An Analytical Study on Antecedents of Occupational Stress & Burnout Among Veterinary Practitioners in India

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Abstract:

Purpose: This article seeks to identify key determinants of occupational stress as well as burnout among veterinary practitioners in India. This work also aimed to evaluate the level of association of these factors with the occupational stress of veterinary practitioners.

Research Methodology: This descriptive study was conducted using a purposive sampling method. Data was collected from veterinary professionals in rural, semi-urban as well as urban areas in Uttar Pradesh & Bihar. A sample of 870 veterinary professionals was included in this study. Data collection was conducted both online and offline mode using structured survey questions. The authors calculated the reliability coefficient using IBM SPSS version 20 and path analysis was done using AMOS software.

Findings: The findings of this study demonstrated that all statement averages are higher than the mean, indicating that respondents generally agreed with the questionnaire's statements. The association of the endogenous variable (Occupational Stress and Burnout) with all exogenous variables was high (Administrative & Quantitative workload, Work Relationships, Job conditions, Resource Availability, Occupational Risks).

Practical implications: The findings of this study are crucial for Animal husbandry departments, veterinary hospital administration, the Indian government, and healthcare policymakers to develop strategies for the well-being of animals and veterinary staff, even though they are more applicable in developing environments. This is essential for developing strategies and interventions to enhance the performance of veterinary practitioners.

Originality/value: In today's environment, the stress levels of veterinary practitioners are constantly rising as the number of animal patients are increasing due to different critical diseases. The government, the healthcare industry, the animal welfare industry and hospital administration can all learn from this study and create policies to improve the health of veterinary practitioners.

Key Words: Occupational Stress and Burnout, Administrative & Quantitative workload, Work Relationships, Resource Availability, Occupational Risks

INTRODUCTION

Stress is a mental or emotional state caused by negative or stressful events. Occupational stress is a mental health condition that affects workers, managers, employers and organizations alike. Occupational stress is defined as the negative response workers have to an excessive amount of stress in the workplace (Lakkawar et al., 2020; Dawson & Thompson, 2017; Al-Dosari & Abdellatif, 2024).). Stress is caused by high workloads, lack of autonomy and lack of appreciation. The effects of stress, which often extend beyond the workplace, can reduce engagement, productivity and performance (Hansez, Schins & Rollin, 2008; Bartram et al., 2009). Burnout, according to the scholarly literature, is also considered a form of stress (Hatch et al., 2011). Burnout is characterized by a series of symptoms, including disbelief, exhaustion, frustration, psychological stress, incompetence etc. Burnout is fatigue and exhaustion caused by the combination of personal and work stress. Everyone experiences burnout in different ways, but

common burnout symptoms include irritability, lack of motivation, feeling overwhelmed, overworked, and feeling trapped (Kristensen et al., 2005; Hatch, Winefield, Christie & Lievaart, 2011). The daily life of a veterinary professional is full of stress, from difficult patients to complex cases, financial concerns, ethical issues and work conflicts, there's no denying that stress is part of the job (Hansez, Schins & Rollin, 2008; Kumar et al., 2023). Veterinary practitioners are workers of Animal Husbandry Departments run by different states of India. This department performs activities like disease diagnostic programs, animal welfare programs, live-stock, dairy & fisheries product development, animal health care activities etc. The work of veterinarians, particularly paraclinical practices and clinical practices, is challenging and sometimes even life-threatening. In India, burnout is a common condition among veterinary practitioners working in various animal welfare hospitals of rural, semi-urban and urban areas (Lakkawar et al., 2020). However, there is still a need for research on how to accurately diagnose burnout and stress among veterinary workers. Few formal studies have been conducted on stress, mental health and burnout experienced by veterinarians in the workplace, as well as factors responsible for these issues. These studies attempted to evaluate the factors that influence stress and burnout among veterinary professionals, including job conditions, work relationships, resource availability, workload, occupational risks etc. Based on the existing research, few studies have been conducted to evaluate the reasons behind veterinary workers stress and burnout, especially in India. There is still a need for research on the exact diagnosis of burnout among veterinary professionals. In order to bridge this gap, this study assesses the reasons behind stress and burnout among veterinary working in veterinary hospitals of UP & Bihar (India). Factors such as job conditions, work-relationships, resource availability, workload, occupational risks etc. contribute to occupational stress and burnout.

Research Objectives: This study seeks to identify the determinants of occupational stress & burnout among veterinary professionals of India. This work also aim to evaluate the extent to which these factors are associated with occupational stress of veterinary practitioners.

LITERATURE REVIEW

Stress refers to the body's general response to various stressors that help people identify and manage difficulties in social and physical environments (Gelberg & Gelberg, 2005). Factors that generate stress are known as stressors; these can be both environmental and personal. A person's response to a stressful stimulus can be complex and influenced by a wide range of elements, such as personal perception, sociocultural influences, psychological influences, physical influences, and environmental influences (Williams, Arnold & Mills, 2005). Certain resources, like time, energy, and attention, are limited, and certain tasks require you to use those resources over the permitted amount of time. People are more likely to feel stressed when there is a rise in demand for any of those resources (Hansez, Schins & Rollin, 2008; Anand & Sharma, 2023). Achieving a balanced life requires effective management of those finite resources, such as time, effort, and commitment. Veterinary practitioners face a variety of challenging circumstances and workplace dangers throughout their careers. Previous work related to veterinarians has demonstrated the importance of proactive efforts to raise awareness of workplace resources such as external planning support, additional administrative support and clinical work to enhance veterinary work (Smith et al., 2009; McLennan & Sutton, 2005). There are several things that can cause stress and burnout such as demands from work and family, handling difficult coworkers or employees, financial constraints, struggle with animal bites, scratches, and other wounds, sharps and needle stick injuries, occupational risks, workover load etc. (Nahar et al., 2019; Yang, Ward, & Fawcett, 2019; Elkins et al., 1992). Some countries, such as the United Kingdom, China, France, Canada, Spain and Norway have started implementing stress management plans specifically for veterinarians (Dicks, 2013; Ilukor, Birner & Nielsen, 2015; Arvidsson et al., 2022). Similar initiatives in India may also benefit the health of veterinarians. These countries have found factors like current work environments, job conditions, risks associated with occupation, impatient and irritation among animals, critical diseases, occupational relationships etc. are the main cause of stress and burnout among veterinary workers (Pohl et al., 2022; Gupta, Choudhury, Das, Mondol & Pradhan, 2015; Soni et al., 2015; Landge et al., 2017). As previous

studies have focused on only a few stressors in veterinary practice and only a few studies have been carried out in India, this study aimed to determine the sources of stress in veterinary practice in India. Following factors have found important for this study:

- **Administrative & Quantitative workload (AQW):** Occupational work overload causes stress. Workover load generally includes increased working hours, on-call working, unspecific work-criteria, less time for professional development, decision-making responsibilities, less opportunities for breaks and leaves etc. (Srinivasa et al., 2022; Perret et al., 2020; O'Connor, 2019; Min et al., 2024). The expectations of the employer as well as the general public are high with veterinary workers, which can cause stress and a hectic schedule. In addition, veterinarians also have a lot of administrative responsibilities. This includes hiring and firing employees, scheduling meetings and events, ordering and tracking supplies, maintaining facilities and more (Arvidsson et al., 2022; Kim and AlZubi, 2024). Workers support often take on these administrative tasks, which can add to their workload.

- **Work Relationships (WR):** Work relationships indicate superior-subordinate relationships which may become reason for occupational stress due to unfair competition, lack of respect, conflicts and misunderstanding between associates, lack of proper communication flow, unfair delegation of responsibilities etc. (Hansez, Schins & Rollin, 2008; Berrada & Herrou, 2023).

- **Job conditions (JC):** Job conditions include animal-related injury, lack of Interaction with clients, Euthanasia, difficulties in dealing with animal abuse, critical animal diseases, health hazards etc. (Hansez, Schins & Rollin, 2008; Sankar & George, 2013).

- **Resource Availability (RA):** Lack of proper resources may create problems of occupational stress and burnout. These resources include lack of training, mentoring and supervision, access to CPD (Continuing professional development), budget & financial constraints, practice equipments etc. (Grakh et al., 2022; Singh et al., 2023).

- **Occupational Risks (OR):** bad working environment, Therapeutic failure, disappointing perks & salaries, Difficult diagnosis, therapeutic failure etc. (Rohlf et al., 2018). To effectively eliminate, control and reduce occupational risks, a worker's exposure to a hazard must be understood. Occupational risks in veterinary practice include challenging work environment, unsatisfactory pay, illness related to animal care, conflicts with animal owners and activists etc. (O'Connor, 2019)

Research Hypotheses & Research Model: Based on above literature review, following hypothesis and hypothesized model **(figure 1)** have been developed;

H1: Administrative and qualitative workload (AQW) are significant influencer of Occupational stress and burnout (OSB)

H2: Work-relationships (WR) are significant influencer of Occupational stress and burnout (OSB)

H3: Current job conditions (JC) are significant influencer of Occupational stress and burnout (OSB)

H4: Availability of appropriate resources (RA) are significant influencer of Occupational stress and burnout (OSB)

H5: Occupational Risks (OR) are significant influencer of Occupational stress and burnout (OSB)
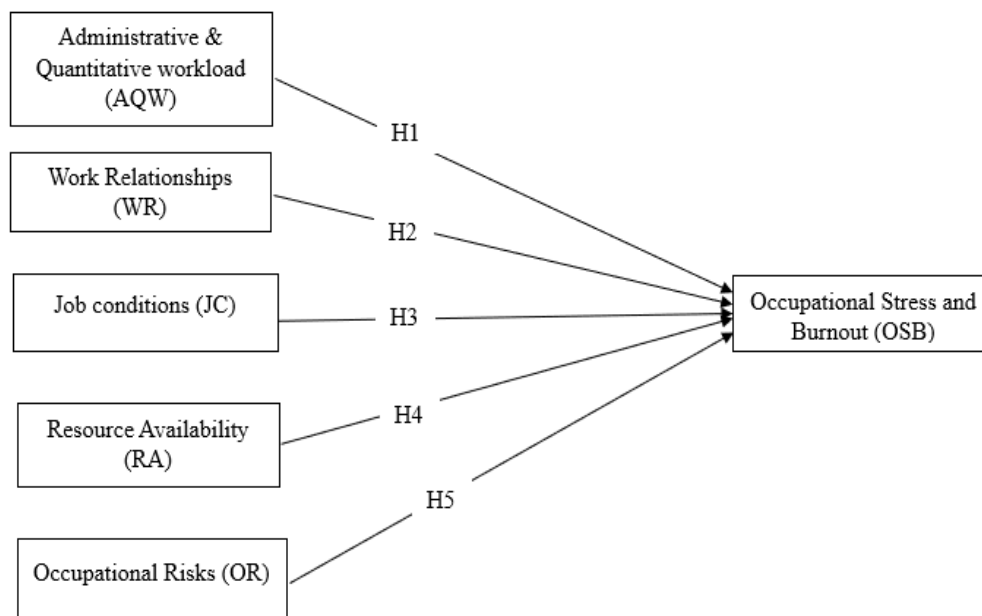
Figure 1: Research Model

Source: Developed through Literature Review (Hansez et al., 2008; O'Connor, 2019; Griek et al., 2018)

RESEARCH METHODOLOGY

Research Participants and Sample size: This descriptive study is based on purposive sampling method. The research data was collected from veterinary workers living in rural, semi-rural as well as urban areas of UP & Bihar States (India). These states were selected for the study because they are largely depending upon animal and agricultural incomes. Majority of the population of these states are living in villages and rural areas. Veterinary workers include veterinary officers, veterinary doctors and nurses, veterinary clerks and field staff etc. Authors included all these types of workers in the sample of this study. The sample size of this study was 870 veterinary professionals. Data was collected through offline as well as online mode by using structured survey questionnaire.

Survey instrument:
In order to obtain primary data from respondents, researchers conducted a comprehensive literature review and developed a measurement tool. A 43-item cross-section questionnaire was initially developed for this study. After formal testing involving 30 veterinary professionals, 7 items were removed from the questionnaire as they were considered irrelevant or controversial. In addition to personal data, the survey questionnaire included questions related to burnout and work-related stress. Exogenous variables include: AQW, WR, JC, RA and OR. The questions of OSB (endogenous variable) and exogenous variables were asked using a five-point likert scale (1 = strongly disagree and 5 = strongly agree). The AQW scale and the OR scale were taken from a study Grahkh et al., (2022). The WR scale and the JC scale were also taken from the study of Hansez et al., (2008), the scale of RA from Lakkawar et al., (2020) and the scale of OSB extracted from the study of Dawson et al., 2017. The measurement values of these scales are presented in Table 2.

RESULTS

Data Reliability: The reliability of the data is determined by the consistency and the error-freeness of questionnaire responses. The authors calculated the reliability coefficient using IBM SPSS (version 20) (See in Table 1). The Cronbach's alpha (CA) of each construct have been presented in the results. The standards allowable values of Cronbach's alpha (CA) were found above 0.8 (Rai, Gupta, & Tyagi, 2021) and the variables' reliability was indicated in the Cronbach's Alpha (CA) results.

Table 2: Data Reliability

Measurement Scale	AQW	WR	JC	RA	OR	OSB
Items of Statements	4	6	5	5	4	6
Cronbach's Alpha (CA)	0.903	0.818	0.831	0.909	0.822	0.910

Source: Author's Calculation

Constructs Descriptive Analysis with CFA Results:

Table 3 summarizes the results of the statistical analysis. The constructs are validated by the CFA results. IBM SPSS is used for descriptive analysis of variables, while AMOS is used for validity and reliability analysis. The findings demonstrated that all statement averages are higher than the mean, indicating that respondents generally agreed with the questionnaire's statements. In other words, respondents tended to agree with the statements presented in the questionnaire on average. When the standard deviation is near to 1, it suggests that the components are dispersed equally. The measurement scale is deemed appropriate by standards based on calculated values of average variable extraction (AVE > 0.5), composite reliability (CR > 0.7), and standardized factor loading (SFL > 0.7) (Ruvio et al., 2008).

Table 3: Descriptive Analysis & CFA Results

Factors	Items	Mean	Std. D	SFL	CR	AVE
Administrative & Quantitative workload (AQW)	AQW1	3.91	0.886	0.799		
	AQW2	4.01	0.901	0.810		
	AQW3	4.02	0.896	0.801		
	AQW4	3.87	0.899	0.789	0.806	0.718
Work Relationships (WR)	WR1	4.08	0.816	0.901		
	WR2	3.98	0.901	0.875		
	WR3	4.00	0.866	0.794		
	WR4	3.99	0.903	0.754	0.809	0.803
	WR5	4.11	0.869	0.802		
	WR6	3.77	0.901	0.751		
Job conditions (JC)	JC1	3.69	0.879	0.732		
	JC2	3.88	0.876	0.802		
	JC3	4.01	0.910	0.795		
	JC4	3.85	0.887	0.798	0.811	0.731
	JC5	4.21	0.790	0.803		
Resource Availability (RA)	RA1	3.99	0.876	0.831		
	RA2	4.11	0.843	0.802		
	RA3	4.01	0.835	0.776		
	RA4	3.57	0.901	0.716	0.859	0.721
	RA5	3.68	0.804	0.803		
Occupational Risks (OR)	OR1	4.08	0.789	0.798		
	OR2	3.91	0.763	0.712		
	OR3	3.93	0.842	0.705		
	OR4	4.06	0.806	0.721	0.811	0.772
Occupational Stress & Burnout (OSB)	OSB1	3.69	0.881	0.781		
	OSB2	4.01	0.805	0.741		
	OSB3	3.57	0.901	0.751		
	OSB4	3.89	0.891	0.785		
	OSB5	3.74	0.902	0.751	0.809	0.711
	OSB6	4.02	0.838	0.732		

Source: Author's Calculation

Co-relation Metrix:

Co-relativity is the ratio of variables that are related to each other. The co-relation of constructs is used to determine their discriminant validity. There is appropriate co-relation between factors that cause burnout and occupational stress (Table 3, discriminant validity). Relationship of AQW with other variables like WR (0.304), JC (0.298), RA (0.316), OR (0.313) and OSB (0.402). Similarly, Relationship of WR with other factors like JC (0.322), RA (0.401), OR (0.312) and OSB (0.352). All co-relativity values below 0.50 are in line with the variables' discriminant validity (Fornell et al.,1981).

Table 3. Results of Discriminant Validity

	AQW	WR	JC	RA	OR	OSB
AQW	0.787					
WR	0.304	0.806				
JC	0.298	0.322	0.872			
RA	0.316	0.401	0.404	0.901		
OR	0.313	0.312	0.321	0.314	0.881	
OSB	0.402	0.352	0.403	0.412	0.343	0.886

Source: Author's calculation

Hypothesis Testing and Structural Model Results:

The path analysis was performed with the help of AMOS -SPSS software. The structural model was tested and all tested hypotheses supported the SEM results. The correlation of the endogenous variable OSB with all exogenous variables was high (AQW; WR; JC; RA; and OR). At a confidence level of $p < 0.05$, the coefficient test is deemed significant if the computed values of t exceed 1.96. Here, all calculated t values are higher than 1.96 and all hypothesis are significant at p-values < 0.05. The hypothesis tests are presented in Fig. 2 below.
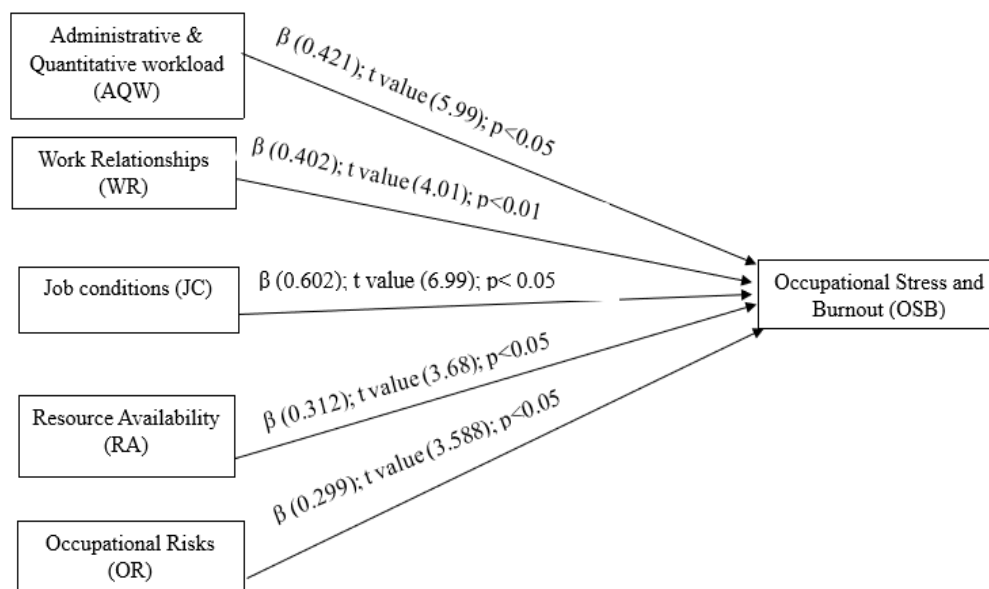
Figure 2: Structural Model Results

Source: Authors' Own

In this result, values of AQW [β (0.421); t value (5.99); p<0.05], WR [β (0.402); t value (4.01); p<0.01], JC [β (0.602); t value (6.99); p< 0.05], RA [β (0.312); t value (3.68); p<0.05] and OR [β (0.299); t value (3.588); p<0.05] indicating that all the above variables are perfectly associated with OSB. Results indicated that all hypothesis (H1, H2, H3, H4, and H5) are supported. Job conditions are higher in beta value than the other variables. Thus, JC is the best predictor of OSB.

DISCUSSION

This study was undertaken to investigate different factors causing occupational stress and burnout among veterinary professionals. The five factors (Administrative & Quantitative workload, Work Relationships, Job conditions, Resource Availability, and Occupational Risks) were found responsible for creating stress among workers. A total of 870 veterinary professionals participated in this study and research information was collected from them through the survey method. All the burnout factors were asked on a five-point Likert scale (Rolla, 2023). The validity and reliability of the variables and variables statement were statistically tested by using CFA analysis and all the results were found appropriate as per the acceptable norms (CR>0.7 & AVE >0.5). The impact of all independent variables on the dependent variable was found using regression analysis (SEM approach). The structural model was tested and all the tested hypotheses supported the SEM. The OSB was found to be highly correlated with all the exogenous variables (AQW, WR, JC, RA, and OR). The result indicated that all variables have an impact on the dependent variable (all hypotheses H1, H2, H3, H4, and H5 are supported) and among these variables, Job condition was found strong predictor of occupational stress and burnout because its beta was highest from all other variables. The findings of this study are consistent with the studies of Hansez et al., 2008; Srinivasa et al., 2022 and Sankar & George, 2013, where variables such as job environment, administrative and quantitative workload, and work relationships were found to be strong predictors of work-life balance among veterinary workers. These elements were identified as significant because the professional indemnity of a veterinary worker is very high, especially in the case of animal-related injuries.

CONCLUSION

The general level of stress and burnout experienced by veterinary professionals in India is a serious concern, and most of this stress is caused by different occupational pressures that happen inside as well as outside the veterinary offices/ hospitals. In order to deal with this stress among veterinary practitioners, it is imperative that these problems be addressed and coping mechanisms developed. The stressors and stress levels among veterinary professionals can be further evaluated using the data from this study. Additionally, this study showed that the five-factor construct (Administrative & Quantitative workload, Work Relationships, Job conditions, Resource Availability, Occupational Risks) has acceptable psychometric properties and can be used as a valid and reliable tool for stress and burnout assessment among veterinary professionals in local settings.

LIMITATIONS AND FUTURE SCOPE

This study is limited to veterinary professionals working in rural, semi-rural as well as urban areas in UP & Bihar (India); therefore, its results may not be applicable in other Indian states. It could also be argued that the biggest limitation of current work is the small sample size. However, this study provides the foundation for future quantitative studies on work-related stress in a larger group of veterinarians working in India. Furthermore, the study's data came from primary data sources, which might introduce bias into the research process. While some of the new variables may have been added by the authors, the predictive variables used in this study are derived from previously conducted research. Research in the future should concentrate on the expanding problems with stress, burnout, and mental health in veterinary education and research.

Practical Implication: In today's environment, the stress levels of veterinary practitioners are constantly rising as the number of animal patients are increasing due to different critical diseases. The findings of this study are important for veterinary hospitals & administration, the Indian government, and healthcare policy makers to develop strategies for the well-being of animals and veterinary staff, even though they are more applicable in developing environments. This is essential for developing strategies and interventions to enhance the performance of veterinary practitioners.

Authors' contributions
The author contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Declaration of Conflicts of Interests
The author declares that they have no conflict of interest.

Availability of data and materials
Not Applicable

Use of Artificial Intelligence
Not applicable

Declarations
The author declares that all works are original and this manuscript has not been published in any other journal.

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