

## **Health and Wellness for Our Students – The Problems of Depression and Suicide**

### **Depression**

Depression (also called major depression, major depressive disorder and clinical depression) is a medical illness that causes a persistent feeling of sadness and loss of interest and may also cause physical symptoms (Mayo Clinic). The CDC reports that 9.1% of adults meet the criteria for depression (including 4.1% who meet the criteria for major depression). Depression is often missed because it tends to appear on slowly and can be mistaken or explained away by other problems or life events, presenting examples include back pain, fatigue, difficulty in sleeping, loss of ability to concentrate, persistent sadness, lack of interest in formerly pleasurable activities, weight gain. There is often a delay of 6-8 years between the onset of depression and initiation of treatment.

### **Depression in students**

A 2004 study by the American College Health Association reports that nearly 50% of students reported feelings of depression that interfered with their ability to function and 15% of college students meet the diagnostic criteria for clinical depression and there is some evidence that the rates are increasing (1, 23). Students commonly report being 'overwhelmed or exhausted' as indicators of depression. The findings are similar to those seen in graduate students (5). There are gender differences apparent in students with a greater percentage of women reporting an emotional or stress related problem in the last year or knowing a colleague with an emotional or stress related problem (5). Positive mental health in graduate students is correlated with confidence in their financial status, a positive functional relationship with their advisor, regular contact with friends, and being married (5).

At least 40% of colleges and universities do not have psychiatric services (4). Those that have them are often underfunded and overwhelmed. Students with a greater index of depression symptoms and increasing time in school are more likely to use on-campus counseling centers. In general, women are more likely to have knowledge of campus counseling resources and are more likely to seek care (5). Field of study also impacts the likelihood of seeking care, with students in the humanities being more likely to report mental health needs than those in professional schools (5). Nearly all of graduate student who used on-campus services and all who used off-campus resources have university sponsored health insurance (5).

### **Depression in the human health professions**

Physicians, house officers, and medical students have an increased prevalence of depression (17%) and other mental health issues as compared to the general population (2). Over half of residents and young physicians with mental health issues do not seek professional assistance.

### **Depression and related mental health in veterinary medicine**

Veterinary students are selected with expectations of high performance (can be interpreted as perfectionism). Veterinarians, and especially women, may set unrealistically high standards of excellence and put excessive pressure on themselves to perform in their careers. This can foster an unbalanced lifestyle – leads to physical and emotional exhaustion, depression, addiction.

A 2008 survey of 1833 veterinary students (45.4 overall response rate) in the UK found that: 55% have suffered from stress, 33% have difficult or severe financial situations, 29% have suffered from anxiety, 22% have suffered from depression, and 7.2% have suffered from an eating disorder (6). This is compared to 12% anxiety / depression in the general population during the same period. Similar findings are seen in the U.S. For example, 32% of 1<sup>st</sup> year students at Kansas State experiencing moderate to severe depressive symptoms (9). Studies overall point to gender differences with women physicians and veterinarians found to express higher levels of stress, depression, anxiety, and somatic (physical) symptoms than men (11 – multiple references within). A more recent study, found that rates of depression markedly exceeded (49-69%) those previously reported in the 1<sup>st</sup> three semesters of school (19). Several other reports with similar conclusions are summarized in Sutton's report (7).

Veterinary students feel that stress had resulted in a lower grade on an assignment (24%), a lower grade in a class (2%), or had forced them to take an incomplete or drop a course (0.9%). These rates were not significantly different across years in the curriculum (11).

Studies have also found that students often use non-adaptive coping strategies to deal with stress such as food, alcohol, or drugs (37%); procrastination (28%); compulsive activities (compulsively playing computer games or exercising) (23%); sleeping or going to bed to avoid problems (21%) (13). Approximately 1/3 of veterinary students are regular users of OTC stimulants and depressants (22). Another study found that 32% of veterinary students reported drinking on more than 6 days over the past 30, 6% reported using marijuana, and 43% reported negative consequences to their alcohol use (11). Interestingly, 41% of veterinary students report a family history of alcohol or drug addiction.

A recent study of practitioners in Alabama found that while 66% indicated that they had been clinically depressed, only 34% had sought some sort of treatment (20).

### **Suicide**

In addition, the veterinary profession has overall failed to acknowledge the problem of suicide. Only 10-11% of students and practitioners believe that there is reason for concern regarding suicide rates within the profession and yet 66% of respondents indicate that they have been clinically depressed and 27% of women and 20% of men admit that they have seriously considered suicide (20).

Suicide emerges in the general population as a significant problem during high school years (8/100,000), increases again in the 20-24Y age (12/100,000), and then increases marginally over the next 20 years of life (14). A study of Big Ten students between 1980 and 1990 found that suicide risks were greater in students 25Y and older (14). In addition, between 1993 and 2008, suicidal behavior in the U.S. tripled (4).

Men are 4x as likely to die by suicide than women. Men represent ~ 80% of US suicides. However, women attempt suicide 3x as often as men (16).

<b>White men</b> <ul style="list-style-type: none"> <li>• Marine engineers 1.89x</li> <li>• Physicians 1.87x</li> <li>• Dentists 1.67x</li> <li>• Veterinarians 1.54x</li> <li>• Finance workers 1.51x</li> <li>• Chiropractors 1.5x</li> </ul>	<b>White women</b> <ul style="list-style-type: none"> <li>• Physicians 2.78x</li> <li>• Sales related occupation 2.42x</li> <li>• Police / detective 2.03x</li> </ul>
<b>Black men</b> <ul style="list-style-type: none"> <li>• Police / detective 2.55x</li> <li>• Furnace operators 2.01x</li> <li>• Electricians 1.78x</li> </ul>	<b>Black women</b> <ul style="list-style-type: none"> <li>• Protective service occupation 2.79x</li> <li>• Sales supervisors 2.0x</li> <li>• Packaging machine operators 1.96x</li> </ul>

For white men, 4/6 professions associated with the highest suicide rates are in the health professions - see table above where veterinarians are ranked 4th below physicians and dentists (15). In the UK and in Australia, the rate for suicides amongst veterinarians is about twice that seen in physicians (16,18). In the US, female physicians have higher suicide rate than do male physicians (11, 15).

While suicidal thoughts are not always associated with behavior, there is significant suicide ideation within the medical profession. Assessment of medical students and as 1<sup>st</sup> year physicians found that 14% of individuals at each time point reported thoughts of suicide with a lifetime prevalence estimated at 43% of individuals. Of these, 8% had planned suicide and 1.4% had attempted suicide (12).

### **Predictive traits and stressors**

Multiple traits and stressors have been found to be associated with increasing rates of depression, suicidal thoughts, and suicidal behavior in college and university students, medical and veterinary students, and within the medical and veterinary profession. These are compiled from a variety of the references and include:

#### **Individual and personality traits:**

- Previous mental health problems
- Personality traits of 'vulnerability' / neuroticism and 'reality weakness'
- Alexithymia (not being emotionally sensitive or expressive)
- Having externally oriented thinking / extraversion
- Depersonalization
- Being an older student
- International students (also less likely to use counseling resources)

#### **Interpersonal**

- Not being married / cohabitant
- LGBT

### **Academic / clinical**

- Perceived medical school stress
- Lack of perceived diagnostic skills or competence
- A sense of isolation and anonymity among students
- Lack of sense of personal accomplishment
- Burnout
- Poor quality or insufficient supervision
- Lack of administrative support
- Lack of 'debriefing' measures after critical incidents
- Unsympathetic administration / supervisors
- Feelings of being an imposter (abilities do not match those of peers)
- Rigidity of the academic program (lives are externally controlled)
- Lack of clinical experience in early years

### **Coping and time management strategies**

- Avoidance
- Blamed self
- Procrastination
- Wishful thinking
- Poor study and time management skills

### **Negative life events**

- Worries about finance and accommodation
- Returning to school
- Lack of time to take care of self and poor self care habits (including sleep, exercise)

## **Addressing the problem: potential areas for consideration**

### **Understanding the impact and increasing awareness**

What is the impact on patient care of depression at the different levels of our profession?

Depression is generally easier to treat in earlier stages – how can we increase awareness? Prioritization of mental health education and awareness. An example would be the launch of website – [vetlife.org.uk](http://vetlife.org.uk) in response to high suicide rate among veterinarians. This site provides information, hotline support, and openly communicates around issues of mental health and wellness.

Because of the lag between the onset of depression and initiation of treatment, it may be that we are missing the true impact by focusing on students. Similar to findings that have assessed

physicians in the first year of their independent career, we may find that depression that originates in veterinary school persists into the individuals career.

### **Bridging the gap between student expectations and their experiences**

“Research in psychology has indicated that the expectations an individual brings to a situation significantly influence how he or she experiences and copes with that situation” (LA Pervin, reality and non-reality in student expectations of college. J Psych 61:41-48, 1966). Stress is an inevitable part of the veterinary student experience because of the intensity of the curriculum and minimal control of the workload. However, there are disconnects noted between student and faculty expectations that may exacerbate the stress of veterinary school. First year students report stress associated with the intensity of the program, the required time commitment, the amount of information to learn, the amount of material to memorize and the paucity of clinically relevant experiences (7,19). Anxiety and depression were both associated with the perception of unclear faculty expectations by students across all 4 years (23). A study comparing the expectations of 1<sup>st</sup> year veterinary students and faculty found that (8):

- Students expected their veterinary education to provide basic competence in veterinary medicine and also train them in specific skills and knowledge that would enable them to function competently. Training in technical skills was rated very high. Students wanted examinations that integrated facts and skills.
- Faculty saw a general education that emphasized theoretical basic knowledge where the primary focus was learning basic facts. They felt that training in technical skills would occur primarily after graduation. Faculty wanted examinations to ensure students had mastered the information.

Students studied in a surgical education environment noted that anxiety was counterproductive to learning while excitement appeared to increase their engagement (21). Being able to prepare well was associated with a positive experience while lack of self-confidence accentuated a negative response (21). Are there mechanisms we can improve upon to provide ongoing feedback that reinforces student perceptions of skills and knowledge gained? Can we provide increased practice periods, ability to gain and test skills in different formats?

### **Availability of counseling and psychologic services for veterinary students**

In 2001, only 48% of veterinary schools had exclusive counseling services for veterinary students, and most of this was available through part time counselors with an average of 9 hours / week (10). In 2012, the rates for in-house counseling support were similar with available time varying from 5-40 hours per week (24). Types of services included individual counseling (100%), group counseling (82%), family counseling (69%), stress management (94%), biofeedback (33%), and test anxiety reduction (94%). Financial support for these came from the college (50%), university (19%), or were shared between the college and the university (31%). Despite the funding concerns there was a perceived need by colleges: 63% answered that they sometimes needed these services, 27% reported that they needed these services fairly often, and 7% reported very often.

### **Peer support and training in effective coping strategies**

It has been demonstrated residents were able to pick out 'troubled interns' (identified as individuals with poor support and few outside interests) before nurses were able to pick out 'troublesome interns' (effects on performance such as poor attitude, unprofessionalism) (3).

Administrative and financial support for social and peer groups can be used to increase linkages between students, interns, and residents. Coupled with increased awareness and training (especially in the area of adaptive and effective coping strategies), this may be a mechanism for identifying trainees at increased risk and to provide peer support.

### **References:**

1. AVMA News, Depression among students. JAVMA 228:1478, 2006
2. Tyssen R, et al, Factors in medical school that predict postgraduate mental health problems in need of treatment. A nationwide and longitudinal study. Medical Education 35:110-120, 2008
3. Daly and Wilcock, Examining stress and responses to stress in medical students and new medical graduates. MJA 177: suppl14-15, 2002
4. Current news (from panel at American Psychiatric Association's annual meeting), Experts say suicide, not homicide is larger threat to nation's college campuses. Diverse Online, May 6, 2008.
5. Hyun J, et al, Graduate student mental health: needs assessment and utilization of counseling services. J College Student Development 47:247-266, 2006.
6. Medical News Today, Veterinary students face financial and mental health pressures. May 18, 2009. For survey go to [http://www.bva.co.uk/public/documents/2008\\_AV\\_Survey\\_Results.pdf](http://www.bva.co.uk/public/documents/2008_AV_Survey_Results.pdf)
7. Sutton R, Veterinary students and their reported academic and personal experiences during the first year of veterinary school. JVME 34:645-651, 2007.
8. Hoppe and Trowald-Wigh, Student versus faculty attitudes toward the veterinary medical profession and education. J Vet Med Educ 27:17-23, 2000.
9. Hafen et al., Predictors of depression and anxiety in first year veterinary students: a preliminary report. J Vet Med Educ 22:432-440, 2006.
10. Kogan and McConnell, Veterinary students and psychologic services. JAVMA 218:873-875, 2001.
11. Kogan et al, Veterinary students and non-academic stressors. JVME 32:193-2000, 2005.
12. Tyssen et al, Suicidal ideation among medical students and young physicians: a nationwide and prospective study of prevalence and predictors. J Affective Disorders 61:69-79, 2001.
13. Williams et al, Coping with stress: a survey of Murdoch University veterinary students. JVME 32:201-212, 2005.
14. Suicide Prevention Resource Center, Promoting mental health and preventing suicide in college and university settings. Oct 21, 2004.

15. The 19 jobs where you're most likely to kill yourself: rate above average for white men. <http://www.businessinsider.com/most-suicidal-occupations-2011-10#>
16. [http://www.afsp.org/index.cfm?page\\_id=04ea1254-bd31-1fa3-c549d77e6ca6aa37](http://www.afsp.org/index.cfm?page_id=04ea1254-bd31-1fa3-c549d77e6ca6aa37) Gender rates in the US
17. <http://www.ava.com.au/sites/default/files/documents/Other/Jones-Fairnie2008.pdf> Australia – rate in veterinarians – 45.2/100,000 (national average of 11.8/100,000)
18. Bartram and Baldwin, Veterinary Surgeons and suicide: a structured review of possible influences on increased risk. *Vet Rec* 166:388-397, 2010.
19. Reisbig et al, A study of depression and anxiety, general health, and academic performance in three cohorts of veterinary medical students across the first three semesters of veterinary school. *JVME* 39:341-358, 2012.
20. Skipper & Williams, Failure to acknowledge high suicide risk among veterinarians. *JVME* 39:79-82, 2012.
21. Langebæk et al, Emotions in veterinary surgical students: a qualitative study. *JVME* 39:312-321, 2012.
22. Hofmeister et al, Over-the-counter stimulant, depressant, and nootropic use by veterinary students. *JVME* 37:403-416, 2010.
23. Drake et al, Predictors of anxiety and depression in veterinary medicine students: a four-year cohort examination. *JVME* 39:322-330, 2012.
24. Kogan et al, Psychological services for US and international veterinary students, *JVME* 39:83-92, 2012.