Workplace stressor factors, profiles and the relationship to career stage in UK veterinarians, veterinary nurses and students

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Workplace stressor factors, profiles and the relationship to career stage in UK veterinarians, veterinary nurses and students

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Abstract

Background: Veterinary professionals experience higher psychological distress and lower wellbeing compared with the general population. Identifying workplace stressors is key to understanding and alleviating these difficulties.

Objective: Identify the severity of workplace stressors in veterinary professions across different levels of professional experience.

Method: A cross-sectional quantitative design was utilised via administration of a veterinary stressor questionnaire that measured the severity of 93 generic and veterinary-specific workplace stressors.

Results: A total of 658 participants reported stressor severity score. Factor analysis revealed four main stressor categories: workload and job demands, client relations stress, performance and accountability, patient care challenges. An inverse relationship was found between experience level and stressor severity scores. Furthermore, the most severe stressors varied as a function of career stage.

Findings and implications: Stressor severity tends to decrease with increasing experience levels. Stressors can be categorised by theme and unique stressor profiles can be derived for practitioners according to experience level. This knowledge can assist in the design and delivery of workplace support initiatives.

Conclusions: Identify key stressors across different levels of experience is important in focusing efforts to support people in the workplace.

performance, resilience, stress, wellbeing, workplace stressors

1 | INTRODUCTION

Recent years have seen increasing attention directed towards veterinary professional wellbeing (Matte et al., 2019; Williamson et al., 2022). Veterinary students and surgeons report higher rates of psychological distress compared with the general population (Bartram et al., 2009a; Cardwell et al., 2013; Knipe et al., 2018; Robin-

son et al., 2019). Approximately 10%-18% of industry staff report clinical distress (MERCK, 2021; Nett et al., 2015; Volk et al., 2018). Furthermore, veterinary surgeons are more vulnerable to suicidality than the general population (Platt et al., 2012). Severe forms of distress, such as suicidal ideation, may be associated with the accumulation of workplace stressors and their consequences (Andela, 2020).

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This discrepancy is particularly evident in early career stages, as yet students report lower wellbeing than their peers in the wider community (Cardwell et al., 2013; Knipe et al., 2018). Approximately 10%–18% of industry staff report clinical distress, with the highest rates in younger vets (MERCK, 2021; Nett et al., 2015; Volk et al., 2018). Furthermore, veterinary surgeons are more vulnerable to suicidality than the general population (Platt et al., 2012).

Mental health campaigns such as the Mind Matters Initiative launched in 2015 by The Royal College of Veterinary Surgeons have attempted to address elevated levels of distress within the veterinary profession. Despite these interventions, wellbeing levels remain relatively low and are possibly decreasing (Robinson et al., 2019). Workplace stressors can have a significant impact on individual physical and psychological health outcomes (Goh et al., 2015). Thus, the work environment is a key focus for understanding and alleviating this important workforce issue. A wider perspective on workplace distress may be required with sharpened focus on targeted interventions for the most severe workplace stressors. This shift requires a move away from a mental health or individual worker focus, to an occupational health paradigm.

There are many reasons to depart from a mental health paradigm for workplace performance and wellbeing. A comprehensive review of these issues is beyond the scope of this article. However, two criticisms illustrate the need for change. The traditional mental health paradigm is heavily reductionist (Steele et al., 2020). This means contextual causal factors can go unacknowledged with disproportionate responsibility on the individual for alleviation. Another issue with a traditional mental illness paradigm is that psychiatric illness stigma persists despite years of public campaigning (Corrigan, 2016). Educational interventions have vielded modest effects with uncertainty around long-term benefits (Walsh & Foster, 2021). An occupational health framework focuses on keeping people physically and mentally well at work. Practitioners within this discipline are multidisciplinary and look to configure the working environment for optimal wellbeing.

The identification of workplace stressors is key to an organisationallevel focus on performance and wellbeing. Several stressors have been identified in the veterinary professions. Research has identified industry-specific stressors, such as working with animal owners, dealing with animal neglect and abuse (O'Connor, 2019). However, other stressors exist that feature across a range of occupations. Variables at the job, managerial, organisational and relational levels contribute to workplace stress (Bartram et al., 2009a; Burman & Goswami, 2018). Across all professions, the most common sources of work stress are high workload (including demanding deadlines) and too much pressure or responsibility (HSE, 2021). Work to organise these stressors has been started, such as that conducted by Vande Griek et al. (2018) who has developed taxonomies of stressors using various methods. Although attempts have been made to organise these stressors, empirical work is required to identify underling stressor categories or themes.

It is not sufficient to identify specific workplace stressors alone. Group analysis can reveal a nuanced picture of stressors that impact people in different demographic and workplace circumstances. For

instance, female workers tend to report higher distress levels than their male counterparts (Pohl et al., 2022). There is some indication that key stressors vary with experience level, and indeed this may mean that those with least clinical experience suffer with higher levels of stress (Bartram et al., 2009b; Halliwell et al., 2016). Work site characteristics such as clinical work domain (e.g., equine and small animal) and sector setting (e.g., state vs. private) may also be correlated with psychological distress (Reijula et al., 2003).

In summary, veterinary professionals experience a disproportionate level of psychological distress in the workplace. While this finding is well established, there is insufficient analysis of stressor type and severity as a function of one's career stage and circumstances. These data are crucial to refining efforts to ameliorate stressors and improve workforce wellbeing. The many laudable efforts to intervene have not yet resulted in significant reductions in distress and high attrition rates. Using a cross-sectional quantitative design, the current study aimed to address the question: What is the nature and severity of workplace stressors for veterinary professionals at different levels of occupational experience? Answering this important question could facilitate more effective use of support and training resources for staff.

METHOD

2.1 | Materials

A questionnaire was developed and used as the data collection tool for this research. The approach to data collection was to gather participant responses to the largest pool of stressors available. To be underinclusive would risk the omission of data for particularly substantial stressors. Several existing workplace questionnaires were combined to produce a final instrument measuring the severity of 93 stressors. Stressors were identified from generic and veterinary-specific workplace stressor questionnaires.

A preliminary pool of stressors was taken from the Health and Safety Executive's (HSE) Management Standards Indicator Tool (HSE, n.d.). This 35-item questionnaire assesses stressors in six domains (work demands, control, support, relationships, role and change) identified in the management standards approach to tackling work-related stress. These management standards were created by the Health and Safety Executive (HSE) and are designed to help organisations adhere to the legislation contained in the UK Health & Safety at Work etc Act 1974 (HASWA). The indicator tool was utilised to capture a range of stressors common to most professions.

Additional veterinary-specific stressors were identified utilising the work of Connolly et al. (2022), Dunn et al. (2019) and Vande Griek et al. (2018). Any duplicate stressors were removed to form the final group of stressors for administration to participants. The six HSE stressor categories were retained to organise questionnaire items but there was no assumption that these categories remained conceptually valid. Items regarding basic demographic and professional data were added to the questionnaire. A list of the final questionnaire items can be found in Appendix 1.

Participants were asked to rate how stressful each stressor was in their current working role using a five-point Likert scale response format ('Not at all stressful', 'Slightly stressful', 'Somewhat stressful', 'Moderately stressful' and 'Extremely stressful'). Participants were also able to indicate 'Not applicable in my role' for any redundant stressors (e.g., practice management responsibilities).

2.2 Design and procedure

The design of this study followed a cross-sectional quantitative approach, with data collected via administration of an online questionnaire. A favourable ethical opinion was received from the [name omitted for manuscript review] University Research Ethics Committee (ref. 0297) prior to data collection. Participants were primarily recruited utilising existing professional networks of the authors, and advertising the study online via forums (e.g., social media platforms), and email correspondence directly to professionally relevant organisations (e.g., The British Small Animal Veterinary Association).

Prospective participants (or the applicable professional body representative) were invited to request further information or discuss questions with the study authors. Participants were then directed towards a weblink to complete the online questionnaire after reading a participant information sheet and completing a consent form. Participants were presented with a debriefing form after completing the questionnaire.

2.3 Participants

A total of 658 participants took part in the study. These participants were primarily drawn from the United Kingdom working in a range of specialties (small animal, large animal and equine) and organisational settings (independent, corporate and charity). Tables 1 and 2 summarise the demographic and occupational characteristics of the

TABLE 1 Participant demographic information.

Demographic characteristic (top three	Proportio	on
from each category)	n	%
Gender		
Female	485	84.5
Male	84	15.0
Non-binary	3	0.5
Marital status		
Single	213	33.3
Married/partnered	377	58.9
Divorced/separated	30	3.7
Ethnicity		
British	484	76.7
Irish	41	6.5
White other	90	14.3

Participants were on average 38.4 years old (SD = 11.3, range 18-64 years).

TABLE 2 Participant work characteristics.

·		
	Proportion	1
Work characteristic	n	%
Profession		
Qualified vet	467	74.2
Qualified vet nurse	92	14.6
Student	70	11.1
Work domain		
Small animal	448	69.8
Equine	46	7.2
Large animal	26	4.0
Work setting		
Independent	256	41.6
Corporate	244	39.6
Charity	35	5.7
Hours per week		
Up to 10	10	1.6
11-20	35	5.5
21-30	90	14.0
31-40	270	42.1
41+	237	36.9

sample. The proportion of female participants in this study (77%) was higher than the overall proportion of females in the veterinary surgeon profession (60%; RCVS, 2022). There was also an over-representation of veterinary surgeons working in a small animal setting (70% vs. 56% of overall workforce in 2019; RCVS, 2022). Qualified veterinary professionals reported an average practitioner experience level of 15.8 years (SD = 9.9, range 1-40).

Statistical analysis

Data analysis was conducted using SPSS Statistics 27. All data were pre-screened for outliers and missing data. The rate of missing data on the stressor variables was between 0.2% and 16.3%. Little's missing completely at random (MCAR) test (Little, 1988) indicated that data were MCAR ($\chi^2 = 27.711$, df = 36,535, p = 0.956). As a result, listwise deletion was used prior to conducting the analyses. Means and standard deviations were calculated for all included stressors. Various additional statistical procedures were then conducted as described in Section 3.

RESULTS

3.1 Stressor descriptive statistics

Mean severity scores were calculated for each measured stressor across the entire study sample. Due to the large number of

TABLE 3 Stressor variables with mean scores above scale midpoint.

	Severity	
Stressor		SD
1. Dealing with staff shortages	2.74	1.2
2. Fear of making mistakes	2.72	1.2
3. Fear of complaints by others	2.57	1.3
4. Workload pressure	2.57	1.3
5. High-performance expectations from self	2.55	1.2
6. Neglecting some tasks because there is too much to do	2.55	1.3
7. Complaints about care or cost	2.54	1.2
8. Poor treatment, neglect and/or abuse of pets by their owners	2.51	1.3
9. Animal suffering and death	2.48	1.3
10. Client not allowing a necessary intervention on their pets	2.37	1.3
11. High-performance expectations from others	2.36	1.2
12. Tasks requiring more time than expected	2.36	1.2
13. Inability or refusal to pay for work done	2.32	1.3
14. Adverse events and patient outcomes	2.28	1.3
15. Pressured to work intensively and/or quickly	2.26	1.3
16. Poor work-life or study-life balance	2.25	1.3
17. Conflicting expectations and/or demands from management, clients and public	2.24	1.3
18. Managing client expectations	2.24	1.2
19. Not having enough time for activities outside work or study	2.22	1.3
20. Complex/difficult cases	2.22	1.2
21. Being accountable for decisions and actions	2.22	1.2
22. Feeling guilty when clients are not able to pay treatment costs	2.22	1.4
23. Lack of appreciation or understanding by clients	2.20	1.3
24. Balancing work and childcare	2.17	1.5
25. Being interrupted with queries or questions by others	2.13	1.3
26. Tension and/or conflict with clients	2.11	1.3
27. Pressured to work beyond contracted/expected hours, including overtime	2.07	1.4
28. Fear of disciplinary action and/or litigation against me	2.05	1.4
29. Difficulty winding down after work or study	2.04	1.3
30. Poor remuneration for the demands and/or complexity of the role	2.03	1.4
31. Dealing with something unexpected at work or university	2.03	1.2
32. Generally poor communication practices within the clinic/organisation	2.03	1.4
33. Personal harassment—unkind words, abuse and/or emotional blackmail from clients	2.02	1.5
34. Poor communication between colleagues	2.02	1.3
35. Difficulty taking sick leave	2.01	1.5

^{*}Score range 0-4.

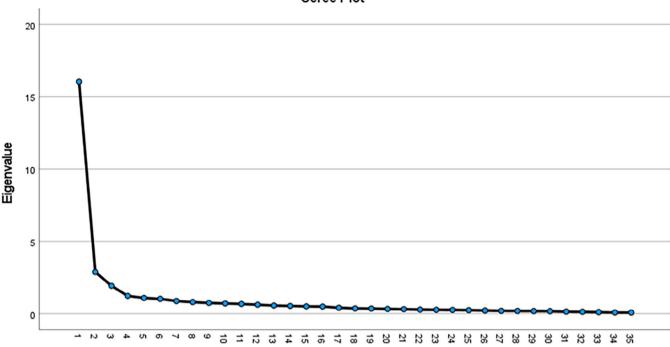
 $Response \ format: \ 0='Not\ at\ all\ stressful', \ 1='Slightly\ stressful', \ 2='Somewhat\ stressful', \ 3='Moderately\ stressful', \ 4='Extremely\ stressful'.$

stressors measured, only the total number of stressors yielding a mean score above the scale midpoint of 2 (n=35) are presented in Table 3. This midpoint also represents a salient level of stress based on the qualitative descriptors for the Likert scale anchor points.

3.2 | Exploratory factor analysis

The underlying structure of 35 stressors with the mean scores > 2 was explored using exploratory factor analysis (EFA). Correlation matrix inspection showed that all variables had at least one correlation





Factor Number

FIGURE 1 Scree plot for the exploratory factor analysis.

coefficient greater than 0.3. The overall Kaiser-Meyer-Olkin measure was 0.93. Bartlett's test of sphericity was statistically significant (p < 0.0001).

EFA revealed six factors with eigenvalues greater than one and explained 45.8%, 8.2%, 5.5%, 3.5%, 3.1% and 2.9% of the variance, respectively. Visual inspection of the scree plot (Figure 1) indicated that four components should be retained (Cattell, 1966). A rotated four-factor solution met the interpretability criterion (see Table 4). Accordingly, four factors were retained. While some items loaded on more than one factor, forced extraction of three factors failed to provide an interpretable factor structure. A qualitative description of each of the final four factors is as follows:

- 'Workload and job demands'. This represents the experience of dealing with significant workload pressures, high expectations from both oneself and others, difficulties in managing tasks effectively and the struggle to maintain a healthy work-life or study-life balance.
- 'Client relations stress'. This reflects the stress and challenges
 associated with client relations and financial aspects of your role.
 It encompasses issues related to managing client expectations,
 resolving conflicts, dealing with financial constraints and handling
 emotional stress caused by client interactions.
- 'Performance and accountability.' This encapsulates the psychological stress related to the need for high performance, accountability for decisions and the fear of making errors. It suggests a high level of personal responsibility and concern about the consequences of actions and decisions.

 Patient care challenges. This represents the stress and challenges associated with ensuring the welfare of animals, handling complex cases and managing client expectations in the context of pet care. It also points to issues related to poor communication and interpersonal dynamics among colleagues.

3.3 | Stressor severity and experience level

A statistically significant negative correlation was found for years of practitioner experience and total stress score for the 35 stressors listed in Table 3 (r=-0.29, p=0.0005). A regression analysis was conducted to understand the relationship between years of experience and total score of the 35 stressors included in the above factor analysis. Assumptions of linearity, homoscedasticity and normality of residuals; independence of observations; and no outliers were met. Experience level statistically significantly predicted stressor score, F(1, 140) = 12.82, p=0.0005, accounting for 8.4% of the variation in stressor severity.

To examine the relationship between stressor type and experience level, this was divided into quartile groups based on years of experience. The ranges of experience levels (in years of clinical practice) were:

- Group 1: 0-7 years (N = 132)
- Group 2: 8-15 years (N = 138)
- Group 3: 16–22 years (N = 116)
- Group 4: 23+ years (N = 124)

 TABLE 4
 Rotated factor matrix with varimax rotation.

Dealing with staff shortages					Patient
Fear of making mistakes					care
Pear of complaints by others	Dealing with staff shortages	0.668			
Managing client expectations from sale	Fear of making mistakes			0.761	
High-performance expectations from self 0.422 0.413 Neglecting some tasks because there is too much to do 0.729 Complaints about care or cost 0.631 Poor treatment, neglect and/or abuse of pets by their owners 0.682 Client not allowing a necessary intervention on their pets 0.573 0.495 Ligh-performance expectations from others 0.573 0.495 Tasks requiring more time than expected 0.573 0.495 Inability or refusal to pay for work done 0.698 0.492 Adverse events and patient outcomes 0.648 0.698 Poor work-life or study-life balance 0.812 0.452 Conflicting expectations/defenands from management, clients, poblic 0.535 0.456 Clients, poblic 0.535 0.456 0.456 Managing client expectations, different expectations, and actions 0.770 0.456 0.416 0.434 Being accountable for decisions and actions 0.542 0.580 0.477 0.477 0.477 0.477 0.477 0.477 0.477 0.477 0.477 0.477 0.477 0.477	Fear of complaints by others			0.848	
Neglecting some tasks because there is too much to do Complaints about care or cost Poor treatment, neglect and/or abuse of pets by their owners Animal suffering and death O.582 Client not allowing an ecessary intervention on their pets High-performance expectations from others Tasks requiring more time than expected Inability or refusal to pay for work done Adverse events and patient outcomes Pressured to work intensively and/or quickly Poor work-life or study-life balance Conflicting expectations/demands from management, clients, public Managing client expectations Being accountable for decisions and actions Peeling guilty when clients are not able to pay treatment costs Each of appreciation or understanding by clients Balancing work and childcare Being accountable for decisions and actions Pressured to work beyond contracted hours, including overtime Person of the demands and/or conflict with clients Pressured to work beyond contracted hours, including overtime Difficulty winding down after work or study Pressured to work beyond contracted hours, including overtime Dealing with something unexpected at work or university Dealing with something unexpected at work or university Pressured to work beyond contracted hours, including overtime Pear of disciplinary action and/or litigation against me Difficulty winding down after work or study Dealing with something unexpected at work or university Pressured to work beyond contracted hours, including overtime Plans of the role Dealing with something unexpected at work or university Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organisation University Pressured to work depondent practices within the organis	Workload pressure	0.871			
Complaints about care or cost Poor treatment, neglect and/or abuse of pets by their cowners Animal suffering and death Animal suffering and death Client not allowing a necessary intervention on their pets High-performance expectations from others 1	High-performance expectations from self	0.422		0.413	
Poor treatment, neglect and/or abuse of pets by their owners Aliminal suffering and death Client not allowing a necessary intervention on their pets Pligh-performance expectations from others Tasks requiring more time than expected 0.573 Inability or refusal to pay for work done Adverse events and patient outcomes Poer work-life or study-life balance Conflicting expectations/demands from management, clients, public Managing client expectations Managing client expectations Not having enough time for activities outside work or study Peeling accountable for decisions and actions Feeling guilty when clients are not able to pay treatment costs Lack of appreciation or understanding by clients Balancing work and childcare Peasured to work beyond contracted hours, including overtime Difficulty winding down after work or study Poer remuneration for the demands and/or complexity of the role of the remuneration for the demands and/or complexity of the role of the remuneration for the demands and/or complexity of the role of the remuneration for the demands and/or complexity of the role of the remuneration for the demands and/or complexity of the role of the remuneration for the demands and/or complexity of the role	Neglecting some tasks because there is too much to do	0.729			
Owiner's Animal suffering and death Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets Client not allowing a necessary intervention on their pets of the pets of	Complaints about care or cost		0.631		
Client not allowing a necessary intervention on their pets Pigh-performance expectations from others 0.573 0.495	The state of the s				0.834
pets	Animal suffering and death				0.582
Tasks requiring more time than expected Inability or refusal to pay for work done Adverse events and patient outcomes Pressured to work intensively and/or quickly O.648 Poor work-life or study-life balance Conflicting expectations/demands from management, clients, public Managing client expectations Managing client expectations Montaging enough time for activities outside work or study Complex/difficult cases Reing accountable for decisions and actions Reing accountable for decisions and actions Realing work and childcare Being interrupted with queries or questions by others Balancing work and childcare Being interrupted with queries or questions by others Rersource to work beyond contracted hours, including overtime Rear of disciplinary action and/or litigation against me Difficulty winding down after work or study Oose Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Proor communication between colleagues O.648 O.649 O.491 O.491 O.491 O.492 O.493 O.494 O.436 O.764 Pressured to work beyond contracted hours, including overtime O.764 O.764 O.764 O.764 O.765 O.765 O.766 O.766 O.766 O.767 O.766 O.767 O.767 O.767 O.767 O.768 O.768 O.768 O.769 O.769 O.769 O.779 O.770 O.77					0.826
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Pressured to work intensively and/or quickly Poor work-life or study-life balance Conflicting expectations/demands from management, clients, public Managing client expectations Not having enough time for activities outside work or study Complex/difficult cases Not having enough time for activities outside work or study Complex/difficult cases Reing accountable for decisions and actions Feeling guilty when clients are not able to pay treatment costs Lack of appreciation or understanding by clients Balancing work and childcare Being interrupted with queries or questions by others O.744 Reing accountable for decisions and actions Tension and/or conflict with clients Pressured to work beyond contracted hours, including overtime Difficulty winding down after work or study Door remuneration for the demands and/or complexity of the role Cenerally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues O.648 O.744 O.744 O.744 O.745 O.744 O.745 O.744 O.745 O.744 O.746 O.744 O.746 O.744 O.746 O.744 O.746 O.744 O.746 O.744	Inability or refusal to pay for work done		0.698		
Poor work-life or study-life balance Conflicting expectations/demands from management, clients, public Managing client expectations Not having enough time for activities outside work or study Complex/difficult cases	Adverse events and patient outcomes				0.432
Conflicting expectations/demands from management, clients, public Managing client expectations Not having enough time for activities outside work or study Complex/difficult cases Complex/difficult	Pressured to work intensively and/or quickly	0.648			
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Balancing work and childcare Being interrupted with queries or questions by others 0.474 0.436 Tension and/or conflict with clients 0.764 Pressured to work beyond contracted hours, including overtime Fear of disciplinary action and/or litigation against me Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.444 0.436 0.713 0.713 0.465 0.465 0.465 0.744			0.491		0.477
Being interrupted with queries or questions by others Tension and/or conflict with clients Pressured to work beyond contracted hours, including overtime Fear of disciplinary action and/or litigation against me Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.474 0.474 0.436 0.713 0.713 0.713 0.465 0.465 0.465 0.465 0.465 0.744	Lack of appreciation or understanding by clients		0.627		
Tension and/or conflict with clients Pressured to work beyond contracted hours, including overtime Fear of disciplinary action and/or litigation against me Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.764 0.713 0.713 0.713 0.713 0.713 0.713 0.713 0.713 0.714	Balancing work and childcare	0.542			
Pressured to work beyond contracted hours, including overtime Fear of disciplinary action and/or litigation against me Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.706 0.713 0.744 0.418 0.744 0.744 0.744	Being interrupted with queries or questions by others	0.474		0.436	
overtime Fear of disciplinary action and/or litigation against me Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.744 0.744	Tension and/or conflict with clients		0.764		
Difficulty winding down after work or study Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.580 0.418 0.418 0.465 0.465 0.744	-	0.706			
Poor remuneration for the demands and/or complexity of the role Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.418 0.445 0.744 0.744	Fear of disciplinary action and/or litigation against me			0.713	
Dealing with something unexpected at work or university Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.445 0.744 0.744 0.744	Difficulty winding down after work or study	0.580			
University Generally poor communication practices within the organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.744 0.744		0.418			
organisation Harassment via unkind words, abuse, emotional blackmail from clients Poor communication between colleagues 0.744 0.744 0.413		0.435		0.465	
blackmail from clients Poor communication between colleagues 0.413					
			0.744		
Difficulty taking sick leave 0.504	Poor communication between colleagues				0.413
	Difficulty taking sick leave	0.504			

20531095, 2024, 4, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/vms3.1547 by Harper Adams University, Wiley Online Library on [24/07/2024]. See the Terms and Condition of the Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons

TABLE 5 Mean stressor severity score by experience-level group.

	Groupa	χ	SD	N	
Workload and job	1	33.7	13.5	98	
demands	2	37.1	15.3	102	
	3	31.3	14.5	74	
	4	26.4	16.3	90	
Client relations	1	16.3	8.5	98	
stress	2	19.8	7.9	102	
	3	14.4	5.7	74	
	4	12.8	6.2	90	
Performance and accountability	1	22.3	6.9	98	
	2	21.5	7.7	102	
	3	17.2	7.2	74	
	4	15.7	9.4	90	
Patient care challenges	1	18.4	9.0	98	
	2	19.3	7.2	102	
	3	14.1	7.3	74	
	4	13.6	8.2	90	

 $^{^{}a}1 = 0-7$ years experience; 2 = 8-15 years; 3 = 16-22 years; 4 = 23+ years.

Average scores were compared across groups stressors grouped by stressor factor. Table 5 shows that, for all stressor factors, there was a trend of decreasing stressor severity as experience level.

A multivariate analysis of variance (MANOVA) revealed a statistically significant difference between the experience-level groups on the combined dependent variables, F(12, 357) = 2.67, p = 0.002; Wilks' $\Lambda = 0.797$; partial $\eta^2 = 0.073$. There was a statistically significant difference in stressor scores between experience-level groups for workload and job demands, F(3, 138) = 3.73, p = 0.013; partial $\eta^2 = 0.075$; client relations stress, F(3, 138) = 5.76, p = 0.001; partial $\eta^2 = 0.111$; performance and accountability, F(3, 138) = 5.35, p = 0.002; partial $\eta^2 = 0.104$; and patient care challenges, F(3, 138) = 5.29, p = 0.002; partial $\eta^2 = 0.103$.

Tukey honestly significant difference post hoc tests revealed significantly higher scores in group 2 versus group 4 for workload and jobs demands (p=0.007), between group 2 and groups 3 and 4 for patient care challenges (p=0.006, p=0.002), between group 2 and groups 3 and 4 for client relations stress (p=0.006, p=0.002) and for groups 1 and 2 versus 4 for performance and accountability (p=0.023, p=0.006).

3.4 | Stressor type by experience-level group

Table 6 summarises the top five stressors with the highest average scores for each experience-level group, illustrating differing stressor profiles. 'Dealing with staff shortages' was the only stressor present in all four groups, and stressor score does not significantly differ between groups (p = 0.94; Table 7).

Examining the top 10 stressors by factor reveals that each group encounters a varied array of stressors. However, the presence and impact of workload and job demand stressors was notable. Stressors from this category comprised four of the top 10 stressors in three of the four groups (with the 8–15 years group being the exception). Furthermore, mean scores for workload and job demand stressors were also higher than those found for other categories (see Table 5).

3.5 | Supplementary group analysis

Table 8 summarises mean scores among gender, ethnicity, professional and work setting groups for the four stressor factors. Most notably, differences were observed for gender (higher scores for females across all stressor categories) and work setting (higher scores for corporate employees across all stressor categories).

A series of one-way analysis of variances (ANOVAs) were conducted and revealed a significant effect of gender on workload job demands, F(1, 179) = 15.083, p < 0.001, $\eta^2 = 0.078$; client relationship stress, F(1, 423) = 20.545, p < 0.001, $\eta^2 = 0.046$; performance accountability, F(1, 493) = 34.763, p < 0.001, $\eta^2 = 0.066$; and patient care challenges, F(1, 423) = 45.491, p < 0.001, $\eta^2 = 0.097$. Significant differences were observed between corporate and independent sectors for workload job demands, F(1, 160) = 9.213, p = 0.003, $\eta^2 = 0.054$; client-related stress, F(1, 361) = 10.544, p = 0.001, $\eta^2 = 0.028$; performance accountability, F(1, 419) = 23.960, p < 0.001, $\eta^2 = 0.054$; and patient care challenges, F(1, 359) = 19.210, p < 0.001, $\eta^2 = 0.051$ (Table 9).

Analysis of professional group via one-way ANOVA indicated that veterinary nurses experienced higher levels of stress for patient care challenges, $F(1,399)=12.907, p<0.001, \eta^2=0.031$. No statistically significant differences were found between professional group for the other three stressor categories. Finally, no statistically significant differences were found between the three ethnicity categories on the four stressor categories.

4 | DISCUSSION

There is evidence that veterinary professionals experience elevated levels of psychological distress (Williamson et al., 2022). However, there is a need to better understand principle workplace stressors and how these vary with practitioner experience levels. Elucidating environmental stressors aligns with an occupational health perspective and this knowledge can facilitate the design of workplace stressor mitigation initiatives.

Four important stressor factors or themes were derived from a subset of workplace stressors using EFA. These themes were 'workload and job demands', 'client relations stress', 'performance and accountability' and 'patient care challenges'. These domains illustrate the complexity of workplace stressors for veterinary professionals. Key sources of stress are found, not only in clinical work itself, but also in personal sources of stress (e.g., imposing high-performance expectations on self), interpersonal challenges, animal welfare and

TABLE 6 Highest five scoring stressors by experience-level group.^a

Stressor ranking	Group 1, 0-7 years (N = 132)	Group 2, 8–15 years (N = 138)	Group 3, 16–22 years (N = 116)	Group 4, 23+ years (N = 124) ^a
1	Fear of making mistakes 3.1	Complaints about care or cost 2.8	Dealing with staff shortages 2.8	Dealing with staff shortages 2.7
2	Fear of complaints by others 2.9	Dealing with staff shortages 2.8	Workload pressure 2.5	Neglecting some tasks because there is too much to do 2.3
3	Dealing with staff shortages 2.8	Poor treatment, neglect and/or abuse of pets by their owners 2.7	Poor treatment, neglect and/or abuse of pets by their owners 2.5	Fear of complaints by others 2.3
4	Workload pressure 2.8	Fear of making mistakes 2.7	High-performance expectations from self 2.5	Complaints about care or cost 2.2
5	Animal suffering and death 2.8	Fear of complaints by others 2.7	Neglecting some tasks because there is too much to do 2.4	Animal suffering and death 2.2

 $[^]a Yellow = Workload \ and \ job \ demands; \ Green = Client \ relations \ stress; \ Blue = Performance \ and \ accountability; \ Orange = Patient \ care \ challenges.$

TABLE 7 Top 10 stressors by experience group colour coded by stressor factor.^a

	o 10 stressors by experience group			
Stressor ranking	Group 1, 0–7 years (N = 132)	Group 2, 8–15 years (N = 138)	Group 3, 16–22 years (N = 116)	Group 4, 23+ years (N = 124)
1	Fear of making mistakes	Complaints about care or cost	Dealing with staff shortages	Dealing with staff shortages
2	Fear of complaints by others	Dealing with staff shortages	Workload pressure	Neglecting some tasks because there is too much to do
3	Dealing with staff shortages	Poor treatment, neglect and/or abuse of pets by their owners	Poor treatment, neglect and/or abuse of pets by their owners	Fear of complaints by others
4	Workload pressure	Fear of making mistakes	High-performance expectations from self	Complaints about care or cost
5	Animal suffering and death	Fear of complaints by others	Neglecting some tasks because there is too much to do	Animal suffering and death
6	High-performance expectations from self	High-performance expectations from self	Fear of making mistakes	Inability or refusal to pay for work done
7	Complaints about care or cost	Inability or refusal to pay for work done	Complaints about care or cost	Fear of making mistakes
8	Poor treatment, neglect and/or abuse of pets by their owners	Lack of appreciation or understanding by clients	Balancing work and childcare	Workload pressure
9	Neglecting some tasks because there is too much to do	Balancing work and childcare	Animal suffering and death	Poor treatment, neglect and/or abuse of pets by their owners
10	Client not allowing a necessary intervention on their pets	Conflicting demands from management, clients and public	Being on call	Being interrupted with queries or questions by others

 $^{{}^{}a} Yellow = Workload \ and \ job \ demands; \ Green = Client \ relations \ stress; \ Blue = Performance \ and \ accountability; \ Orange = Patient \ care \ challenges.$

TABLE 8 Mean stressor scores for additional demographic and employment characteristics.

	Stressor factor				
Participant characteristic	Workload and job demands	Client relations stress	Performance and accountability	Patient care challenges	
Gender					
Male ($N = 84$)	25.71	14.03	16.20	12.84	
Female ($N = 485$)	36.12	19.02	21.80	19.40	
Ethnicity					
British ($N = 484$)	33.62	17.97	20.63	18.26	
Irish ($N = 41$)	29.09	17.52	19.91	17.36	
White other ($N = 90$)	37.48	19.25	22.80	19.07	
Ethnicity					
British ($N = 484$)	33.62	17.97	20.63	18.26	
Irish ($N = 41$)	29.09	17.52	19.91	17.36	
White other ($N = 90$)	37.48	19.25	22.80	19.07	
Professional group					
Vet nurse ($N = 92$)	34.63	20.05	21.52	21.60	
Vet surgeon ($N = 467$)	33.74	17.87	20.77	17.69	
Setting					
Corporate ($N = 244$)	37.59	19.56	23.00	20.06	
Independent (N = 256)	30.38	16.69	19.40	16.50	

TABLE 9 The 10 highest scoring stressors by professional group.

Stressor ranking	Vet nurse	Vet surgeon
1	Poor treatment, neglect and/or abuse of pets by their owners (3.17)	Dealing with staff shortages (2.73)
2	Dealing with staff shortages (2.99)	Fear of making mistakes (2.63)
3	Client not allowing a necessary intervention on their pets (2.99)	Fear of complaints by others (2.58)
4	Animal suffering and death (2.88)	Complaints about care or cost (2.52)
5	Fear of making mistakes (2.86)	Workload pressure (2.51)
6	Complaints about care or cost (2.81)	Neglecting some tasks because there is too much to do (2.46)
7	Earning enough money to cover personal/family bills and expenses (2.80)	High-performance expectations from self (2.45)
8	Neglecting some tasks because there is too much to do (2.80)	Animal suffering and death (2.38)
9	High-performance expectations from self (2.66)	Poor treatment, neglect and/or abuse of pets by their owners (2.37)
10	Workload pressure (2.63)	Tasks requiring more time than expected (2.35)

organisational issues. The workload and job demand factor comprised almost half the subset of workplace stressors included in the EFA. Here, we see the combination of an individual's high-performance expectations and structural issues of workforce shortages and pressure to work for lengthy periods. This grouping of stressors may help explain the much-cited high attrition rates among veterinary professionals, but

also the need to re-calibrate workload and performance expectations at the individual, practice and profession levels.

The heterogeneous nature of workplace stressors indicates the need for targeted support at both the individual and organisational level. While previous efforts have been directed towards stressor quantification (e.g., Crane et al., 2015), few attempts have been

made to identify underlying stressor groupings. The organisation of stressors into categories provides some guidance on the organisation of staff support and training. Mental health literacy programmes are insufficient to ameliorate stressors associated with psychological distress in the workplace. Literacy concerns knowledge and beliefs about mental health conditions (Jorm et al., 1997). While such programmes can enhance knowledge, they have been criticised for the lack impact on other important outcomes such as help-seeking (Gorczynski et al., 2020). Furthermore, the exclusive focus on mental disorders neglects non-intrapersonal stressors (e.g., time pressures and role conflict; Mopkins, 2022) and non-psychiatric outcomes, such as burnout. Organisations can use stressor themes identified in this study to organise mitigation activities.

The primary study question was 'What is the nature and severity of workplace stressors for veterinary professionals at different levels of occupational experience?'. In terms of overall stress levels, this study found an inverse relationship among respondents between an individual's years of experience in clinical practice and stress, with the highest average stressor scores being reported among the least experienced respondents. These individuals also reported a relatively larger number of 'high severity' stressors as defined by average stressor scores across the sample. These results are consistent with previous research (e.g., Hatch et al., 2011). Average stressor scores tended to be lower for each of the four stressor categories in the two participant groups comprising the most experienced practitioners. This finding indicates that lesser experienced professionals encounter higher stress levels across the range of stressors included in the current study. However, we should also consider the potential role of survivor bias in these data. More experienced professionals might appear to experience lower stress levels not because age reduces stress per se, but because those unable to cope have already exited the profession. In addition, there was variation in the ranking of individual stressors across the four experience-level groups. Efforts towards stressor mitigation and support needs will need to account for this variation to address practitioner needs effectively. For example, recently qualified workers may need specific support for anxiety around performance issues, such as making mistakes and the fear of complaints.

The greater vulnerability to stressors among these practitioners indicates the need to assign more resources to supporting people in the early years following qualification. Also revealed in the current study was the heterogeneous profile of specific stressors impacting the four experience-level groups. However, there was no clear pattern of stressor factor prominence. This analysis reveals that both the severity and nature of stressors will vary according to career stage. Individual practices will need to account for career stage when offering training and support. Accounting for individual circumstances is likely to make training outcomes more effective. This knowledge may also help individual veterinary professionals to identify their own sources of stress at different career stages, which may impact engagement with, or seeking out of, potential sources of support or training.

Supplementary subgroup analysis revealed that female participants experience significantly higher stressor scores across all stressor categories. Furthermore, participants working in the corporate sector

reported significantly higher stress scores than their independent counterparts across all stressor categories. Significantly higher distress levels for females have been reported elsewhere, as have different stress scores according to work sector (e.g., private vs. state; Reijula et al., 2003). Elucidating mechanisms underlying these group differences will be an important task in successfully alleviating stressors for vulnerable groups.

4.1 Recommendations and future research

Organisations can use the data reported here to refine their staff support and professional development. A multi-level approach to stress mitigation covering a wide range of stressors is essential to any effective programme. At the individual level, practitioners should be supported to develop skills in identifying and respond adaptively to maladaptive cognitive and behavioural phenomena (e.g., setting excessively high expectations around workload and performance). These skills need to be integrated with an organisational-wide series of interventions addressing major environmental stressors (e.g., supporting work-life balance). Mitigation of environmental and organisational stressors aligns with an occupational health framework. Several workplace health promotion models are available, but often involve a process approach comprising assessment, planning, implementation and monitoring/review (e.g., WHO Workplace Health Model; WHO, 2010). Failure to adequately address stressors at the organisational level will likely result in minimal wellbeing and performance improvements among staff (Krijgsheld et al., 2022).

Innovative approaches are available, such as 'job crafting'. Here, individuals initiate changes to proactively influence their job (Tims & Bakker, 2010) by shaping occupational boundaries and promoting a work environment in line with their own competencies, skills and preferences (Wrzesniewski & Dutton, 2001). This can be better achieved if individuals can better understand themselves, which includes identifying any potential personal stressors employee engagement with 'job crafting' has been linked with reduced stress and burnout, and improved psychological availability (Singh et al., 2018).

Future research on this topic should look to replicate the study on a larger sample size and to test the proposed underlying stressor factor structure described in the data presented above. A large sample size would also provide the opportunity for subgroup analysis of stressors through more rigorous analytical and statistical procedures. For instance, we could analyse changes in stressor profiles as experience levels increase for individual veterinary disciplines. Specific subgroups are more vulnerable to distress and wellbeing issues. These include gender (female), age (younger), ethnic and sexual orientation minorities and presence of a disability/medical conditions (Fritschi et al., 2009; Gardner & Hini, 2006; Moir & Van den Brink, 2020; Robinson et al., 2019; Volk et al., 2018). Again, larger samples can help us understand the most relevant stressors for these groups as they progress through their careers. Furthermore, it would be important to make cross national comparisons in stressor severity to ascertain cultural/jurisdictional differences in stressor profiles. There is also scope

for development of a veterinary professional-specific stressor questionnaire based on the individual stressors utilised in the current study. Such a tool would be invaluable for monitoring stressor impact and evaluating the implementation of targeted interventions. This work could be complimented by other efforts to identify additional stressors not identified and measured in the current study. Finally, longitudinal study designs would be useful to track temporal trajectories of key stressors and provide more powerful analysis of underlying relationships between key variables. Longitudinal data could also be useful to address the potential methodological issue of survivor bias.

4.2 | Limitations

Limitations of this study include its cross-sectional nature which limit the ability to infer underlying causal relationships. Participants were self-selecting thereby introducing the possibility of bias. In addition, the four practitioner experience-level groups were derived statistically (quartiles). However, there were other possible methods for group assignment (e.g., based on career milestones, completion of additional qualification and registration requirements). Despite a large number of stressor variables measured, other significant workplace stressors could have been omitted in this study. Hence, the list of stressor variables measured in the current study is not exhaustive.

AUTHOR CONTRIBUTIONS

Jason Spendelow: Conceptualisation (lead); formal analysis (lead); investigation (equal); methodology (equal); writing (lead). Clare Cripwell: Conceptualisation (supporting); investigation (supporting); project administration (equal); visualisation (equal); writing (supporting). Rebecca Stott: Conceptualisation (supporting); investigation (supporting); project administration (equal); visualisation (equal); writing (supporting). Kathryn Francis: Formal analysis (supporting); visualisation (supporting); writing (supporting). Kate Cavanagh: Conceptualisation (supporting); investigation (supporting); project administration (equal); visualisation (equal); writing (supporting). Jenny Powell: Conceptualisation (supporting); investigation (supporting); project administration (equal); visualisation (equal). Ruth Corbett: Conceptualisation (supporting); investigation (supporting); project administration (equal); visualisation (equal).

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

ETHICS STATEMENT

The authors confirm that the ethical policies of the journal, as noted on the journal's author guidelines page, have been adhered to and the appropriate ethical review committee approval has been received.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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PEER REVIEW

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APPENDIX 1

High-performance expectations from self

High-performance expectations from others

Fear of making mistakes

Fear of complaints by others

Fear of disciplinary action and/or litigation against me

Being accountable for decisions and actions

Pressured to work intensively and/or quickly

Pressured to work beyond contracted/expected hours, including overtime

Being on call

Workload too high

Dealing with staff shortages

Feeling overwhelmed by high workload

Neglecting some tasks because there is too much to do

Tasks requiring more time than expected

Being interrupted with gueries or guestions by others

Dealing with something unexpected at work or university

Performing administrative tasks

Passing coursework

Poor work-life or study-life balance

Difficulty winding down after work or study

Difficulty taking sick leave

Not having enough time for activities outside work or study

Balancing work and childcare

Earning enough money to cover personal/family bills and expenses

Maintaining a profitable clinic/practice

Managing vet clinic costs

Lack of flexibility in working/study pattern

Lack of control over timing, length and/or frequency of breaks

Lack of control over the speed I work

Lack of control over how my day is planned

Lack of choice in deciding what I do at work (i.e., specific activities)

Lack of control over the method/approach to my work/studies

Lack of control over clinical and non-clinical resources available (e.g., drugs and office supplies)

Lack of choice over the desired level of care I want to provide

Lack of supportive feedback on the work I do

Lack of management support for work/study problems

Inability to discuss with my manager/mentor something that has upset or annoyed me at work

Lack of support through emotionally demanding work

Lack of encouragement from my line manager/university staff

Lack of instruction and guidance on how to perform clinical procedures (assessment and treatment)

Feeling undervalued

Lack of leadership in the practice/organisation

Being discriminated on the basis of my gender, ethnicity, sexual orientation, health, and so forth

Inability to rely on my colleagues/peers to help when work is too demanding

Feeling unsupported by my colleagues/peers

Feeling a lack of respect from my colleagues/peers

Not being listened to by my colleagues/peers regarding work-related problems

Feeling unsupported by governing bodies

Working on my own/in isolation

Lack of appreciation or understanding by clients

Feeling like I don't fit in with colleagues/other trainees

Tension and/or conflict with clients

Personal harassment in the form of unkind words, abuse and/or emotional blackmail from clients

Managing client expectations

Complaints about care or cost

Inability or refusal to pay for work done

Poor treatment, neglect and/or abuse of pets by their owners

Client not allowing a necessary intervention on their pets

Feeling guilty when clients are not able to pay treatment costs

Dealing with the emotional strain of clients suffering pet death

Tension and conflict with colleagues

Differing views on care between yourself and colleagues

Poor communication between colleagues

Being mistreated and/or bullied

Dealing with unpleasant colleague(s)

Negative reactions from colleagues for having work-life boundaries and/or taking breaks

Negative social media exposure

Conflicting expectations and/or demands from management, clients and the public

Unclear about the expectations others have of me at work

Working in a role that is poorly defined

Lack of professional development and/or training opportunities

Lack of opportunities for advancement

Unclear goals and objectives for the practice

Lack of clarity around how my work fits in to the aims of the practice

Adverse events and patient outcomes

Animal suffering and death

Complex/difficult cases

Surgery

Complex ethical issues

Workplace practises clashing with personal values

Supporting clients

Supporting colleagues

Poor remuneration for the demands and/or complexity of the role

Risk of getting hurt while caring for the animals

Feeling in physical danger while working at night

Feeling in physical danger while working alone

Feeling in physical danger from clients/pet owners

Generally poor communication practices within the clinic/organisation

Not given opportunity to question clinic/organisational changes

Not consulted over changes in rota/working patterns

Not consulted before changing drug/surgical procedures

Not kept informed about how changes will work in practice

Too much change within the clinic/organisation