each career choice. This total score was then divided by the number of respondents to obtain the mean score for each career option, representing the average rank assigned to each career option, adjusted for the number of respondents. Finally, the career options were ranked based on the mean scores, with higher mean scores indicating higher preference among the respondents. The career choice with the highest mean score was identified as the most preferred, while the one with the lowest mean score was identified as the least preferred (Garrett & Woodworth, 1969).

Ethical Considerations

The study was conducted in accordance with ethical standards. Informed consent was obtained from all participants. Confidentiality and anonymity of the respondents were maintained throughout the study.

3. RESULTS AND DISCUSSION

Totally, a sample of 275 veterinary interns were participated in the study and their gender distribution were summarized in Table 1. Based on the responses of the sample responses, the job preferences of TANUVAS veterinary interns were determined by Garrett Scores and revealed a well-defined hierarchy of career aspirations which is illustrated in Table 2.

Table 1. GENDER DISTRIBUTION OF VETERINARY INTERNS AT TANUVAS
n = 275

Sl. No	Gender	Number of Students	Percentage
1	Male	165	60.00
2	Female	110	40.00
Total		275	100.00

Note: Percentages are calculated for the column total.

The most highly preferred career path among outgoing veterinary students of TANUVAS is Government Veterinary Services, which includes positions such as Veterinary Assistant Surgeons and Permanent TCMPF Ltd (Aavin) employees. This option received the highest average Garrett Score of 86.40, indicating a strong preference among the students for stable and prestigious government roles.

The second most preferred career choice is faculty positions within Indian universities, which garnered an average score of 74.67. This reflects the graduates' inclination towards academic careers, where they can engage in teaching and potentially contribute to research and extension activities.

Research Scientist within the Indian Council of Agricultural Research (ICAR) or other government sectors holds the third rank in career preferences with a Garrett score of 70.27. This suggests a significant interest in research-oriented careers, where graduates can pursue scientific investigations and contribute to advancements in veterinary science.

Following closely is the preference for establishing their own private practice, which received a Garrett score of 61.38. This option demonstrates the graduates' entrepreneurial spirit and desire for professional autonomy, allowing them to manage their own veterinary clinics.

Table 2 CAREER PREFERENCE RANKINGS BASED ON GARRETT SCORES FOR TANUVAS VETERINARY GRADUATES

S.	Job Preference	Average	Rank
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No		Score	
1	Govt. Veterinary Services (Veterinary Assistant Surgeons / Permanent TCMPF Ltd (Aavin))	86.40	1
2	Faculty (Teaching in Indian Universities)	74.67	2
3	Research Scientist (ICAR, ICMR and other Govt. sector)	70.27	3
4	Private Practice and Clinic	61.38	4
5	Research Scientist (Renowned Private Laboratories)	53.95	5
6	Livestock Industry (Private Dairy, Poultry and Feed Industry)	50.85	6
7	Civil Services (IAS, IPS, IFS, etc.)	50.84	7
8	Entrepreneur	47.75	8
9	Veterinary Practice in Foreign Countries	47.37	9
10	Teaching/ Research in Foreign Universities	45.59	10
11	Marketing Jobs in Private Sector	34.93	11
12	NABARD/ Banking Sector/Insurance Companies	28.79	12
13	Defence Sector	27.72	13
14	Others	19.23	14

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Other notable preferences include working as Research Scientists in renowned private laboratories, which scored 53.95, indicating a considerable interest in private sector research opportunities. Positions in the private sector such as those in the dairy, poultry, and feed industries also scored relatively high at 50.85, reflecting a diverse interest in various veterinary-related industries.

Civil Services encompassing roles such as IAS, IPS, and IFS officers, received an average score of 50.84. This shows that some graduates are inclined towards prestigious administrative roles within the government and outside the traditional veterinary field.

Careers involving starting their own enterprises such as farms, feed mills, breeding centres etc., scored 47.75 which highlighted a preference for entrepreneurial ventures. Similarly, veterinary practice in foreign countries scored 47.37, indicating an interest in international career opportunities. Teaching or conducting research in foreign universities received a score of 45.59, further showcasing the graduates' aspirations for global academic and research roles.

Less preferred job options include marketing and product distribution roles in the private sector, which scored 34.93 and positions in NABARD, banking, and insurance

companies, which scored 28.79. These career paths are preferred by few numbers of outgoing graduates.

Only very few outgoing students had their top preference for defence sector as a career choice which received an average score of 27.72. Finally, the category 'Others' scored the lowest at 19.23, encompassing a variety of unspecified roles that did not resonate strongly with the graduates.

Overall, the job preference rankings highlight a clear prioritization of government and academic roles, with a significant interest in research and private practice. The diversity in career aspirations highlights the varied interests and professional goals of the veterinary graduates at TANUVAS.

The job preference rankings of TANUVAS veterinary graduates highlighted a strong inclination towards stable and prestigious roles within the government sector, which is consistent with the findings of Bharadwaja Krishna *et al.* (2017). Their study of veterinary students in Andhra Pradesh similarly indicated a preference for government veterinary doctor positions and roles in research centers attached to veterinary colleges. The preference for government positions can be attributed to perceived job security and long-term career benefits, aligning with the findings of Ramesh *et al.* (2019) who noted that employment security and salary prospects are major factors influencing career preferences among undergraduates in Telangana state.

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The high ranking of faculty positions in Indian universities and research scientist roles in ICAR or other government sectors also reflects a preference for academically oriented and research-intensive careers. This is consistent with the findings of Heath *et al.* (1996) who reported that many veterinary students are drawn to careers that allow them to continue their academic and research pursuits.

The moderate preference for private practice and positions in the private sector such as dairy, poultry and feed industries indicates that while these roles are considered viable career options, they are less preferred compared to government and academic positions. This finding aligns with the study by Jelinski *et al.* (2008) where they found that rural upbringing and specific educational backgrounds significantly influence career choices towards more conventional and secure roles.

Interestingly, the preference for civil services and roles in private laboratories suggests that some graduates are seeking diverse career opportunities outside the

traditional veterinary field. This trend is supported by Serpell (2005), who noted significant gender differences and diverse career motivations among veterinary students.

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The findings from Thilakaret *al.* (2014) have similar findings with this study, indicating a strong preference among veterinary students for government jobs due to job satisfaction, family influence and job security. Their study emphasized the need for veterinary curricula to be tailored to meet these career preferences and ensure that graduates are well-prepared for their chosen career paths.

Overall, the findings in this study generally support the existing literature, highlighting the importance of job security, academic and research opportunities and personal interests in shaping the career preferences of veterinary graduates. The preference for government and academic roles emphasized the need for educational programs and career counselling to align with these aspirations, ensuring that students are well-prepared for their chosen career paths

4. CONCLUSION

This study examined the career preferences of veterinary interns at Tamil Nadu Veterinary and Animal Sciences University (TANUVAS). The analysis revealed a strong preference for Government Veterinary Services which emphasized the importance of job stability. Faculty positions within Indian Government Universities and research scientist roles within ICAR and other government sectors were also highly favoured by the veterinary interns, which reflects an inclination towards academia and research careers. Moderately preferred options included private practice and roles in the livestock industry, while civil services, entrepreneurial ventures, and international opportunities were preferred by comparatively few number of Veterinary interns.

Thus, these findings highlight significant trends among veterinary graduates, showing the need for specific awareness programmes and policy initiatives. From the study, we could perceive that the preference for government and academic roles suggests that job security, structured career progression and professional development opportunities are considered to be important factors in career choices. Understanding these preferences is essential for stakeholders to develop programs and policies that meet the career aspirations of veterinary graduates. This will help ensure a well-prepared and motivated veterinary workforce capable of meeting the demands of Tamil Nadu's significant livestock sector

Understanding the career preferences of veterinary graduates is important but it is equally important to evaluate these preferences against the actual job market demand and

sectoral needs. By conducting comprehensive workforce analysis and aligning educational and policy initiatives accordingly, stakeholders can ensure a balanced and effective deployment of veterinary manpower. This approach will not only address the career aspirations of graduates but also meet the critical needs of Tamil Nadu's livestock sector, ensuring sustainable growth and development.

Comment [19]: make a concise conclusion

Reference.

Garrett, H. E., & Woodworth, R. S. (1969). *Statistics in Psychology and Education*. Bombay: Vakils, Feffer, and Simons Pvt. Ltd.

Thilakar, P., Tripathi, H., & Kumar, G.S. (2014). Career Preferences of Veterinary Science Students in India. *Indian Veterinary Journal*, 91(06), 40-43.

Government of Tamil Nadu. (2023). Policy Note, Department of Animal Husbandry, Dairying and Fisheries.

Krishna, M.B., Sharma, G.R.K., Harilal, R., & Suresh, J. (2017). Career Preferences of Undergraduate Veterinary Students in Andhra Pradesh. *International Journal of Science and Environment Technology*, 6(1), 708-713.

Ramesh, N., Sagar, M.P., Singh, B.P., Yadav, R., & Pathade, S.S. (2019). Factors Influencing Career Preferences of Agriculture and Animal Sciences Undergraduates in Telangana State. *Haryana Veterinarian*, 58(1), 117-118.

Serpell, J.A. (2005). Factors Influencing Veterinary Students' Career Choices and Attitudes to Animals. *Journal of Veterinary Medical Education*, 32(4), 491-496.

Jelinski, M.J., Campbell, J.R., MacGregor, M.W., & Watts, J.M. (2009). Factors associated with veterinarians' career path choices in the early postgraduate period. *Canadian Veterinary Journal*, 50(September), 943-948.

Heath, T.J. (1996). Longitudinal study of career plans and directions of veterinary students and recent graduates. *Australian Veterinary Journal*, 74(4), 305-308.

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