

# VETERINARY PRACTITIONERS –

## *personal characteristics and professional longevity*

Troubled by the attrition rate and mental health problems among veterinarians, retired equine reproduction specialist and now part-time business coach **Jeff Grimm** suspected the selection process could be partly at fault. He realised that experienced veterinarians might provide a template for evidence-based reform. His research produced some interesting results.



**MANY PEOPLE RECOGNISE** that a key factor in how they ended up in their jobs was random chance. Chance, however, has little to do with those entering the veterinary profession. These people often made their career choices at a young age (Grimmett, 2014). Most graduates from veterinary school achieve their childhood dreams, and one would think for them it would be happy ever after. Sadly, the profession is wracked with an unconscionably high suicide rate (Bartram and Baldwin, 2010; Mellanby, 2005; Jones-Fairnie et al., 2008) and nearly 25% of new graduates are no longer registered after 10 years (Anonymous, 2015).

It has been suggested that one underlying factor may be the personal characteristics of the people being selected (Bartram and Baldwin, 2010). Are we bringing in the right people? Experience suggests that personal choice and the traditional academic university selection process are not enough to ensure good job fit.

It is no surprise that in recent years the selection process for entry to veterinary schools has come under the microscope (Jillings, 2013). A recent survey of the New Zealand veterinary profession indicated a number of personal characteristics thought to be ideal for entry to veterinary school (Jillings, 2016). However, little research evidence has been recorded about the actual personal characteristics of those who have achieved long careers in veterinary practice.

Advances in psychometric testing and the near-universal availability of smartphone apps now permit the easy identification of a wide range of personal attributes and abilities and offer a real possibility of improving job fit (Schmidt and Hunter, 1998). This pilot project sought to utilise these recent advances to determine the personal characteristics of veterinarians who have proven longevity as practitioners. The findings were then compared with the proposed ideal non-academic selection characteristics, as determined from the survey of New Zealand veterinarians (Jillings, 2016). Are these the same characteristics? And how

did these real-world veterinarians match up to the supposed ideal?

### METHOD

A sample of 212 veterinary practitioners was invited to play Knack's psychometric games Dashi Dash and MetaMaze (Anonymous). This list of invitees included every veterinarian on the online register of VCNZ who had graduated from Massey University before 1986, who had a functional email address and who was known to have been in clinical practice for at least 30 years.

Dashi Dash is a game that casts the player in the role of a waiter at a sushi restaurant serving different meals to customers based on their facial expressions. Multiple demands are made on the waiter's time, with many orders to fill and pressure piled on. In MetaMaze, the player constructs a hard-to-find path between two on-screen dots.

The object of both games is to reveal how people behave, plan, perceive and

aptitudes and traits simultaneously that it is difficult for people to deliberately produce a desired result.

The software measures cognitive abilities, social skills and personality traits – for example, self-confidence, resourcefulness, managing ambiguity, and perseverance. For each measure a score is generated via algorithms that have been validated against traditional methods of psychometric testing. These scores then allow real-world predictions to be made, such as potential job performance (O'Boyle et al., 2010). Given the big demographic changes in the veterinary profession, gender information was also deemed necessary and recorded.

### RESULTS

There was a response rate of 22%, with 47 usable responses – 41 men and six women.

Sixty attributes were tested. The six most common characteristics are listed in Table 1 using the average score. These scores were compared with the average

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make decisions in real time. Small but reliable differences across a wide variety of behaviours are assessed when people respond to different game events – for example, in Dashi Dash it is the facial expressions of on-screen characters.

A player's processing speed, context-based choices, improvement over time and other features become the building blocks of subsequent analyses. The real-time immersive complexity of the game experience allows the measurement of so many different behaviours,

scores for the general population using a one-sample t-test and a Bonferroni correction for multiple comparisons (given that a large number of characteristics were statistically compared). Note the average score for the population as a whole, for every characteristic, is 50. All six characteristics listed in Table 1 proved to be significantly different from those of the general population.

From the list of attributes analysed it was possible to extract data for most

characteristics deemed ideal from the New Zealand survey (Jillings, 2016). If these characteristics are indeed relevant to veterinary practitioner longevity, one might expect this same group of stayers to again score highly. Table 2 lists their results against the ideal characteristics. No statistics were performed on these Table 2 characteristics.

**DISCUSSION**

The high level of veterinary professional attrition is an unacceptable, ugly fact. And yet there are many who have enjoyed long careers in practice, have used their education as intended and proven themselves job fit. Such people were the subject of this study. The focus was on practitioners, deemed an appropriate place to start given that 70% of the New Zealand profession fits this category (Anonymous, 2015).

Current knowledge of the ingredients of veterinary job fitness appears to be largely based on personal opinion, recycled research from the medical profession and a remarkable lack of direct scientific veterinary professional evidence. The Knack games are novel, fun and grounded in science and machine learning algorithms. What counts most is the way a person engages with these games and incorporates the assumption that, ‘The way you do something is the way you do everything’ (Halfteck, 2016). As a predictor of potential job performance, these games are gaining traction globally in the business, health and academic worlds. Less value is now being attached to academic background, and more to the individual’s potential to perform (Anonymous, 2017). Recent peer-reviewed papers suggest that the use of these games may add another important tool to the selection process for orthopaedic and biomedical research training programmes (Ergol et al., 2017; Chabowski et al., 2017).

It was no surprise to find these 30-year veteran practitioners scored highly for perseverance (average 63; average for the entire population 50). This score represents their ability to concentrate on tasks at hand and finish what they start.



They also demonstrated high average scores for self-confidence (average 74) and resourcefulness (average 68). These are people who have strong beliefs that they will succeed, excel in identifying the steps to success and are effective in getting the results. They also proved highly optimistic (average 66).

In terms of decision-making, the group was characterised by an ability to manage ambiguity (average score 67), to thrive when uncertainty was high, to make decisions effectively based on limited information and to balance data against instincts. Inspirational leadership proved an area of exceptional strength (average score 88). These individuals typically have a clear vision, are able to inspire others and lead by example. With the benefit of hindsight, this last finding is not unexpected, since many of these people are well-known leaders of the profession.

In terms of gender, 13% of the responses from our veteran practitioner group were from women (n=6), too small to draw meaningful conclusions. A gender comparison of the top six personal characteristics (Table 1) did not reveal any significant differences, although women did tend to score higher than men for self-confidence and resourcefulness.

This group graduated more than a generation ago, so how relevant are these findings in today’s world? Veterinary practitioners are still required to work all sorts of hours in complex situations with animals, clients, colleagues and many other stakeholders. Numerous high-stakes, life-and-death decisions are made on a daily basis, and it is very clear who is responsible. It has always been a high-stress job.

It is suggested that the core personal characteristics required for job fitness as veterinary practitioners are unlikely to have changed much. Optimism, self-confidence, perseverance, resourcefulness and managing ambiguity are highly likely to be key characteristics in tomorrow’s successful veterinary practitioners, and the profession will still require strong leaders.

It is important to note that these games put a score on as many as 60

**TABLE 1. ACTUAL CHARACTERISTIC**

	AVERAGE SCORE
Inspirational leadership	88
Self-confidence	74
Resourcefulness	68
Managing ambiguity	67
Optimism	66
Perseverance	63

**TABLE 2. ‘IDEAL’ CHARACTERISTIC\***

	AVERAGE SCORE
Teamwork	54
Communication	**
Problem-solving	26
Empathy/compassion	52
Resilience	27
Integrity	42

\* As defined by the New Zealand survey (Jillings, 2016)  
 \*\* Not tested with these games



**DISCOVER YOUR TOP NINE KNACKS**

Just download KnackUp games from the App Store or Google Play and play Dashi Dash and MetaMaze for free.

personal characteristics, both strengths and weaknesses. A comparison with the 'ideal' characteristics as determined by the survey of New Zealand veterinarians makes interesting reading (Jillings, 2016). The average scores for these veteran practitioners (Table 2) were either average or below average (scores 26-54) for every 'ideal' measure.

One can only assume that few, if any, of this group would be selected into veterinary school these days – if these ideal, non-academic criteria carry significant weighting. And yet these same people are proven performers, and many are the profession's leaders. Seemingly, the profession's own perception of itself (Jillings, 2016) bears little relationship to the actual characteristics of veterinarians who enjoy long careers.

This pilot study had several limitations, and the findings beg to be investigated further. The sample size was small – despite numerous prompts to invitees. We do not know why veterinarians drop off the VCNZ professional register. These veteran practitioners were successful in a Darwinian context, but how did they perform in terms of other professional measures? And what was their academic performance like – especially at veterinary school entry time?

We also don't know the impact of self-selection (to play these games), or how these personal characteristics change over a lifetime. That being said, the Knack team does focus on characteristics that are thought to be relatively stable through adulthood (Prabhakaran, 2017).

It may also be significant that when 18 current final-year veterinary students played the Knack games, their scores for the top six characteristics exhibited by

veteran practitioners (Table 1) ranged from 13 to 47 points below those of the veterans. This gap is unlikely to be solely due to youth and inexperience. Are we setting students up to fail, not at university but in the real world beyond?

Veterinary schools worldwide are blessed with a plethora of applicants. The question is, do the universities, or indeed any of us, know what we are looking for? What does success look like for a veterinary school selection system? What is the selection standard to be achieved? What is an acceptable professional retention rate? These are questions that have yet to be answered in a professional forum.

Ultimately, any selection process represents an attempt to assess the genetic component that each applicant potentially brings to the profession. As Mukherjee says, "The influence of our genes is richer, deeper and more unnerving than we imagined." It seems that the importance of this selection decision has been underestimated.

Findings from this pilot study suggest that the ideal personal characteristics for entry to veterinary school and to the profession have yet to be adequately defined. The paper breaks new ground, applies new tools and signposts new directions for psychometric research founded on successful members in the various branches of the veterinary profession. Can we afford to ignore, through inertia or vested interest, these possibilities now revealed?

There are strong financial reasons to undertake and continue this research approach to better inform selection policies – at both university and professional levels.

Above all, there is a powerful moral imperative to reduce the human wastage that is currently taking place. <sup>(9)</sup>

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ACKNOWLEDGEMENTS:

It has been my pleasure to have had inspiration and support from Hugh Perkins, Guy Halfteck, Michelle Earle, Ranjani Prabhakaran, Will Geiger, Jenny McIlraith, Sally Grimmett, Judy McDonald, Jeremy Gray, Alison Lenton, 18 final-year students and the 47 well-known veterinary practitioners – the survivors. Financial support gratefully received from the VPIS. Thank you all.