

# Merck Animal Health Veterinary Team study reveals factors associated with well-being, burnout, and mental health among nonveterinarian practice team members

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## OBJECTIVE

To assess the levels of burnout, well-being, and mental health of nonveterinarian employees of veterinary practices and, for context, compare them to veterinarians and the general population by use of validated instruments.

## METHODS

An online survey of 2,271 nonveterinary practice employees drawn from members of the North American Veterinary Technicians Association, members of the Veterinary Hospital Managers Association, referrals from veterinarian respondents to a companion survey, and a large hospital group that owns several hundred US veterinary practices. The study was fielded from September 11 to October 9, 2023.

## RESULTS

A majority of practice team members were satisfied with their work in veterinary medicine. However, serious psychological distress was twice as prevalent among team members as among veterinarians and well-being was lower than that of veterinarians. Burnout was similar to veterinarians. Personality played a role: team members on average were more likely to score higher in neuroticism than veterinarians and the general population, and neuroticism was a predictor of low well-being, poor mental health, and burnout. There was also evidence of substantial financial stress among team members.

## CONCLUSIONS

Serious psychological distress was common among practice team members. Financial stress may play a role. Burnout and low levels of well-being were also common.

## CLINICAL RELEVANCE

This study provided a useful profile of the psychological conditions that many practice employees may be experiencing.

**Keywords:** well-being, burnout, mental health, personality, neuroticism

In 2017, the authors began a series of comprehensive biennial studies of well-being, burnout, and mental health of veterinarians.<sup>1,2</sup> In 2021, a modest effort was made to expand the research to include nonveterinarian practice employees, including veterinary assistants, veterinary technicians, practice managers, kennel staff, and client service representatives (CSRs).<sup>3</sup>

The aim of the current study was to build on that effort with a much more robust survey of practice team members. The goal was to assess the levels of burnout, well-being, and mental health of nonveterinarian employees of veterinary practices and, for context, compare them to studies of veterinarians and the general population by use of common validated instruments. In addition, the study attempted to identify individual behaviors and practice management techniques that were associated with lower levels of burnout and/or better well-being and mental health.

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vaccines, pharmaceuticals, and digital technology to the veterinary profession.

## Methods

### Survey

The research protocol and questionnaire were submitted to the Advarra Institutional Review Board for review and received a letter of exemption. Unlike with veterinarians, there is no comprehensive database of practice team members, so efforts were made to reach as many as possible. An email with an invitation to participate in an anonymous online survey was distributed to current members of the North American Veterinary Technicians Association and Veterinary Hospital Managers Association. A large hospital group that owns several hundred US veterinary practices also posted a link to the survey in their facilities and invited employees to respond. In addition, respondents to a companion survey<sup>4</sup> of veterinarians conducted at the same time were invited to share a link to the team survey to nonveterinarians in their practices. Three reminders were sent to available email addresses. The study was in the field from September 11 to October 9, 2023. The survey asked detailed questions about demographics, job satisfaction, attitudes about veterinary work, clinic culture, certain employee benefits, attitudes toward mental health treatment, and a variety of other related questions. In addition, respondents were asked to complete several instruments for the measurement of mental health, well-being, and burnout. Instruments used included the following.

### **Burnout Assessment Tool**

The study used the Burnout Assessment Tool (BAT)<sup>5</sup> developed by European researchers. The BAT not only provides an overall score for burnout but also measures component factors including cognitive impairment, emotional impairment, exhaustion, and mental distance. The BAT was used in the companion survey of veterinarians. McKinsey & Company, a management consulting firm, had conducted a global study of burnout among adults using the BAT.<sup>6</sup> The McKinsey and veterinarian study provided excellent reference data on the general population and veterinarians.

### **Kessler Psychological Distress Scale**

Mental health was assessed with the Kessler Psychological Distress Scale,<sup>7</sup> by which respondents assigned a numeric score ranging from 0 (none of the time) to 4 (all of the time) to 6 items. The standard criterion for the presence of severe psychological stress, a sum score of 13 or higher, was used to determine the presence or absence of severe psychological distress.

### **Well-being Index**

Well-being, or the way individuals feel about their lives compared with the best or worst possible lives they can imagine, was evaluated with the Cantril Ladder.<sup>8</sup> Respondents were asked to envision a ladder

with 10 steps where the ground level (0) represented the worst possible life they could imagine and the top (10) represented the best possible life they could imagine. Responses were subsequently categorized as flourishing (scores of 7 to 10), getting by (scores of 4 to 6), or suffering (scores of 0 to 3).

### **Big Five personality assessment**

The present study included an assessment of respondents on the Big Five personality traits: neuroticism, extroversion, agreeableness, openness, and conscientiousness.<sup>9</sup> Extroversion and especially neuroticism are the 2 personality characteristics most associated with well-being.<sup>10</sup> Neuroticism is a core personality trait associated with anxiety and negative emotions. Individuals with high levels of neuroticism may respond worse when faced with environmental stress or may get more overwhelmed with minor frustrations compared to individuals who do not have high levels of neuroticism.<sup>11</sup> Scores of team members on the Big 5 personality traits were compared to the general public as measured in the 2017 *Panel Study of Income Dynamics*.<sup>12</sup>

### Statistical analysis

Multiple regression analysis was performed to identify which of all surveyed attributes were the most predictive for (ie, largest measures of association with) high levels of well-being (ie, with flourishing), serious psychological distress, and high levels of burnout.

The same predictor variables were used for all outcome measures. Standard demographic variables such as age, gender, and income were included to control for them and because demographic effects on well-being, burnout, and mental health are important to understand. Personality variables were included because it is well-known that they predict well-being and could be confounded with other predictor variables (eg, neuroticism could lead to lower income). The remaining predictor variables, including student debt, were included to examine how various aspects of respondents' lives influence their well-being and mental health. Many of these factors were included in the survey because they showed significant effects in previous surveys among veterinarians and team members or were selected to examine the influence of newly suggested factors (eg, coping strategies).

Regressions were based on percentile of maximum possible score.<sup>13</sup> Each predictor variable was scored from 0 (lowest possible value) to 1 (highest possible value). This scoring allows use of regression coefficients as a measure of effect sizes for measures with different units of measurement. Results were interpreted in terms of the strength of effect sizes, with a focus on effect sizes that were statistically significant at the conventional level of significance ( $P < .01$ ). Most of the stronger effects were significant with a higher standard of significance ( $P < .001$ ). Multiple regression coefficients are signified with the symbol  $b$ . Data were analyzed with the base package of R (The R Project for Statistical Computing).

# Results

## Respondents

A total of 2,271 completed surveys were received. The majority of respondents in this study (79% [1,797/2,369]) were female and 81% (1,840/2,263) were under the age of 45. Seventy-three percent (1,665/2,269) were White (non-Hispanic), 14% (325/2,269) Hispanic, and 4% (98/2,269) Black. The majority (62% [1,404/2,265]) had a college degree. Eighty-six percent (1,944/2,270) worked in companion animal practices (**Table 1**). For comparison purposes, relevant scores of veterinarians and US employed adults on surveys using common instruments will be referenced in this section.

**Table 1**—Self-reported demographics of 2,271 respondents to an online survey conducted between September 11 and October 9, 2023, as part of the Merck Animal Health Veterinary Team Study to gather information about levels of burnout, well-being, and mental health among nonveterinarians employed by veterinary practices.

Variable	No. (%) of respondents
Gender	n = 2,269
Female	1,797 (79)
Male	408 (18)
Other/NA	64 (3)
Age (y)	n = 2,263
18–24	206 (9)
25–34	997 (44)
35–44	637 (28)
45–54	279 (12)
55–64	127 (6)
≥ 65	17 (1)
Race/ethnicity	n = 2,269
Black/African American	98 (4)
Hispanic	325 (14)
Other	226 (9)
White	2,013 (73)
Education	n = 2,265
Graduate degree	129 (6)
College, university degree	1,275 (56)
Some college	666 (29)
High school	176 (8)
Less than high school	19 (1)
Position	n = 2,268
Veterinary technician	1,075 (47)
Veterinary assistant	536 (24)
Practice manager/administrator	378 (17)
CSR/receptionist	219 (10)
Other	60 (2)
Practice type	n = 2,116
General	853 (40)
Specialty	543 (26)
Emergency	364 (17)
Urgent care	73 (3)
Wellness only	42 (2)
Vaccine only	32 (2)
Other	209 (10)
Species focus	n = 2,267
Companion animal	1,944 (86)
Mixed	117 (5)
Equine	15 (1)
Food animal	45 (2)
Other	146 (6)

CSR = Client service representative.

## Job satisfaction

Fifty-five percent (209/378) of practice managers/hospital administrators were very or extremely satisfied with their job, and 44% to 48% of those in other roles were very or extremely satisfied. This compared to 51% (2,646/5,188) of employed adults in the general population who indicated that they were very or extremely satisfied with their jobs<sup>14</sup> and 56% (2,590/4,633) of veterinarians who were very or extremely satisfied with their jobs<sup>15</sup> (**Figure 1**).

When presented with a list of 13 different dimensions of work, the 3 rated highest by veterinary team members were the following: “I am invested in my work and take pride in doing a good job” (92% [2,088/2,265] agreed), “my work makes a positive contribution in other people’s lives” (89% [2,000/2,247] agreed), and “I have a warm, friendly, and supportive relationship with coworkers” (87% [1,957/2,262] agreed). Strongest agreement was with the statement, “I am invested in my work and take pride in doing a good job” (50% [1,130/2,265] strongly agreed). Lowest agreement was with the statement, “I think I am fairly and adequately paid for my work” (46% [1,038/2,258] agreed). Other dimensions included the following: “My supervisor treats me with respect and values my work,” “I often learn something new at work,” “I am often intensely focused on work and time goes by quickly,” “a coworker or supervisor is creating a negative work environment,” “I decide how I structure my work,” “I am satisfied with my position and promotion opportunities,” “I have flexible work hours,” “I feel invigorated after working with clients,” and “I have a good balance between my work and personal life.”

## Burnout

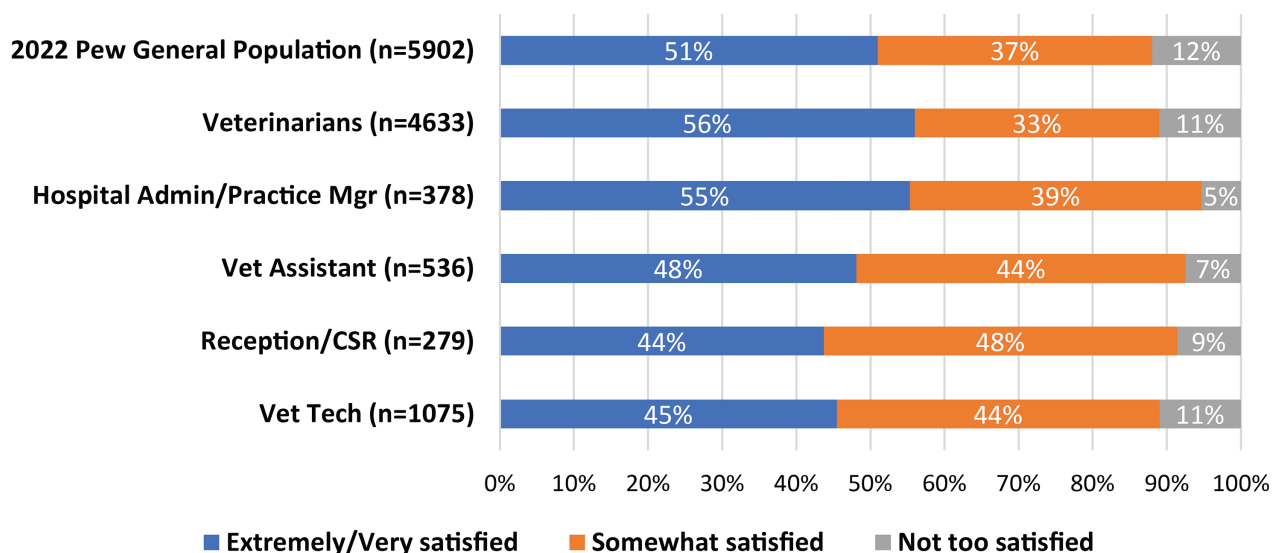
The majority (74% [1,680/2,271]) of practice team members surveyed experienced low to medium burnout; 27% (598/2,271) experienced high to very high burnout. There were variations by roles. A higher percentage (31% [336/1,075]) of veterinary technicians experienced high/very high burnout compared to 22% (47/219) of CSRs and 21% (76/378) of hospital managers (**Figure 2**).

When the components of burnout measured in the BAT were analyzed, 71% (1,596/2,271) of team members scored high or very high in exhaustion. Scores for cognitive impairment (24% [546/2,271] high/very high), emotional impairment (22% [493/2,271] high/very high), and mental distance (34% [765/2,271] high/very high) were much lower.

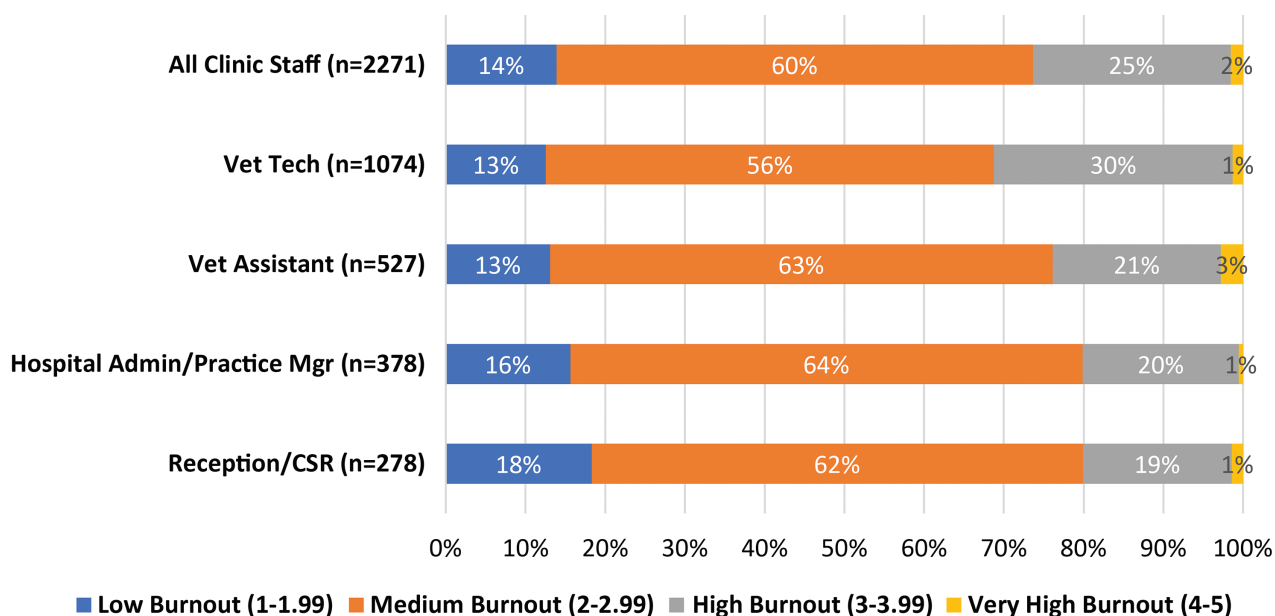
Regression analysis provided insights into factors associated with low or high levels of burnout. The factors predictive of lower levels of burnout included the following:

- Experiencing good work-life balance ( $b = -0.10$ )
- Being satisfied with one’s position and promotion opportunities ( $b = -0.07$ )
- Working in a positive clinic culture (more on this later;  $b = -0.07$ )
- Having an effective mechanism for coping with stress ( $b = -0.05$ )

Factors most predictive of a high level of burnout included a personality high in neuroticism ( $b = 0.20$ ),



**Figure 1**—In a survey of 2,271 veterinary practice team members conducted from September 11 to October 9, 2023, the percentages of receptionists/customer service representatives (CSRs), practice managers, veterinary assistants, veterinary technicians, veterinarians, and employed adults in the general population that were very/extremely satisfied with their jobs, somewhat satisfied, or not too satisfied. Mgr = Manager. Pew = Pew Research Center.



**Figure 2**—In the survey referenced in Figure 1, the percentages of veterinary technicians, veterinary assistants, practice administrators, and CSRs that scored low (1 to 1.99), medium (2 to 2.99), high (3 to 3.99), or very high (4 to 5) in burnout, as well as the aggregate mean score for all 2,271 respondents.

working > 45 h/wk and/or nights and weekends ( $b = 0.12$ ), working in a negative clinic culture ( $b = 0.07$ ), and having student debt ( $b = 0.02$ ).

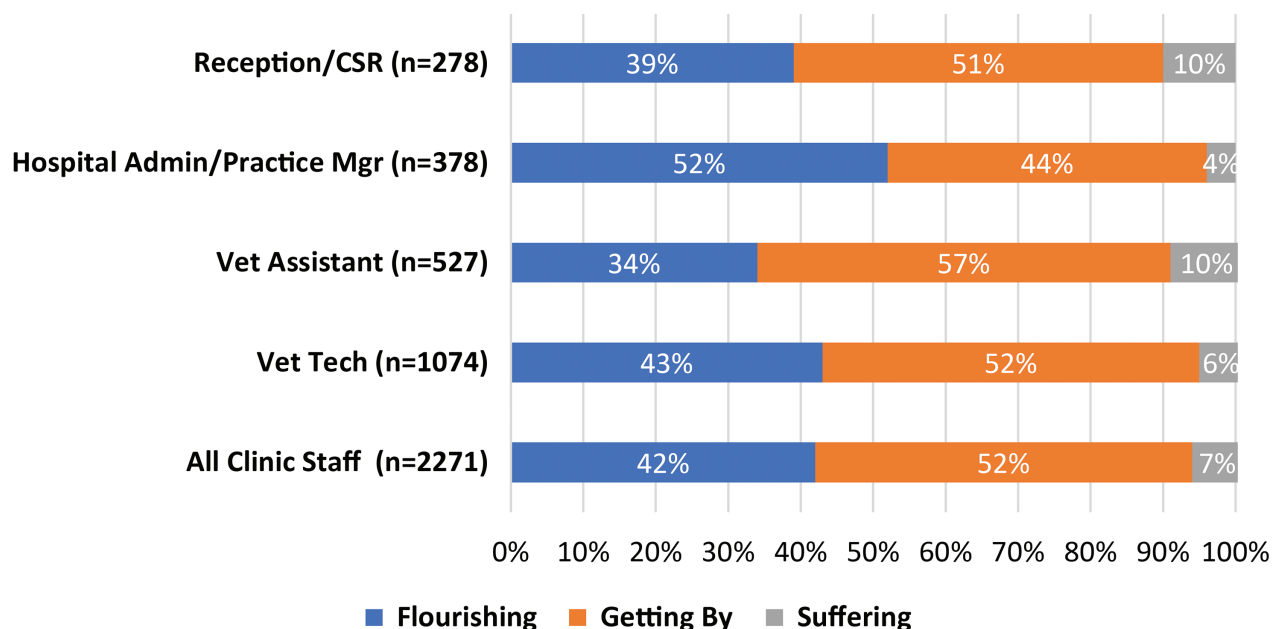
## Well-being

Among team members, 42% (945/2,267) were flourishing, 52% (1,168/2,267) were getting by, and 7% (154/2,267) were suffering. There were variations by position, with practice managers/administrators having the highest percentage of respondents who were flourishing (52% [197/378]) and veterinary assistants the lowest (34% [180/536]; **Figure 3**).

Factors most predictive of a high level of well-being were working in a positive clinic culture ( $b = 0.11$ ), engaging in healthy activities outside of work ( $b = 0.10$ ), being satisfied with one's position ( $b = 0.09$ ), and having an effective mechanism for coping with stress ( $b = 0.09$ ). Working > 45 h/wk or working nights and weekends ( $b = -0.16$ ) was a key predictor of low well-being, as was a personality high in neuroticism ( $b = -0.09$ ).

## Mental health

In the present study, 20% (463/2,262) of respondents were suffering from serious psychological

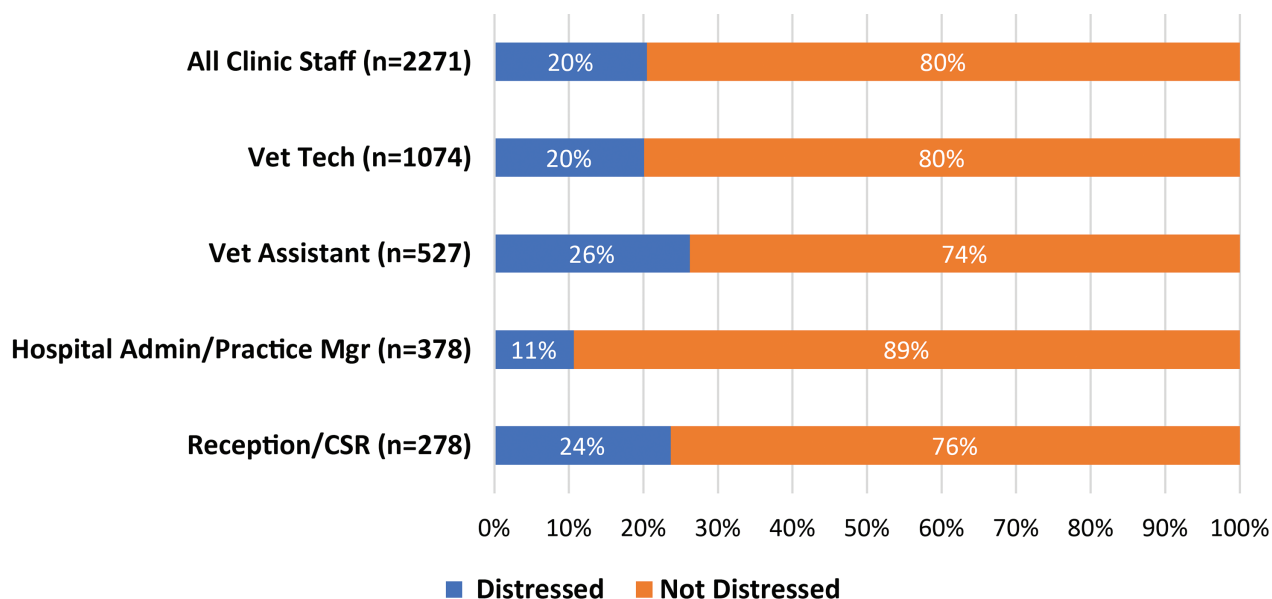


**Figure 3**—In the survey referenced in Figure 1, the percentages of veterinary technicians, veterinary assistants, practice administrators, and CSRs whose well-being scores suggested they were suffering (scores of 0 to 3), getting by (scores of 4 to 6), or flourishing (scores of 7 to 10), as well as the mean score for all 2,271 respondents.

distress. In a comprehensive national survey<sup>16</sup> conducted by the US government, 6.3% (1,197/18,592) of employed, college-educated US adults aged 25 years or older suffered from serious psychological distress. Among team members, a smaller percentage of practice managers (11% [40/378]) exhibited serious psychological distress (**Figure 4**).

The predominant predictor for serious psychological distress was a personality high in neuroticism ( $b = 0.31$ ), although working long hours ( $b = 0.05$ ),

working in a negative environment ( $b = 0.05$ ), and having student debt ( $b = 0.02$ ) were associated with serious psychological distress as well. The key predictors for good mental health (lack of serious psychological distress) were having an effective mechanism for coping with stress ( $b = -0.12$ ), good work-life balance ( $b = -0.10$ ), engaging in recreational activities outside of work ( $b = -0.07$ ), and being satisfied with one's position ( $b = -0.04$ ). All were statistically significant at the  $P < .05$  level.



**Figure 4**—In the survey referenced in Figure 1, the percentages of veterinary technicians, veterinary assistants, practice administrators, CSRs, and all 2,271 respondents with serious psychological distress based on a score of 13 or more on the 6-item Kessler Psychological Distress Scale.



## Coping skills

For a person encountering stress, having an effective coping mechanism may be important to reducing burnout and serious psychological distress. When asked whether they had an effective mechanism for dealing with stress, 30% (686/2,271) of respondents agreed or strongly agreed. An additional 36% (807/2,271) said they slightly agreed. Further, the most common method used was distraction with TV, computer games, or the like, which is not viewed by licensed mental health professionals on the research team as a productive method for coping with stress.

## Clinic culture

Four characteristics defined a positive clinic culture: (1) a strong sense of belonging to a team, (2) candid and open communication among team members, (3) a high degree of trust in the organization, and (4) sufficient time for high-quality patient care. Fewer than 25% (470/1,890) of veterinary technicians, veterinary assistants, and CSRs said that these terms described their practice to “a great extent”; 66% to 71% of non-managers, depending on the role, said these terms only described their practices “a little” or “somewhat.” Practice managers scored their practices much higher.

## Work-life balance

The leading predictor of low burnout was experiencing a good work-life balance. It also contributed to higher levels of well-being and less serious psychological distress. The most frequent recreational activities engaged in by team members were spending time with family (78% [1,771/2,271]), socializing with friends (66% [1,499/2,271]), engaging in a hobby (62% [1,407/2,271]) or outdoor activity (62% [1,407/2,271]), and reading for pleasure (60% [1,363/2,271]; **Figure 5**). All were positively associated with low burnout.

## Financial stress

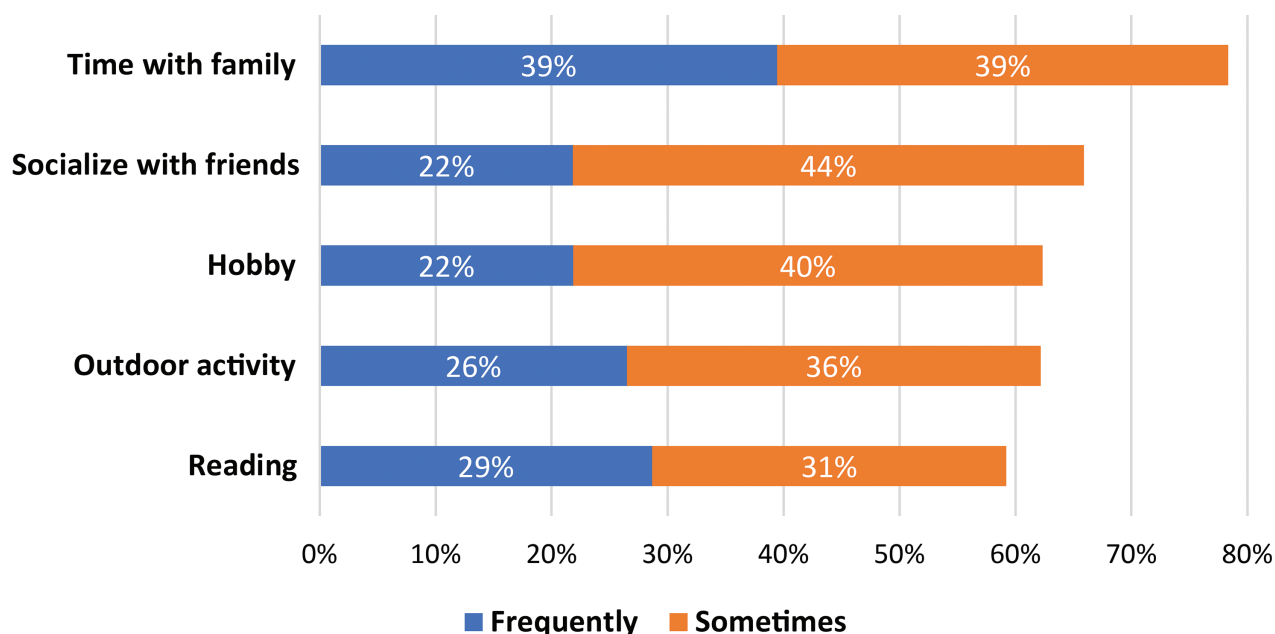
The study revealed that there was significant financial stress among practice team members. When respondents were asked to rate the importance of 14 different issues facing the veterinary profession, the number one issue rated was “poor compensation of veterinary practice employees.” Sixty-eight percent (1,505/2,216) of respondents rated it as critically important; an additional 20% (444/2,216) rated it as moderately important.

While nearly 75% (1,618/2,215) of respondents were satisfied with their job to some degree, only 42% (935/2,227) were satisfied with their income or financial situation. Fourteen percent (310/2,227) of veterinary team members were “very” or “completely” satisfied with their income.

Approximately 1 in 4 veterinary team members worked a second job outside of veterinary medicine. Fifty-eight percent (1,317/2,267) were carrying credit card debt (ie, they did not pay off their balances monthly). Forty-eight percent (1,087/2,265) had student debt. Though the majority (56% [1,220/2,264]) had a college degree, mean pay was \$21 to \$26/h for CSRs, veterinary assistants, and veterinary technicians. Practice managers earned on average \$30/h. Higher income was a positive predictor of high well-being ( $b = 0.05$ ) and mental health ( $b = -0.05$ ); debt was a negative predictor ( $b = 0.02$ ) of serious psychological distress.

## Discussion

This study demonstrated that the majority of veterinary practice team members enjoyed their work and took pride in doing a good job. They found meaning in their work, indicating that they felt their work made a positive contribution to other people’s lives.



**Figure 5**—In the survey referenced in Figure 1, the percentages of 2,271 respondents who said that they engaged in selected nonwork activities frequently or sometimes.

However, a majority were not happy with their income or financial situation. One in 4 worked a second job outside of veterinary medicine. Nearly 60% were not paying off their credit cards in a timely fashion. Almost half carried student debt.

About 1 in 4 respondents in this study suffered high or very high burnout, while in a large-scale study of the general employed population only 16% suffered high or very high burnout. The main difference was in the exhaustion component, in which team members scored much higher than the general population. The group also scored lower in well-being as compared to the general population according to a recent Gallup study,<sup>17</sup> with only 42% in the “flourishing” category and the majority in the lower “getting by” category. Except for hospital administrators/practice managers (which were lower), 20% of team members were suffering from serious psychological distress, twice the percentage of veterinarians<sup>15</sup> with serious psychological distress and 3 times the percentage of employed adults in the general population.<sup>12</sup>

On average, team members scored higher than average in neuroticism and extroversion than the adult employed population.<sup>12</sup> Individuals with higher levels of neuroticism appeared to be more vulnerable to stress, and neuroticism proved to be a predictor of higher burnout, lower well-being, and serious psychological distress. For some in the veterinary industry, particularly those with a client service role, an extroverted personality may prove beneficial.

This study found a number of factors that were associated with higher well-being, lower burnout, and less serious psychological distress. At the practice level, a positive practice culture that fosters teamwork, trust, open communication, and sufficient time for high-quality care was important. In addition, practices can support employee well-being and mental health by providing Employee Assistance Programs and insurance plans that provide coverage for mental health treatment. Practices should also consider fostering psychological safety among team members by openly discussing work challenges, highlighting positives, and seeking feedback from team members on ways to improve the practice culture. Practices could consider periodically inviting local mental health professionals to team meetings to help make practice staff aware of mental health resources available to them. Only 37% (891/2,265) of respondents said that mental health was openly discussed in team meetings. Open discussion may help remove the stigma associated with mental health issues.

Practices could also consider additional opportunities for career advancement for team members including providing learning opportunities to grow skills of team members and utilizing team members to the best of their capabilities and training. Better utilization of veterinary team members may result in more revenue for practices: 1 study<sup>18</sup> found that gross revenue of a veterinarian increased by around \$90,000 for every additional veterinary technician per veterinarian in the clinic. Increased revenue could also allow for additional promotion opportunities for veterinary team members.

This study also identified strategies that may work on the individual level to promote mental health and well-being. Having a healthy method for coping with stress was an important predictor for good mental health and well-being, so individuals should consider developing reliable methods for coping with stress. Managing one's work-life balance is critical and was a top factor associated with high levels of well-being and lower burnout. Research shows that spending time with family and friends appears to be particularly vital to a well-balanced life.<sup>19</sup>

In addition, team members could consider a financial advisor. Given the amount of financial stress evident among team members, a financial advisor can be valuable for support around budgeting, financial planning, and debt repayment. Occasionally inviting local financial planners to team meetings could be beneficial.

It is important to note that this study had limitations. Given the methodology, there was no way to know the representativeness of the sample. Potential response bias may have favored a population of individuals with poor mental health or well-being or higher burnout. The study was observational in nature in that it only identified factors associated with well-being at a single point in time; therefore, inferring causality, and as such the effectiveness of some of the various factors evaluated in improving well-being for those who are currently suffering from poor mental health, would not be indicated.

In conclusion, this study provided a comprehensive assessment of the levels of burnout, well-being, and mental health among veterinary team members in the US. Veterinary team members appeared to have worse mental health and well-being as compared to the general population, but this study identified several strategies at both the individual and organizational levels that could be implemented to improve the overall mental health and well-being of individuals in the profession.

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## Disclosures

The authors have nothing to disclose. No AI-assisted technologies were used in the generation of this manuscript.

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## CONCERNS ABOUT COLORADO'S PROPOSED VPA

As proposed in Colorado, a midlevel practitioner (MLP), also known as a Veterinary Professional Associate or VPA, would be allowed to diagnose, prognose, recommend treatment plans, and even perform surgery. Yet the proposed training for these individuals encompasses a mere 65 credit hours, consisting of three semesters of **fully online** lectures with no laboratory, a fourth semester of truncated basic clinical skills training, and a short internship/practicum. That is approximately half the credit hours required by DVM programs.

Currently there is no nationally accepted accreditation for MLP programs, no national examination, and no regulatory structure to ensure a MLP would deliver safe and effective care. This endangers patients and clients across practice types and poses unacceptable risks for animals and public health.



## Learn more about this risky proposal

