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The life of meaning: a model of the positive contributions to well-being from veterinary work

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1 BEST PRACTICE
2 (STUDENT VALUES, ATTITUDES, AND WELL-BEING)

3

4 **The life of meaning: a model of the positive contributions to**
5 **well-being from veterinary work**

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8 Martin A. Cake*, Melinda A. Bell, Naomi Bickley, David J. Bartram

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10 **ABSTRACT**

11 We present a veterinary model of work-derived well-being, and argue that
12 educators should not only present a (potentially self-fulfilling) ‘stress
13 management’ model of future wellness, but should balance this with a positive
14 psychology-based approach depicting a veterinary career as a richly generative
15 source of satisfaction and fulfillment. A review of known sources of satisfaction
16 for veterinarians finds them to be based mostly in meaningful purpose,
17 relationships, and personal growth. This positions veterinary well-being within the
18 tradition of ‘eudaimonia’, an ancient concept of achieving one’s best possible self,
19 and a term increasingly employed to describe well-being derived from living a life
20 that is engaging, meaningful, and deeply fulfilling. The theory of eudaimonia and
21 workplace well-being is explored, to inform development of the personal
22 resources likely to foster resilience in undergraduate and graduate veterinarians.

23

24 **Key words:** well-being, job satisfaction, eudaimonia, positive psychology

25

26

27 **INTRODUCTION**

28 As veterinary educators, we spend much time and effort teaching undergraduates how
29 to be veterinarians – but do we spend enough time teaching them why to be
30 veterinarians? Traditionally, attempts at explaining the ‘why’ of veterinary medicine will
31 cite societal common good, through service to animal welfare, the human-animal bond,
32 inter-species ‘One Health’, or community leadership.¹ Many of these goals are implicit in
33 accreditation or competence frameworks.^{2,3} But these service to society models only

34 defer the question, with respect to individual motivation: why devote a life and career to
35 the service of animals, their owners or society? What's the intrinsic and personal reward
36 for the veterinarian?

37

38 More worryingly, do we inadvertently teach our students too much about why not to be
39 veterinarians? Increasing concerns about elevated risk of mental distress and suicide in
40 veterinarians,^{4,5} and increased mental health risks in veterinary students,⁶⁻⁹ rightly dictate
41 that these important issues should be proactively addressed in undergraduate programs.
42 Preventative mental health strategies are typically enacted in veterinary curricula
43 through professional 'self-care' programs, emphasizing approaches such as stress
44 management, coping skills, mindfulness meditation, and work-life balance through
45 hobbies and supportive relationships.^{10,11} But notwithstanding that these are all important
46 interventions for individuals suffering from mental distress, there is a hidden risk that
47 teaching such strategies to undergraduates models their future workplace as a one-way
48 drain on well-being to be avoided in bad times, and a negative externality that must be
49 counteracted by personal resources built elsewhere. This also risks unnecessarily
50 demonising their future profession, ignoring the fact that many of the known stressors for
51 veterinarians (e.g. long working hours) are generic to all professions, and are malleable
52 through good working practices. Thus due to the power of human attention bias,
53 excessive emphasis on preventative 'self-care' paradoxically risks fostering a negative
54 work concept (Table 1) and sensitizing to mental distress and burnout.

55

56 ***[Table 1 near here]***

57

58 **The Positive Side of Veterinary Work**

59 An overly negative emphasis also risks obscuring the truth that many veterinarians,
60 while simultaneously reporting workplace stress, remain highly satisfied in their work and
61 regard it of net *benefit* to their well-being. For example, a UK workforce survey found the
62 overwhelming majority of veterinarians agreed with the statements 'veterinary work is
63 stressful' (83%) and 'veterinary work is enjoyable' (93%).¹² Similarly in Heath's
64 longitudinal studies most respondents felt that the positive factors of their veterinary
65 experience outweighed the negative, and at 10 years post-graduation the majority (67%)
66 agreed 'my veterinary career is a major source of satisfaction in my life'.^{13,14} Job
67 satisfaction is important to veterinarians' well-being; in a New Zealand study overall job

68 satisfaction explained 8.2% of variance in mental health, while specific job factors
69 explained 5.6%, and the interaction of these with non-job factors explained a further
70 6.6%.¹⁵ A Belgian study similarly found a high level of job engagement in veterinarians,
71 with 95% reporting average or high level of engagement, while less than 4% did not feel
72 stimulated at work. This high level of engagement apparently mitigated job strain, which
73 was comparable to other professions, despite known stressors including long working
74 hours.¹⁶

75

76 This picture, of negative work aspects (stress) in equilibrium with counterbalancing
77 positive aspects (satisfaction), is mirrored in several other models of work-related well-
78 being that have been applied to veterinarians. 'Compassion fatigue' is a phenomenon of
79 physical and emotional depletion recognized particularly in healthcare workers, which is
80 ameliorated by the reciprocal experience of 'compassion satisfaction' (*i.e.* the sense of
81 personal satisfaction and meaning derived from caring for others).^{10,17} In one study of
82 frontline mental healthcare professionals, low compassion satisfaction was found to
83 explain 28% of the variance in burnout.¹⁸ In a US study of these phenomena across
84 animal care professions, 83% of veterinarians were found to have 'good' or higher levels
85 of compassion satisfaction, partly explaining their low burnout despite high self-reported
86 risk of compassion fatigue (so-called 'bookend scores').¹⁷ Another applicable model is
87 the more expansive Job Demands-Resources model, which recognizes the competing
88 influence of two broad categories of work characteristics (*i.e.* job demands and job
89 resources).¹⁹ Using an extended version of this model to investigate Dutch veterinarians,
90 Mastenbroek and co-workers found a central role for both job resources (opportunity for
91 professional development, skills discretion) and personal resources (self-efficacy,
92 reflective & proactive behavior) in maintaining work engagement and workplace
93 performance, even in the face of exhaustion.^{20,21}

94

95 A focus on positive/generative contributions to life satisfaction and well-being is
96 foundational to the relatively young science of *positive psychology*, which aims to
97 understand how individuals and societies thrive and flourish, and how to promote human
98 happiness and fulfillment.^{22,23} Thus while (by definition) positive psychology is explicitly
99 not concerned with treating problems, it is nevertheless applicable to preventative
100 interventions. For example Fredrickson's Broaden-and-Build Theory shows that positive
101 emotional experiences can have a long-lasting effect on personal growth and well-being,

102 through countering negative emotions; broadening attention, creativity, and open-
103 mindedness; and building psychological and social resources that enhance ability to
104 cope with future challenges.²⁴ This buffering effect links positive psychology to the
105 important and educationally-useful construct of *resilience*, defined as the ability to
106 succeed, live, and develop in a positive way despite stress or adversity.²⁵ It can be
107 argued that mental resilience is the most important attribute for a veterinary graduate, on
108 the basis that failure of this attribute carries the most severe potential consequences.
109 Many tangible benefits flow from a positive approach to well-being, for example doctors
110 experiencing positive emotions are more efficient and creative in their clinical decision-
111 making,²⁶ and optimistic people achieve greater sales in business.²⁷ Bartram & Boniwell
112 (2007) provide a concise summary of positive psychology for veterinarians and their
113 employers.²³

114

115

116 **WHAT SATISFIES VETERINARIANS?**

117 Though not widely studied, available evidence of what motivates and satisfies
118 veterinarians is largely consistent (Table 2). Most frequently cited factors include
119 intellectual challenge and variety; helping clients; helping animals, in both the individual
120 and collective sense; and positive interactions with work colleagues.^{12,17,28,29} Perhaps
121 unsurprisingly, self and animal factors appear slightly (but only slightly) more important
122 than human or relational (client/colleague) factors. Heath similarly distilled free-response
123 data from his many graduate surveys to reveal the importance of “satisfaction gained
124 from achieving a good result in a challenging professional situation, or from being able to
125 communicate with, gain acceptance from and help, clients”.^{13, p.34} However in contrast to
126 the 14% of UK veterinarians citing ‘status’ as important,¹² Heath (2002) found that most
127 veterinarians did not value their status relative to other professions.¹⁴ This perception is
128 probably flawed, given that US market research commissioned for this purpose found
129 that public opinion rates veterinarians very favourably against other occupations
130 (including doctors, dentists, and teachers), particularly among pet owners.³⁰ Similarly
131 though financial reward was cited by a minority in two satisfaction surveys,^{17,28} other
132 evidence broadly contradicts this. Large economic studies of the profession in the US
133 have shown no correlation between job satisfaction and mean income,³¹ and that income
134 is placed far behind other motivating factors.³⁰ While experienced veterinarians generally
135 have comparatively high (upper tertile) incomes, they (like most people) are inaccurate in

136 estimating income distribution,³² prone to social comparison (e.g. with doctors), and are
137 only loosely satisfied by financial gain.³³

138

139 **[Table 2 near here]**

140

141 The factors satisfying veterinarians are generally similar to those motivating veterinary
142 students, *i.e.* in their initial choice of career path. The choice of a veterinary career is
143 made very early in life, an average age of 8.7 years in one French study, in which the
144 words ‘animal’, ‘care’ and ‘passion’ were thematically identified as most strongly
145 associated with the veterinary role.³⁴ UK students rated the top attractions of the career
146 as working with animals, rewarding job, varied job, practical job, and fulfilling job³⁵;
147 similarly Austrian students ranked their major motivating factors as medical interest, love
148 of animals, and desire to help/heal animals.²⁹ In a US survey new graduates and
149 students ranked their reasons for choosing the profession as (in descending order):
150 desire to work with and care for animals, interest in science and medicine, good stable
151 career with steady work, desire to help people, honor and respect accorded to the
152 veterinarian, desire to work outdoors, and income.³⁰ With the obvious exception of the
153 central role of animals (and perhaps higher daily task variety, e.g. surgery), these factors
154 are also broadly similar to those motivating doctors and medical students. Medical
155 students cite the top determinants of career satisfaction as: being a good communicator
156 with patients, balanced life, involving patients in choices, professional or intellectual
157 growth, and being in a career whose primary goal is service to humankind.³⁶ In studies of
158 hospital-based doctors, the greatest contributions to job satisfaction were good
159 relationships with patients, having professional status/esteem, and intellectual
160 stimulation,³⁷ while the most important protective factor against burnout was favourable
161 social relations with colleagues and patients.³⁸

162

163 **The Eudaimonic Tradition**

164 Analysis of the above sources of satisfaction shows them to be aligned principally with
165 meaningful purpose (helping animals and others) and self-improvement, rather than with
166 extrinsic or material reward. While satisfaction or ‘happiness’ is usually defined in the
167 hedonic sense (*i.e.* as positive emotion), it is increasingly compared with the ancient
168 concept of *eudaimonia*, which can be traced to Aristotle’s view that the highest human
169 good is to realize one’s true human potential or inner ‘daimon’.³⁹ The eudaimonic

170 tradition focuses on living a life that is fulfilling and deeply satisfying, and is more
171 concerned with life content and process ('living well') rather than pleasurable
172 outcomes.^{39,40} Thus 'eudaimonia', *i.e.* the well-being experienced as the byproduct of
173 living such a life, is difficult to define and has been variously synonymized as
174 psychological well-being (*c.f.* subjective well-being),⁴¹ self-validation,³³ 'authentic
175 happiness',⁴² personal expressiveness,⁴³ meaningfulness,⁴⁴ quality of life,^{39,41} or
176 flourishing.^{45,46} While there is substantial overlap (and statistical correlation) between
177 hedonia and eudaimonia, it is possible to discern important areas of divergence.
178 Responses correlated positively with meaningfulness but negatively with happiness
179 include, for example, being a giver rather than a taker; thinking about past and future
180 rather than the present; and (notably, in the veterinary context) perceived stress and
181 anxiety.⁴⁴ Eudaimonic well-being is also more stable and enduring than hedonic
182 happiness, and is more clearly evaluated in long-term perspectives.³³

183

184 Various models of eudaimonia have been elaborated, partly hampered by the confusion
185 of correlated inputs, processes, and outcomes of well-being.⁴⁷ Ryff and colleagues
186 (1989) defined six dimensions of Psychological Well-Being (PWB): self-acceptance,
187 personal growth, relatedness, autonomy, relationships, environmental mastery, and
188 purpose in life.^{41,48} This model has been challenged by Springer (2006) who argues that
189 four of the six sub-scales are virtually indistinguishable, and only autonomy and
190 relatedness should stand as separate dimensions of PWB.⁴⁹ This brings it close to the
191 model advanced by Ryan and Deci on the basis of their Self-Determination Theory,⁵⁰
192 which views eudaimonic living as the pursuit of intrinsically-oriented goals in order to
193 satisfy the basic needs of competence, relatedness and autonomy, which in turn
194 mediate well-being. In this model a happy person is one who has achieved what is worth
195 desiring, thus inferring reflection and evaluation against personal values or (internalized)
196 societal ideals.³³ This also implies mindfulness, *i.e.* awareness of what is truly occurring
197 and its congruence with the desired state. This reflective/mindful endorsement of the
198 worthiness of one's volitional goals and actions constitutes much of what is defined as
199 *autonomy* within Self-Determination Theory.⁵¹

200

201 Waterman and coworkers invoked a number of eudaimonic dimensions as the basis for
202 their well-being measure: self-discovery, development of one's best potentials, sense of
203 meaning and purpose, enjoyment of activities as personal expressive, investment of

204 effort in goal pursuit, and intense involvement in activities.³⁹ These last two dimensions
205 of effort and involvement parallel the *engagement* element of Seligman's original 'three
206 roads' well-being model (positive emotions, engagement, meaning).⁴² In a recent
207 revision Seligman (2011) added two further elements: relationships (because
208 relationships are fundamental to human well-being), and accomplishment (since
209 achievement can be pursued purely for its own sake).⁴⁵ This last dimension, of mastery
210 and striving to be better, brings to mind theories of needs for *competence* (Ryan &
211 Deci)⁵⁰ and *personal growth* (Ryff),⁴¹ and also the ideal of 'self-actualisation', the tip
212 of Maslow's famous hierarchical pyramid of needs.⁵² Self-actualisation is a rather vague
213 concept, usually translated in the Western philosophy as fulfillment through attainment of
214 personally meaningful goals. Waterman similarly viewed 'personal expressiveness' as a
215 feeling derived from self-realization and fulfillment via development of one's skills,
216 advancement of one's purpose in living, or both.⁴³ This is close to Boniwell's simplified
217 view of the "broad umbrella" of eudaimonia, which distils this rather fuzzy concept to two
218 central elements: personal growth, and transcendence – dedication or commitment
219 transcending the personal for the sake of deeper meaning in life.²²

220

221 Notwithstanding much theoretical vagueness around the constructs of both well-being⁴⁷
222 and eudaimonia,²² we contend that in the context of their professional work most
223 veterinarians would naturally recognize 'well-being' as being founded much more in
224 eudaimonia than hedonia. In doing so, they consciously invest much effort (and endure a
225 certain amount of stress), in search of meaning, fulfillment, and social connection, rather
226 than outright pleasure. This brings to mind Seligman's contention that " ... 'happiness'
227 and 'well-being' sometimes refer to feelings, but sometimes refer to activities in which
228 nothing at all is felt".⁴² Thus we contend that in the veterinary context, eudaimonia may
229 be the most useful definition or organising construct of work-related well-being, rather
230 than positive emotion or (hedonic) happiness.

231

232 **Job characteristics**

233 Various models have been developed to assess the influence of job characteristics on
234 employee outcomes, including satisfaction and well-being. It can be argued that the job
235 of a veterinarian rates very favourably using such models, which show a recurrent
236 emphasis on eudaimonically-oriented job elements (*i.e.* autonomy, intrinsic motivation,
237 meaningfulness, social contact) thus implying a eudaimonic perspective. For example, of

238 Warr's³³ nine key workplace characteristics (all of which are associated with happiness
239 in the broader eudaimonic sense), veterinary work can theoretically be evaluated
240 favourably against at least six: opportunity for personal control (decision latitude),
241 opportunity for skill use [*including learning*], externally generated goals [*challenges,*
242 *problems to be solved*], contact with others, variety, and valued social position [*status*
243 *and meaningfulness*]. On only three characteristics would veterinary work possibly be
244 evaluated negatively or neutrally: environmental clarity [*unpredictability*], physical
245 security [*occupational hazards, noise*], and perhaps (self-assessed) financial reward. It
246 also scores highly on the five dimensions of Hackman & Oldham's Job Diagnostic
247 Survey instrument: skill variety, task identity (start-to-finish involvement), task
248 significance, autonomy, and (perhaps less so) feedback; under this construct veterinary
249 work is a 'broad' job with high 'motivating potential'.⁵³

250

251

252 **A MODEL OF THE EUDAIMONIC VETERINARIAN**

253

254 ***[Figure 1 near here]***

255

256 By combining sources of satisfaction with relevant models of work engagement and
257 eudaimonia, it is possible to propose a model of how eudaimonic well-being might be
258 achieved within a veterinary career, based primarily on Seligman's PERMA model of
259 well-being (positive emotion, engagement, relationships, meaning, accomplishment)⁴⁵
260 (Figure 1). The notion of deriving broader well-being from varied challenges and the use
261 of specialized skills, particularly surgery,²⁸ particularly invokes Seligman's⁴² concept of
262 engagement as being derived principally from Csikszentmihalyi's phenomenon of
263 'flow'.⁵⁴ Flow states occur when a task is sufficiently difficult but attainable, skills are
264 equal to the challenge, and all are aligned with intrinsically-oriented motivation. These
265 conditions facilitate a subjective experience of transcendence of self, of time stopping or
266 racing by, or being 'in the zone'. Since flow states are not necessarily pleasurable while
267 experienced but are related to longer-term well-being, these align more closely with
268 eudaimonia than with hedonia.⁴⁷ Waterman found that for important activities, the
269 balance of high challenges and high skills was consistently associated with both flow
270 experiences, and the eudaimonic dimension of personal expressiveness.⁵⁵ The positive
271 clinical outcomes resulting from successfully meeting such challenges provide reward as

272 accomplishment, both in the narrower (achievement) sense, and more broadly as
273 learning and personal growth. Mastenbroek's application of the mixed Job Demands-
274 Resources model to Dutch veterinarians found (in an endorsement of the 'self-
275 actualization' concept) that the strongest predictors of work engagement were
276 opportunities for professional development, and high freedom to use their skills.²⁰
277
278 Feelings of well-being derived from caring for others lie firmly in the eudaimonic tradition,
279 as highlighted by the general tendency for care-giving professions to be more prone to
280 distress and emotional exhaustion (*i.e.* compassion fatigue).^{17,18,56} Nevertheless
281 evidence suggests the strong positive correlation between well-being and empathy is
282 bidirectional,⁵⁷ and that empathic concern for others increases life satisfaction, as has
283 been shown for veterinarian satisfaction with problem visit consultations.⁵⁸ Such feelings
284 are presumably mediated through sense of meaning and purpose in life, which is closely
285 correlated with psychological well-being. Some have suggested meaning in life may
286 largely mediate the association between eudaimonic *conceptions* of well-being, and the
287 subjective *experience* of well-being.⁵⁹ Meaning is also a powerful factor in resilience,
288 including reduced risk of suicidality.^{60,61} Similarly, people who view their work as a *calling*
289 report significantly higher life and job satisfaction than those who describe it as merely a
290 *job* or a *career*.⁶²
291
292 For veterinarians, their care-giving role is split across both animals and humans, possibly
293 explaining why veterinarians have shown better job satisfaction than other emotionally-
294 invested, helping professions using the same survey instrument.⁵⁶ Surveys of
295 veterinarian satisfaction (Table 1) also suggest benefits from simply working with, and
296 around, animals. While the research around pet ownership is somewhat ambiguous,⁶³
297 interactions with animals are generally seen to be beneficial to physiological and mental
298 health.^{64,65} Interest in or love of animals seems deeply engrained in the psyche of many
299 veterinarians, and contributes to the often very early conception of their desired career
300 path,³⁴ which likely remains a persistent source of intrinsic motivation and well-being (via
301 both *meaning* and *accomplishment*) well past initial attainment of this childhood dream.
302 Animal interactions are also beneficial through their role as 'social lubricants' or catalysts
303 for positive human interaction,⁶⁵ and thus may play a central role in the well-being
304 derived from social connectedness via colleague and client relationships, which depends
305 more on the quality rather than the quantity of interactions.³³ The central phenomenon of

306 the human-animal bond, and of animals as an interposed glue mediating social
307 connectedness, is understandably absent from standard well-being models but brings to
308 mind Heath's concept of "satisfaction ... from helping people through helping their
309 animals".^{13,p.52} Veterinary workplace teams are close-knit; Bartram found the [colleague]
310 relationships domain of a standard working conditions survey to be much higher in
311 veterinarians than the general population.⁶⁶

312

313 **Enabling Resources**

314 Positive psychology research and Self-Determination Theory also predict important
315 enabling factors for well-being (Figure 1), equivalent to the resources side of the Job
316 Demands-Resources model. *Autonomy* within work settings is variously associated with
317 self-control, job discretion, participation in decision-making, responsibility, and of course
318 self-determination, and requires an appropriate balance between absence of close
319 supervision yet presence of support. It fulfills the basic psychological need for free will
320 and control of one's own behaviours as an expression of self, which in turn requires a
321 degree of self-awareness and mindful evaluation of congruence with personal ideals.⁵¹ In
322 a study of New Zealand veterinarians, job discretion, variety, and control of work pace
323 were the factors associated most positively with well-being and negatively with anxiety
324 and depression; interestingly in this study involvement of other people in work was not
325 related to job satisfaction or well-being.¹⁵ The central role of autonomy was also evident
326 in the job resources (decision latitude) and personal resources (proactive behavior and
327 self-efficacy) found to be most important in Mastenbroek's Dutch study.²¹ Seligman's
328 work further predicts that approaching tasks from the learnable perspective of *optimism*,
329 and with full engagement of one's 'signature strengths', will maximize well-being
330 potential.^{42,45,47,67} Similarly experimental work has shown that conscious *gratitude* for the
331 'good things in life' induces persistent long-term increases in well-being.⁶⁸

332

333

334 **NURTURING WORK-RELATED WELL-BEING**

335 Since universities cannot directly influence the future work conditions of their students, it
336 is clear that the best opportunities for undergraduate intervention lie in fostering the
337 development of these enabling personal resources. This point was clearly highlighted by
338 Mastenbroek et al. (2014), who defined personal resources as "...aspects of the self that
339 are generally linked to resilience...", thus encompassing "...a feeling of being

340 appreciated and in control, as well as skills and attitudes that facilitate these
341 feelings".^{20,p.145} The period of undergraduate-to-graduate transition represents a
342 particularly crucial time in the development of the professional self, as well as a time of
343 elevated mental health risk.^{4,69,70} In medicine this has been termed 'the professional
344 formation', a vulnerable period of concurrent personal, moral, and professional
345 maturation.⁷¹ Thus it is particularly important to foster development of the personal
346 resources promoting resilience during this formative period.

347

348 However, since well-being is necessarily reached via a personal journey of self-
349 discovery, this destination itself cannot be *taught*. It is for example largely unknown
350 whether eudaimonic conceptions of well-being can be increased, or are instead stable
351 trait-like elements of personality.⁵⁹ At least some elements of a eudaimonic approach
352 can be learned; for example optimism can be increased through learned explanatory
353 styles (*i.e.* cognitive behavioural techniques) that dispute pessimistic thinking.⁶⁷ But to a
354 large extent the aim in 'teaching' for future well-being and resilience (as indeed in all
355 education) must be to provide the optimal conditions for nurturing personal development
356 of enabling resources, which are likely to include the following:

- 357 • **Self-awareness** – encouraging discovery of personal identity and the developing
358 professional self, such as through personality preference,⁷² signature
359 strengths,^{42,45} vulnerabilities (*e.g.* perfectionism),⁷³ personal values and principles,
360 and leadership styles. As the basis of emotional intelligence, self-awareness
361 closely aligns with the development of fundamental communication and
362 professional skills. In the medical context this has been described as facilitating
363 an "understanding that *who they are as a person* is central to the outcome of their
364 work as physicians".^{71, p.313}
- 365 • **Personal congruence** – encouraging critical exploration, clarification, and
366 preservation of core values, sense of meaning, purpose, and mission or "calling";
367 and foreshadowing the embedding of personal meaning in future veterinary work
368 – "meaningful practice" – such as through writing and committing to personal
369 mission statements.⁷¹ The educational climate should allow that these are not
370 'trained away', but instead act as fundamental personal anchors during
371 navigation of training.
- 372 • **Reflective practice** – encouraging habitual reflective practice, personalization
373 and sense-making of experiences and role-modelling, and mindful awareness

374 and self-evaluation of progress against the desired state. Reflection is similarly
375 crucial to the parallel development of veterinary professionalism.⁷⁴
376 • **Autonomy and self-efficacy** – encouraging internal motivation, self-
377 determination, and self-efficacy; taking proactive responsibility for current and
378 future states; setting and maintaining personal goals; and promoting personal
379 growth by volitional challenge.^{20,75}
380 • **Optimism and gratitude** – encouraging positive re-framing of attitudes and
381 outlook, appreciative enquiry and positive affirmation, ‘learned optimism’,⁶⁷ and
382 gratitude⁶⁸; conversely, promoting meta-cognitive approaches disputing negative
383 thoughts and emotions. This might be underpinned by teaching of relevant
384 positive psychology and well-being theory, essentially as summarized within this
385 paper.

386

387 It is important to emphasize to students the dynamic nature of resilience; rather than
388 being an innate attribute, resilience should be presented as the outcome of a dynamic
389 equilibrium between contextual risk and protective factors,⁷⁶ or demands and
390 resources.¹⁹ This frames resilient veterinary graduates as active agents who mindfully
391 employ strategies on both sides of this equilibrium to overcome adversity. It is also
392 important that schools provide an enabling culture with effective social support and
393 mentoring, and a sense of belonging and shared mission.^{10,71} This may require
394 investment in faculty development, to ensure exposure to positive role-models, and
395 counteract the detrimental effect of a negative ‘hidden curriculum’.⁷¹ We should remind
396 both students and faculty that an emphasis on well-being is central to the education
397 mission of producing excellent clinicians; for example well-being is deeply linked to
398 academic performance^{50,75} and empathy,⁵⁷ a key clinical skill in veterinary
399 communication⁵⁸ and a central characteristic of professionalism.^{57,71}

400

401

402 **CONCLUSION**

403 Though we acknowledge the above account is (intentionally) rather rose-tinted, our
404 intention here is to complement, rather than detract from, the important recent focus on
405 prevention of mental distress, burnout, and suicide in the veterinary profession. We
406 certainly do not intend to imply that veterinarians should persist in unhappy work
407 situations in vain search for fulfillment. However, focus on mental health prevention

408 should not counterproductively obscure the truth that most veterinarians find their work
409 experience more positive than negative, and more satisfying than stressful. Occupational
410 stress should not be presented as an intrinsic condition of the profession, but rather as a
411 potentially manageable risk.

412

413 We contend that particularly at undergraduate level, the healthiest approach is to provide
414 a balanced account in correctly portraying a veterinary career as a potential source of
415 both stress and distress, but also of eudaimonic well-being and fulfillment. This reframes
416 their future work not as a stressful job demanding attention to preventive self-care, but
417 as a challenging and stimulating job full of ‘ups and downs’, commending attention to the
418 buffering positive psychology of engagement, personal growth, meaning, connectedness,
419 and self-actualization. Doing so allows us to provide an answer to the question of *why* to
420 pursue a veterinary career: because it will likely increase lifetime well-being, or – if we
421 invoke a broader eudaimonic use of the term – happiness.

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Table 1: Dichotomies illustrating a negative versus positive concept of veterinary work. Note theoretical individuals holding these polar work concepts could be performing *exactly the same job*, highlighting the subjectivity of work perceptions.

Veterinary work concept	
NEGATIVE	POSITIVE
A job	A calling
Stressful	Stimulating
Draining	Energising, fulfilling
Have to work	Want to work
Something I do	Something I love to do
Coping	Thriving
Extrinsic motivation	Intrinsic motivation
Pessimistic	Optimistic
Drains well-being	Generates well-being

Table 2: Published sources of work satisfaction for veterinarians, in descending order.

Bartram (2009) ²⁸	Figley & Roop (2006) ¹⁷	RCVS Survey (2006) ¹²	Shibly <i>et al.</i> (2014) ²⁹
<i>300 veterinarians (UK)</i>	<i>200 veterinary practices (US)</i>	<i>9,671 veterinarians (UK)</i>	<i>55 veterinary school faculty/staff (Austria)</i>
<i>Coded free-response “three ... greatest sources of pleasure and/or satisfaction”</i>	<i>Top three “on-the-job satisfiers”</i>	<i>Coded free-response “three best things about being in the veterinary profession”</i>	<i>What do you love about your job? (5-pt Likert response)</i>
Good clinical outcomes (39%)	Helping/healing animals (81%)	Variety (48%)	Interesting, varied, challenging job (4.7)
Relationships with colleagues (31%)	Thankful clients (69%)	Working with animals (33%)	Lifelong learning (4.2)
Intellectual challenge/learning (30%)	Working as a team (42%)	Challenge/using skills (33%)	Helping animals (4.2)
Client satisfaction (29%)	Using skills/learning new ones (29%)	Job satisfaction (32%)	Interaction with colleagues (4.1)
Relationships with clients (27%)	Daily contact with animals (21%)	Clients (28%)	Training of students (3.8)
Improving animal health & welfare (16%)	Educating clients (17%)	Interest/enjoyment (17%)	Scientific studies (3.7)
Surgical work (14%)	Financial rewards (12%)	Status (14%)	Interaction with clients (3.2)
Working with animals (13%)		Autonomy (12%)	
Financial rewards (12%)		Colleagues (12%)	
Management (9%)		Career opportunities (11%)	
		Working outside (10%)	

Figure 1: A model of the positive contributions to eudaimonic well-being from veterinary work, aligned to the key mediating domains identified in positive psychology theory. Note the contribution of positive emotions (pleasure/hedonic happiness) has been excluded to make explicit the eudaimonic nature of the well-being model. The enabling resources which facilitate eudaimonic well-being (*shaded*) may represent fruitful targets for personal development in training undergraduate veterinarians for future well-being and resilience.

