

Promoting Student Wellbeing in Veterinary Technology

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Context: Growing Concern

College students are stressed. They have to navigate increasing academic expectations and growing independence, often while facing financial burdens and family obligations. Many are living away from home for the first time and have a limited social network of friends. Additional sources of stress may include weak study skills, poor intellectual preparation, and the weight of being a first generation college student. It's not surprising that mental health disorders, such as anxiety, depression and suicide ideation, are becoming more prevalent among our students (Kadison, 2004). In particular, those struggling financially are at greater risk of experiencing mental health problems (Eisenberg, Gollust, Golberstein, & Hefner, 2007).

Veterinary technology students face the added burden of entering a profession with a high rate of mental health issues. Veterinarians report psychological distress, depression, and thoughts of suicide at rates higher than other adults in the US (Larkin, 2018; Nett et al., 2015a; Nett et al., 2015b). Nett et al. (2015a) surveyed 10,254 veterinarians and found that serious mental illness and feelings of helplessness or worthlessness were 2-3 times higher than the national average, episodes of depression were 1.5 times the national average, and thoughts of suicide were three times the national average. In Volk, Schimmack, Strand, Lord, and Siren (2018), 79% of responding veterinarians reported experiencing depression, compassion fatigue, burnout, anxiety, or panic attacks within the last year. Reported suicide attempts are lower than the general adult population (Nett et al., 2015a; Volk et al., 2018), but it is commonly believed that the attempt rate appears lower because the success rate is actually higher given veterinarians' access to and knowledge of drugs used for euthanasia (Nett et al., 2015b). Very few surveys have focused on the mental health of veterinary technicians, but those surveys that include all members of the veterinary team find no difference among the mental health issues

facing veterinarians and veterinary technicians (Wallace, 2014a; Wallace, 2014b; Wallace, 2014c).

Over the past five years, the faculty and staff of the University of Cincinnati Blue Ash College Veterinary Technology Department have grown increasingly concerned about the mental health and wellness of our sophomore, clinical year students. The number of students with anxiety sufficient to negatively affect academic performance, national licensing exam results, and general wellbeing appeared to be increasing. With growing concern for the emotional and psychological struggles that our students will face when they enter the veterinary medical profession, I began introducing wellness and self-care practice into the curriculum during the 2017/2018 academic year. My goal was to foster self-awareness and reduce stress through simple mindfulness-based stress reduction (MBSR) techniques. Previous studies (Dechro et al., 2002; Felver, Morton, & Clawson, 2018) have demonstrated the ability of structured MBSR courses to decrease stress and anxiety in college students. I hypothesized that an introduction to and awareness of MBSR techniques, even without their required practice, could help reduce stress among students. This study describes the introduction of wellness practice into the Veterinary Technology curriculum, the results of initial surveys on stress management, and implications for further development of the department's approach to student wellbeing.

Methods: Approach to the Problem

Mental Health Awareness and MBSR Introduction

Multiple approaches were used to raise awareness of mental health issues in veterinary medicine, promote self-realization of perceived stress, and develop small practices to help relieve stress and promote wellbeing. Mindfulness-based stress reduction involves using techniques, like meditation, body scans, and yoga, to bring attention purposefully, but non-judgmentally, to oneself in the present moment (Felver et al., 2018). The techniques used in this study were informed by these MBSR practices.

Articles. The sophomore veterinary technology students began clinical coursework in June. Over the summer, they read a series of articles on wellbeing in veterinary medicine published throughout 2017 in *Veterinary Team Brief*. Topics included developing a gratitude practice in a profession where success often goes unrewarded, recognizing that perfectionism can

actually be an obstacle to growth, and acknowledging that asking for help is a sign of strength, not weakness. The articles not only explored timely topics in mental health, but also resonated within the specific context of veterinary culture. Students were asked to post and respond to a discussion board comment on a particular article they had found pertinent or profound.

STOP Protocol. Veterinary technology students are required to perform myriad technical skills involving live animals under the watchful eyes of an instructor. The stress they experience is palpable and often paralyzing. To help students recognize and alleviate this stress, instructors began employing the practice of STOP, which stands for Stop, Take a deep breath in, Observe the moment, then Proceed. This is a very brief mindfulness exercise in which focusing on the breath brings the mind back to the body and allows the fight-or-flight response to dissipate. Instructors had to initially remind students to STOP, but with time the goal was for students to recognize when stress became a barrier to success and STOP themselves. The technique was used in *any* context in which student stress was perceived to create an obstacle to learning.

Wellness plans. Students met individually with me, the sophomore academic advisor, in the fall semester to review their plans for success in the program. In preparation for our meeting, students completed a self-care assessment and wellness wheel (provided to me by Dr. Marie Holowaychuk). The assessment asked students to rate how frequently they attended to eight dimensions of wellbeing, including physical, spiritual, emotional, intellectual, social, financial, occupational, and environmental. The score for each dimension was then used to complete a wellness wheel (Figure 1).



Figure 1: A wellness wheel with eight dimensions of wellness (Hettler, 1976).

The higher the score, the more filled that dimension's wedge will be (Hettler, 1976). Wellness wheels are a simple visual tool used in wellness assessments. In theory, a balanced wheel will be round and roll easily, but in reality most wheels are out of balance. I never asked to see the self-care assessments, but I did look at the wheels with students as we discussed their plans for success, because it provided a nice visual representation of perceived balance, or lack thereof. I also asked students to come to the meeting with three very small, almost inconsequential, changes they wanted to make in their approach to the sophomore year to help with stress reduction. I encouraged them to set reasonable, attainable goals for the semester in order to be successful. My intention was to follow up with each student individually to encourage them to reach and reset their goals as needed.

Invited speakers. During the fall and spring semesters, I invited four speakers from across the university to introduce wellness concepts during lunch-and-learns. Topics discussed included mindfulness and meditation, aligning personal goals with professional responsibilities to avoid burnout, suicide ideation and prevention, and nutrition on a budget. Students were asked to reflect on the speakers in their private journals.

Data Collection

Private journals. Students were asked to write an entry in their private online journals every 2-3 weeks during fall and spring semesters. Journals were not graded, so not all students participated, and response to each journal request was variable. In each entry, students were asked to rate their stress during the previous week on a scale from 1-10, with 1 being virtually no stress and 10 being extreme stress. In addition, they were asked to identify the cause of their stress, to describe the specific steps they took to decrease the stress they were experiencing, and to detail specific steps they planned to take in the next week to reduce stress. The goal was to raise self-awareness about the *source* of stress in order to help students develop better approaches to stress reduction.

The original intent was to perform a quantitative analysis on the stress scores across the academic year to look for trends in degree of stress across time. However, it quickly became apparent that the day-to-day stress ratings could be wildly different if, for example, a student

wrote the journal the day before or the day after an exam. Instead, I performed a qualitative thematic analysis on the journal entries looking for common stressors and methods of stress relief described by each student. Individual students listed multiple sources of stress and means of stress relief, but each category mentioned was only recorded once per student for the entire year.

Online surveys. During fall and spring semesters, students were asked to respond to online wellness surveys. The survey was the same each time, and students were asked to reflect on questions based on their current experiences. Surveys were conducted in October 2017, January 2018, March 2018, and April 2018. Questions assessed self-care practices, frequency of self-care, self-care goals, and perceived barriers to achieving those goals. Students were asked to rate both their academic and work stress, if employed, on the same scale as in their journals (1-10). Additionally, students were asked to rate how much control they felt they had over their stress in each situation on a scale of 1 to 10, with 1 being no control and 10 being complete control.

Online surveys were evaluated using a qualitative thematic analysis similar to the one applied to private journals. The surveys were anonymous, making it impossible to track responses across time for any given student participant. I could not, therefore, record the thematic categories by number of students. The categories were, instead, recorded as the total number of times mentioned among all surveys submitted, and they are expressed as a percentage in the results.

The levels of stress and control of stress reported in the online surveys were analyzed quantitatively using an unpaired t-test. The values from the beginning of the fall were compared to the end of spring. Those dates were chosen because they represented a time when wellness concepts were new to students (October) and when students had had the opportunity to establish their own wellness practices (April).

Graduate survey. The Veterinary Technology Department sends out a graduate survey each year in the fall. The survey from fall 2018 included a question about continued wellness and self-care practice. A qualitative thematic analysis was applied to the graduate responses.

Results: Stress and wellness

Private Journals

Throughout the year, 26 of 35 veterinary technology students wrote private journal entries. Students reported that the amount of required school work and lack of time to complete it created the greatest stress. Additional sources of stress were employment, unclear academic expectations, performance of hands on techniques, unexpected life events like illness or car trouble, sleep deprivation, and financial concerns (Figure 2).

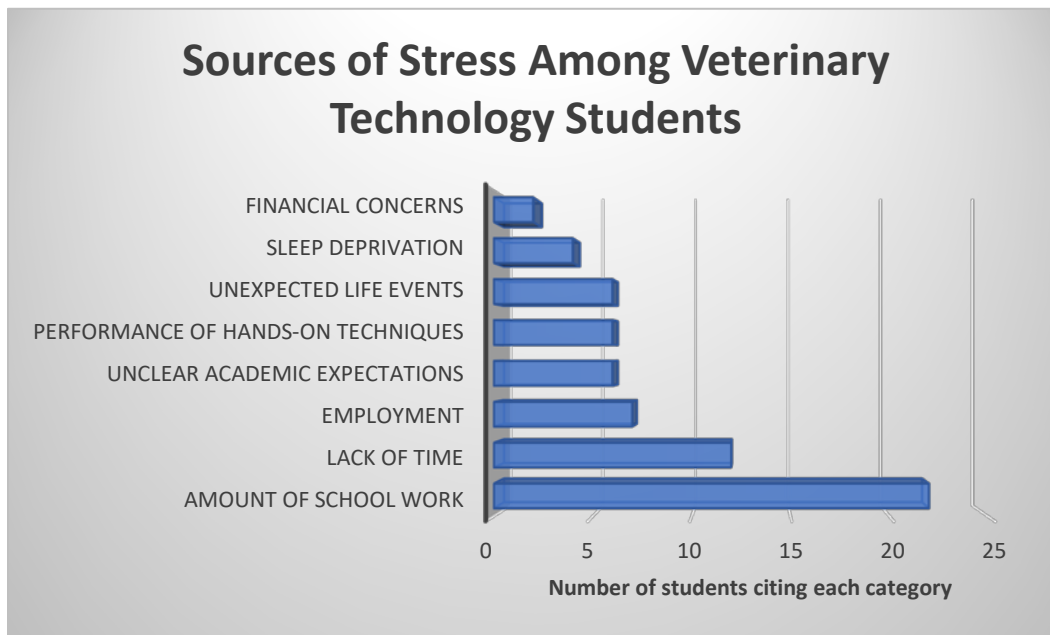


Figure 2: Results of private journal entries showing thematic categories of common sources of stress among veterinary technology students.

Overwhelmingly, students felt that being prepared academically was the best way to relieve stress. Close behind was spending time with family, friends and pets, taking short breaks from studying, and mindfulness activities like deep breathing and aromatherapy. Additional means of stress relief were getting enough sleep and taking naps, exercise, eating well, music and reading, and professional counseling (Figure 3).

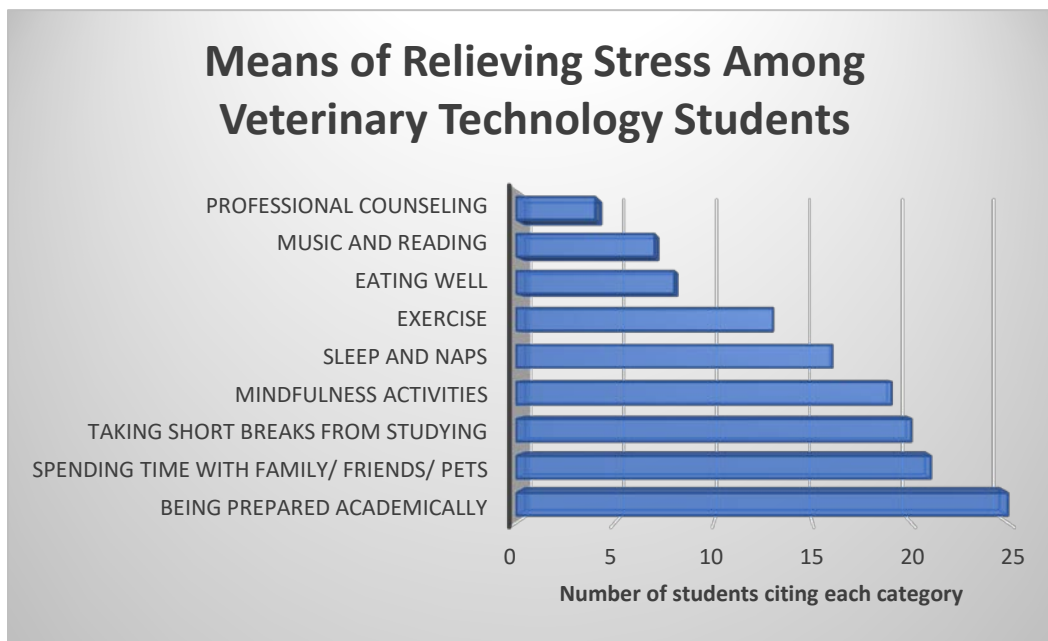


Figure 3: Results of private journal entries showing thematic categories of common means of stress relief among veterinary technology students.

Online Surveys

Students submitted a total of 130 online surveys throughout the year. There were 35 submitted in October 2017, 32 in January 2019, 39 in March 2019, and 24 in April 2019. Some students declined to participate in all of the surveys, while it appears that several students participated more than once within a single survey period. The latter definitely occurred in March when the number of surveys outnumbered the total number of participating students. I cannot determine if this occurred during other survey periods, as well, because the surveys were anonymous.

The questions in the online surveys were phrased around self-care practice instead of stress relief. However, the themes that emerged from the surveys were similar to those found in the private journals. The predominant self-care practices were taking short study breaks, spending time with family, friends and pets, and exercise. Next were getting enough sleep and taking naps, mindfulness, breathing and meditation, creative endeavors like music and drawing, and healthy eating. Also mentioned were aromatherapy, stress reducing apps, and counseling (Figure 4). Students listed exercise and better sleep routines as the most common self-care goals,

with additional goals including spending more time with family, friends and pets, healthier eating, better organization, taking breaks from studying, hobbies and creative endeavors, earning and saving money, and mindfulness practices (Figure 5). The most common barriers to reaching their goals were very similar to the common sources of stress listed in the journals. Lack of sufficient time and academic workload were the top two barriers, followed by employment, family obligations, distracted minds, financial concerns, anxiety, and lack of sleep (Figure 6).

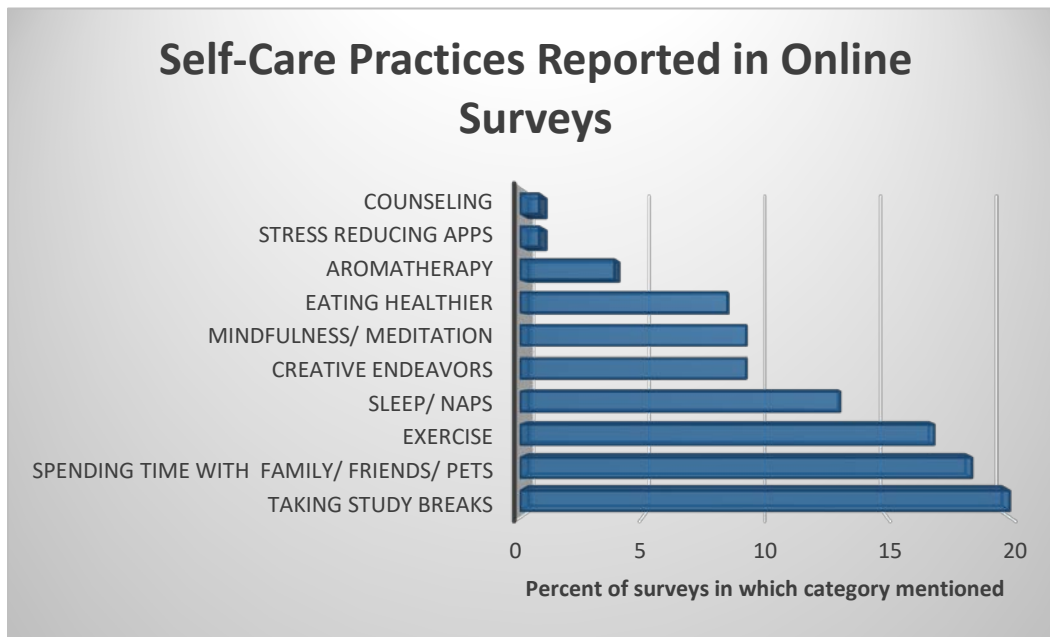


Figure 4: Results of online surveys showing thematic categories of self-care practices reported by veterinary technology students.



Figure 5: Results of online surveys showing thematic categories of self-care goals reported by veterinary technology students.

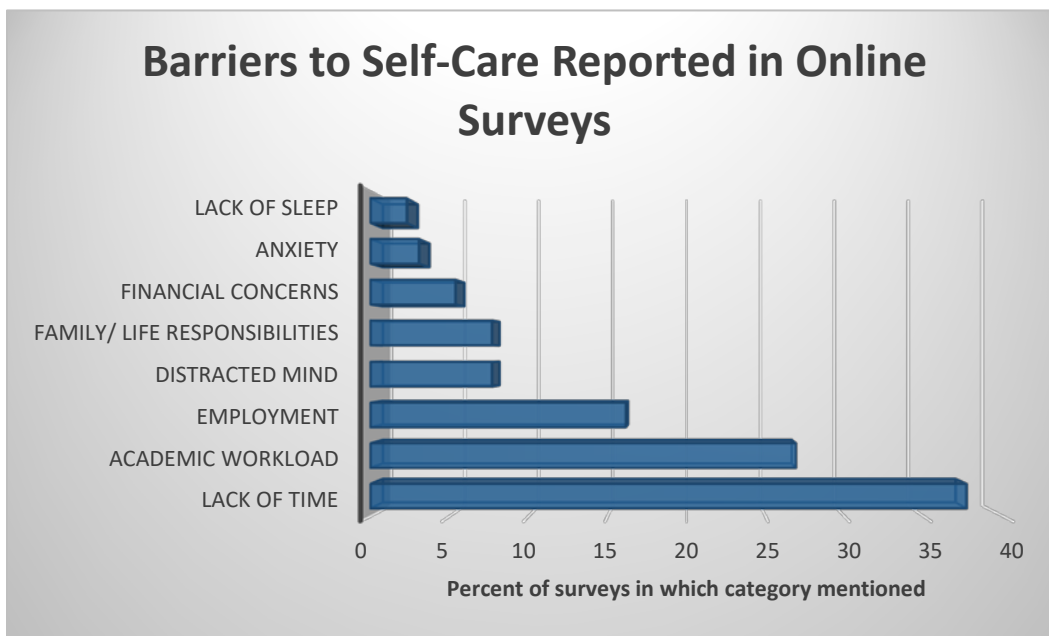


Figure 6: Results of online surveys showing thematic categories of self-care goals reported by veterinary technology students.

There was a significant difference in the reported level of academic stress from the beginning to the end of the year. Academic stress was significantly lower in April ($M=3.67$, $SD=1.97$) compared to October ($M=7.77$, $SD=1.46$); $t(57)=9.2012$, $p<0.0001$. The inverse was true for control over academic stress, with control being rated significantly higher in April ($M=7.78$, $SD=2.15$) compared to October ($M=5.06$, $SD=1.95$); $t(56)=4.9907$, $p<0.0001$. The work stress and control over work stress reported for those who held jobs outside of school did not change over the same time period. There was no significant difference between work stress in October ($M=4.23$, $SD=2.93$) and April ($M=3.95$, $SD=2.11$); $t(53)=0.3726$, $p=0.711$. Similarly, there was no significant difference between control over work stress in October ($M=5.51$, $SD=3.25$) and April ($M=6.09$, $SD=2.56$); $t(56)=0.7122$, $p=0.4793$.

One question in the online survey asked how frequently students were incorporating wellness and self-care practices into their routine. In October, the majority (68.6%) of students chose “occasionally”, and 8.6% reported that they never practiced any self-care. In April, all students reported some degree of wellness and self-care practice, with a higher proportion choosing the weekly and daily options (Figure 7). The qualitative responses were converted to a numeric value (0 for “never” to 3 for “daily”), and the means for October and April were compared using an unpaired t-test. The mean for practicing wellness and self-care was significantly higher in April ($M=1.75$, $SD=0.74$) compared to October ($M=1.20$, $SD=0.68$); $t(57)=2.9557$, $p<0.005$.

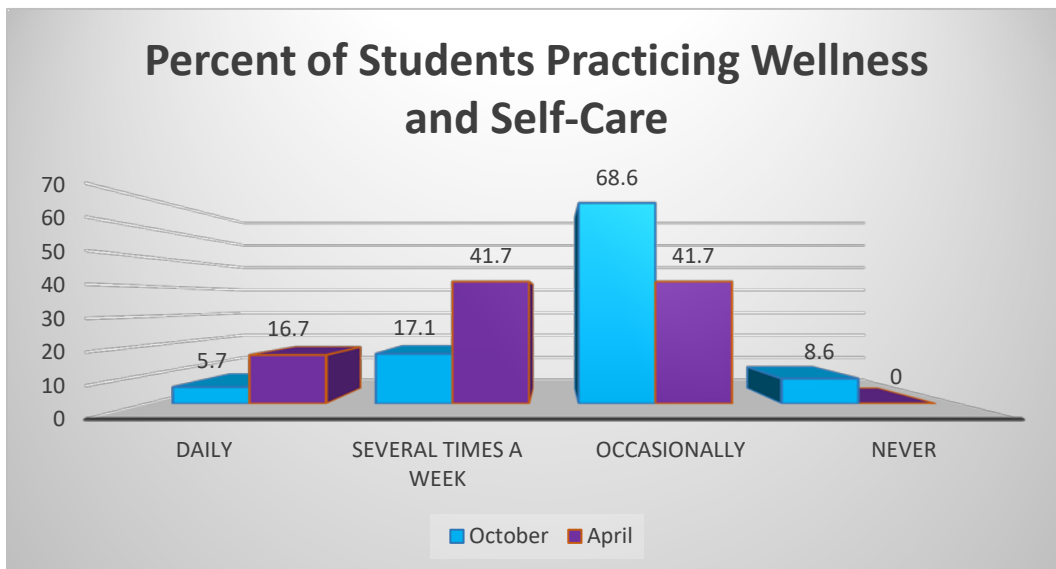


Figure 7: Percent of students practicing wellness and self-care as reported on the online surveys from October 2017 and April 2018.

Graduate Survey

We received feedback from 19 of 35 graduates, and 16 of the 19 respondents reported that they continued to practice wellness techniques discussed in the Veterinary Technology Program. Almost all practiced mindfulness and STOP technique. Additional wellness practices included an attention to good nutrition, professional identity development, meditation, and professional counseling (Figure 8).

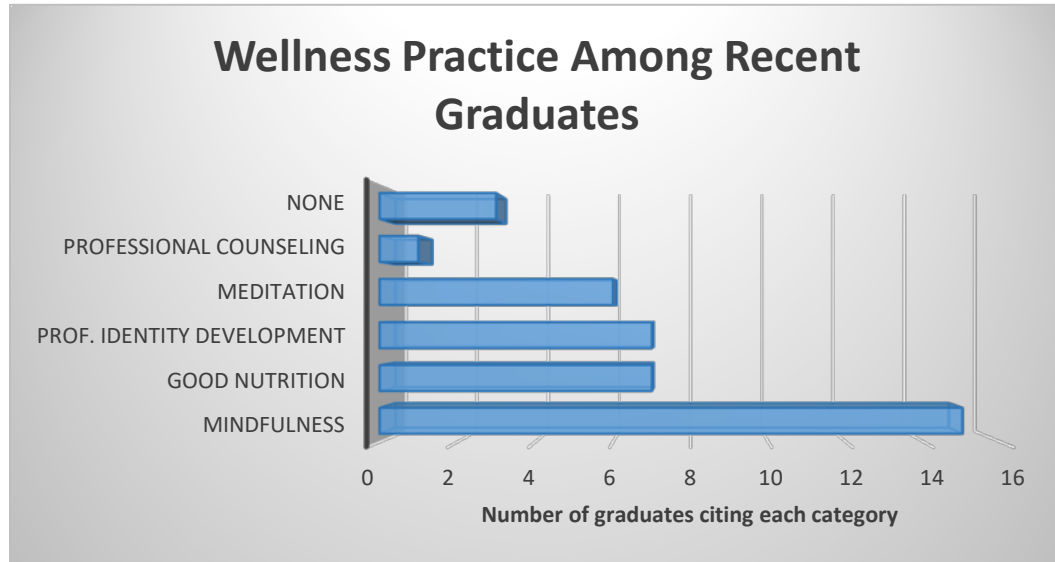


Figure 8: Results of the 2018 graduate survey showing thematic categories of continued wellness practice reported by recent graduates.

Discussion: Moving Forward

Lower Stress and Enhanced Practice

The stress perceived by veterinary technology students decreased from fall 2017 to spring 2018, and the number of students incorporating wellness and self-care practices into their routine increase over the same time period. Studies evaluating mindfulness-based or relaxation-based stress reduction techniques, including meditation and focusing on the breath, have demonstrated their ability to reduce psychological distress, depression, anxiety, and perceived stress, especially among college students (Dechro et al., 2002; Felver et al., 2018; Khoury, Sharma, Rush, & Fournier, 2015; Regehr, Glancy, & Pitts, 2013). Subjects in such studies were recruited for participation in formal MBSR courses that introduced and practiced stress reduction techniques in a prepared manner over 6-8 weeks (Dechro et al., 2002; Felver et al., 2018). Students in the

current study did not self-select for training in mindfulness techniques. Instead, they were introduced to the techniques through speakers, articles, and STOP interventions when stressed in the learning environment, and no formal practice of the MBSR techniques was required. The results suggest that even informal practice of MBSR techniques can raise self-awareness and impact perceived stress in students. One caveat is that students in the current study were exposed to wellness concepts and self-reflection over a ten month period, which is substantially longer than the duration of most MBSR courses. The longer duration of exposure may have compensated for the informal nature of wellness practice in the study design.

I would like to conclude that enhanced wellness practice, like mindfulness, led to reduced stress among veterinary technology students. However, I cannot with the information collected, as there are several alternative explanations. Overall stress may have been lower in April as the sophomore year concluded. The excitement of a new career may have provided a counterbalance to academic stress, reducing the level of stress perceived among graduating students. Perhaps students were able to devote more time to wellness in the spring as time management skills matured. Lastly, it is possible that students did, essentially, self-select for the present study by deciding whether or not to complete the journal entries and wellness surveys. If students who had an affinity for self-care practice were dominant among the respondents, then the results could be skewed toward a higher level of mindfulness practice and lower stress.

Sustained Practice

New graduates appear to have sustained their wellness practice as they transitioned into the veterinary medical profession. Over half of the 2018 graduates responded to the graduate survey, and 80% of those continued to practice mindfulness with a focus on centered breathing. Mindfulness-based stress reduction techniques have been shown to enhance resiliency and tolerance to adverse events (Nila, Holt, Ditzen, & Aguilar-Raab, 2016). Adversity takes many forms in veterinary medicine. Interpersonal conflicts with coworkers or management, clients irate over treatment costs or outcomes, failure to perform a technical skill with perfection, or the loss of a beloved patient are all potential obstacles to job satisfaction and happiness. Left unaddressed, the stress of clinical practice can lead to burnout and compassion fatigue, but the practice of reflection, gratitude, and self-care can confer protection (LaJeunesse, 2012; Nett et al., 2015b; Wallace, 2014b; Wallace, 2014c). My hope is that the self-care tools our students

learn in their sophomore year will provide the foundation for growing resiliency, mindfulness, and balanced compassion as they build lifelong careers in veterinary medicine.

Future Directions

There are several aspects of wellness that the Veterinary Technology Department could address differently. The first is to teach students how to shift their perspective on control of time management. By the end of the clinical year, students did feel more in control of their stress. However, academic workload and a lack of time in which to adequately address school work were consistent sources of stress for a majority of students. While the Veterinary Technology Department cannot, and should not, decrease the academic expectations of the program, we can help students appreciate that they are actually in control of their time management. Students treat time, or perceived lack thereof, as an external obstacle: "I don't have enough time." If we can help them shift their perspective to an internal locus of control, "How can I best use the time I have," then they develop greater ability to mediate stress. An interesting study demonstrated that college students who practiced time management techniques thought they performed better, but it was those students who felt in *control* of time management who reported lower stress, less overload, and greater work and life satisfaction (Macan, Shahani, Dipboye, & Phillips, 1990). Mindfulness is a useful way to raise self-awareness and help students develop an internal response, rather than just a reaction, to stress. Translating that calmer response into perceived control will take time and constant encouragement from veterinary technology educators.

Another aspect of wellbeing that the Veterinary Technology Department can address differently is perfectionism. I did not assess perfectionism directly in this study, but signs suggest it is pervasive among our students. They are extremely hard on themselves when they fail, or think they fail, especially when it comes to hands-on skills; they procrastinate then worry about insufficient time; and they fear instructors will be disappointed in them if their performance is not perfect (Jones, 2018). We remind students that skills take practice, but they persist in viewing attempts as dichotomous, succeed or fail, rather than a continuum through which to learn and grow. Studies have shown that perfectionism, sometimes referred to as maladaptive perfectionism when it is pursued to an unhealthy and unachievable end, was correlated with psychological distress in college students (Christman, 2012; Henning, Ey, & Shaw, 1998). This was particularly true in the health professions, like nursing, where students enter intense programs of study after already having competed for the opportunity. Veterinary

technology students must apply for selective admission into the clinical year of the program, and their sophomore year is quite challenging. It is reasonable to assume that maladaptive perfectionism would plague them, just as it does nursing students.

Student success in the Veterinary Technology Program depends on support and development of the whole student. Graduates have acknowledged that simply knowing the department cared about them beyond academic performance was comforting. However, there are additional practices in which any department can engage to promote student wellbeing. The results of this study suggest that exposing students to deliberate stress reduction techniques can be effective. In addition, helping students develop reasonable expectations for control of their own time management would also facilitate stress reduction and preparedness. In conjunction with expectations for success, we must embrace failure as a tremendous opportunity for growth. In this way, facilitating a growth mindset may help counteract the tendency toward perfectionism. The use of group problem solving, especially in a team-oriented health profession like veterinary medicine, can remind students that they are not alone in their challenges and can give them perspective on their accomplishments.

Instructors in career-oriented professions often place significant responsibility on students, including the responsibility to seek advice, which mimics the expectations of the job. Unfortunately, coupled with perfectionism and a fear of failure, this can lead students away from much needed academic and psychological support (Christman, 2012). Providing scheduled opportunities to meet with faculty, and prompting faculty to ask probing questions, may encourage reluctant students to reach out for help. Finally, and perhaps most importantly, educators can model not only professional practice, but also wellness practice. Demonstrating that even experts make mistakes from which they can learn creates a situation in which vulnerability is an asset. It provides a moment to breathe, reflect, and proceed with the confidence that our own wellbeing may inspire others.

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