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**A Modern Image of the Veterinary Profession:
A Qualitative Study using Photo-Elicitation Interviewing**

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Abstract

More than 80% of vets are currently employed in clinical practice¹ but other veterinary roles are also vital for society^{1,2,3}. However, even clinical practice does not seem to fulfil modern graduates, and it is estimated that an increasing number of veterinarians are leaving the profession early in pursuit of other careers^{4,5}. Research suggests that less than 50% of veterinarians would choose to undertake their career path again^{1,6,7}, so the profession faces a “workforce crisis”^{1,4,5,8,9}. By means of semi-structured photo-elicitation interviewing (PEI), this study has explored the image that students embarking on veterinary education have of the profession. The dominant image of the veterinary profession according to these veterinary students, and their perception of the public image, was small animal practice. A large proportion (n=16, 80%) of participants saw themselves working in clinical practice in the future, with the majority of participants (n=8, 40%) aspiring to focus on surgery. The image of the veterinary profession has changed since the 1970’s when James Herriot and the mixed practice model were best known to the public. The dominant small animal and surgical image of veterinary entrants demonstrates a need for members of the veterinary profession to work together in order to educate public and entrant perception, thereby emphasising the diversity of veterinary careers, and their value to society, and allowing aspiring veterinary entrants to develop career goals with broader horizons.

Introduction

The veterinary profession is responsible for a range of important roles within society including meat inspection, research, veterinary public health, livestock production, private clinical practice and teaching^{1,2,3}. However, a large majority of UK veterinarians work in clinical first opinion practice¹, for which they have a strong vocation. A survey of UK veterinarians carried out by the British Veterinary Association (BVA) in 2017¹¹ indicated that nearly half chose their career path whilst in primary school¹². According to new research, three quarters of UK veterinarians chose to pursue their career due to an interest in animal care¹¹. However, within their professional roles, veterinarians have responsibilities not only to animals but also to clients, the profession, the broader veterinary team, the RCVS and the public¹². This means multiple types of interaction are required on a daily basis. In a

study¹³ of veterinary students in the workplace, communication and social skills were listed as key themes for assessing veterinary performance. Communication is the first professional practice day one competency mentioned in the RCVS Day One Skills¹⁴ and is a well-known foundation for good practice^{15,16,17,18,19}. Yet, a predominant number of complaints to the RCVS regarding veterinary surgeons involve communication-based disputes²⁰.

An additional workforce and capability concern for the veterinary profession is the effect of the forthcoming negotiations on exiting the European Union. More than 50% of veterinarians registering each year in the UK graduated elsewhere, and surveys suggest that nearly one-third of these are not planning to stay in the UK after the exit⁸. In recent months, headlines such as “not enough experienced vets”²¹, “changing expectations”²² and “workforce crisis”⁸ have regularly appeared on the front pages of the veterinary press. In the 2017 Society of Practising Veterinary Surgeons (SPVS) Recruitment Survey, entitled “Recruitment – a Crisis for the Veterinary Profession”, only a minority of respondents said they had found it easy to recruit a suitable candidate for their practice. According to the 2014 RCVS Survey¹, one quarter of UK veterinary surgeons would not choose to undertake a career in veterinary medicine again if they were given the choice and a further 30% of respondents were unsure if they would. There has been a lot of discussion within the profession about not enough being done to tackle this recruitment crisis⁴; however, the Veterinary Capability and Capacity Project (VCCP)²³, Vet Futures Project² and Mind Matters Initiative²⁴ are all examples of how the RCVS, BVA and DEFRA are trying to tackle the many factors that contribute to the problem, not just the suggested 3-10 year drop-out post-graduation⁴.

Photo-elicitation interviewing (PEI) incorporates the use of photographs or other images into a research interview²⁵ in order to elicit in-depth recipient responses through greater rapport between participant and interviewer²⁶. The technique, using images taken and selected by the researcher or by participants, can also be referred to as ‘photovoice’, ‘photo novella’ or ‘reflexive photography’²⁷. Since first used by John Collier in 1967²⁶, a number of photo-elicitation techniques have been developed²⁸ with a range of examples appearing in literature in recent years^{29,30}. Images can provide a bridging form of communication leading to understanding that may not be available with words alone³¹. It has also been suggested that the use of images can improve the sharpness of memories and increase the brain’s capacity to review a question²⁵ as well as improving participant engagement³², thus creating qualitative data with great richness³³.

The aim of this researcher-driven PEI was to use images taken or selected by the researcher to stimulate thinking and uncover perceptions that students embarking on veterinary education have of

the profession – the archetypal role and the nature of the interactions within the role – and their perceptions of the broader public image of the modern veterinary profession.

Materials and Methods

Image Production

A series of photograph collections were created which displayed a range of daily interactions and job roles of veterinarians. The word image has multiple meanings and interpretations³⁵. For the purpose of this study, the definition of “image” used was that of *“a mental representation or picture; idea produced by the imagination.”*³⁵

Therefore, the choice was to use physical images to explore the mental images participants held. These physical images, with permissions for their use, came from three sources; researcher-produced, Adobe stock³⁶ and the Royal Veterinary College (RVC) asset bank³⁷.

Two photograph collections were created: the first included three complementary image sets representing interactions within small animal, farm animal and equine practice, and the second represented the variety of job roles within the profession. Each image set representing interactions within the profession included four images: A: vet–animal interaction; B: vet–owner interaction; C: vet–paraveterinary professional interaction; and D: all four subjects interacting.

Veterinary job roles represented were selected based on their inclusion in the RCVS 2014 Survey¹, BVA and RCVS Vet Futures² and the RCVS career opportunities webpage³. Images included; A - Small Animal Practice, B - Farm Animal Practice, C - Equine Practice, D - Surgery, E - Diagnostics, F - Teaching, G - Research, H - Food Safety and I - One Health. In order to create image continuity, the subject who represented vet/animal/ owner/ paraveterinary professional in each photograph collection was kept consistent. Additionally, every vet wore a stethoscope to identify them as the vet.

Six final year RVC veterinary (BVetMed) students participated in a pilot study to assess photographs for content and context. Pilot participants were additionally asked to ‘describe what they see’ in each photograph and if there were ‘any images that they felt were missing’²⁶. Based on feedback, photographs were removed, added and edited as relevant.

Participant Selection

Participants were drawn from the first year veterinary cohort at the RVC, and were invited to take part in the study by interviewers before they had been exposed to any course content, using convenience sampling, directly. Ninety percent of invitees (34 students) were willing to be involved,

with the primary reason for opt out being time constraints. This allowed, for technical reasons, 20 interviews following protocol to be completed.

Semi-structured Interviews

Interviewers were clinical year BVetMed students, unknown to the participants, and training was conducted prior to interviews. Semi-structured, individual interviews were recorded. All recordings were copied to the researcher immediately after interview completion, and original files were deleted from personal devices. Data were transcribed, then analysed using qualitative content analysis with data reduction and inductive category development³⁸. Participants were made aware of the interviewer status, reason for data collection and the broad title of the research.

Ethics Approval and Consents

The research received ethical approval from the RVC Social Sciences Ethical Review Board (URN SR2017-1091). Subjects in images taken by the researcher completed a consent form for image use; participants completed consent forms, which gave permission for voice recording, data collection and data storage; and interviewers completed a consent form which specified the terms of data collection.

Results

Data from 20 participants were analysed; 3 participants (15%) were male and 17 (85%) were female, representative of the veterinary student demographic^{22,39,40}. Work experience completed prior to BVetMed application ranged from 3–52 weeks (mean 15 weeks). Seven participants (35%) had gaps in education of one to two years.

Interactions within the veterinary role

For each of three collections of photographs, representing interactions within small animal, farm and equine practice, participants were asked which image most characterised the nature of the role of a vet to them. Eight participants (40%) made a direct comparison with their work experience when giving reasoning for image selection.

The veterinary-paraveterinary interaction (Image C) was selected least frequently to represent the role of a vet, with no participants selecting image C to represent the work of an equine vet ([Figure 1](#)). Four themes dominated participant response; subject, action, interaction and environment. Other themes included financial implications of treatment and having the animal as the main focus of the image.

Subject

All participants discussed the presence of one or more subjects in each collection of images. Despite the animal being excluded or to the side in images B and C, the presence of an animal was inferred and discussed by 9 participants selecting image B (64.3%) and 4 participants selecting image C (80%). The presence of the paraveterinary professional in those selecting image C was discussed by 4 participants (80%), in comparison to the presence of the owner in image B which was discussed by 13 participants who selected that image (92.9%).

Action

Five subthemes arose for the theme 'action'. The most commonly discussed subtheme was a physical examination of an animal, which was discussed by all participants who selected image A for small animal and equine work.

"I see a vet checking the heartbeat of the dog and maybe it's breathing. Just checking it over." – Participant 3

"A vet using a stethoscope on a horse to listen to the heart beat. There's no-one else in the picture with him, it's just him and the horse." – Participant 11

Other subthemes included animal handling, performing a consultation, knowledge application, and discussing results with an owner.

Interaction

Four subthemes arose from the theme 'interaction': communication/discussion, working with the animal, relationships and teamworking. Interactions displayed in the images were discussed by participants 41 times (68.3%) overall, with varying degrees of depth. The majority of participants who discussed this theme mentioned talking between the vet and owner or paraveterinary professional. Other participants discussed the theme in more depth and spoke about relationships and teamwork.

"I see the handling of an animal but I also see the teamwork between the vet nurse and an actual vet...this represents caring for the animal and also the teamwork that happens in the clinic." – Participant 5

"Obviously you are dealing with animals a lot but a lot of the profession is also talking to the owners, making sure they understand, getting their point of view and understanding how the animal has been acting." – Participant 20

Environment

Three subthemes arose for the theme 'environment': location, instruments and posture. For location, participants commented on:

"She's wearing different clothes to what you would wear in a small animal hospital and they're in a barn, not a room." – Participant 5

"They're at a vets practice indoors." – Participant 19

Instruments were included within the environmental theme and objects such as stethoscopes, examination tables, the crush and clothing were discussed. In the small animal photograph collection, posture was discussed by 6 participants (30%) with some participants making an image selection based purely on the body position of the vet.

"The vet and the vet nurse are standing up whereas in the other images, the people are not standing." – Participant 11

"Every time I've been to a vet they don't normally sit down and speak, it's normally stood up at a table." – Participant 17

Any other Image?

Participants were asked if there was any image not displayed which they felt would better characterise the work of a vet. A range of responses were given to this question including a different environment, another practical element and a combination of two or more of the images. The greatest proportion of participants responded that there was no other image which would better characterise farm animal (n=11, 55%) and equine (n=8, 40%) work. A large proportion of participants (n=9, 49%) responded that they would like to see an image of surgery representing small animal veterinary work in comparison to 10% (n=2) with this view for both farm animal and equine. In the latter contexts, typical statements were:

"I don't think there's as much surgery for farm animals but I would like to see a surgery image."
– Participant 8

"When I picture an equine vet, I picture a big practice with a big surgical room over a vet coming out to a farm." – Participant 18

The veterinary job role

Own Image of the Veterinary Role

After closing their eyes and “visualising the image which appears in their head” after hearing the word “vet”, participants ranked the set of nine career images, with the first being most representative of their own mental image of the veterinary role in the UK.

Seven major patterns were evident within the data which are displayed in [Figure 2](#). Image A, displaying a vet performing a physical examination on a dog, was placed in rank 1 by 12 participants (60%) and in the top 4 by all participants (100%). Images A, D and E, which all showed areas of small animal practice, were ranked in the top 4 by 12 participants (60%) and the top 5 by all participants (100%). Images F (teaching), G (research), H (food safety) and I (one health) were ranked together in the lowest 4 positions by 10 participants (50%).

One participant did not conform to any of these patterns (Participant 1). This was one of only two participants who had completed 52 weeks of work experience prior to BVetMed application (Participant 1 and 6). Both participants 1 and 6 gave more in-depth reflections on their rankings commenting that:

“...I put what I thought was more important. I see myself working in small animal with some farm work and other stuff but I see image H and I as just as important... I didn’t rank it from most important to least important but the image that I saw in my head then other images after. I would say you do research before you get to the stage where you can apply it...”. –

Participant 1

“...You could take your animal to the vet and you just see in the consult room with your parents, that’s all you see. But for me it’s all about the excitement of being able to see what goes on behind the scenes...” – Participant 6

Participants’ reasons for ranking their selected image as number one included: influence of work experience (n=5, 25%), small animal dominance (n=3, 15%), and future career aspirations (n=3, 15%).

Participants who selected image A commented:

“Image A is the classic first image which comes in to my head; A vet doing a check up on a pet with an owner.” – Participant 2

“When I closed my eyes, I imagined someone in a white coat, wearing a stethoscope, with a dog, and that’s pretty much what the photo is.” – Participant 5

“Even though I almost know better, this is the classic vet picture; cute little dog, looks very clean.” – Participant 9

Public Image of the Veterinary Role

On being asked to re-rank all nine images according to the public image of the veterinary role in the UK, 19 participants (95%) selected image A and one participant (5%) selected image D. FGHI were ranked in positions 6-9 by 17 participants (85%). Reasons given for placing image A first included: most common/iconic/stereotypical (n=16, 80%), small animal dominance (n=5, 25%), public contact with animals (n=3, 15%) and animals the public bring to vets (n=3, 15%).

“When people take their animals to the vets, that’s the most common form of vets they’ll see. I moved some of the images around [comparative to own mental image] by putting all the animal contact images first because when people think of a vet, they think of them examining an animal and having direct contact and possibly don’t associate disease control with vets.” – Participant 3

Future Aspirations

Using the nine images a final time, participants chose the image that most represented their future aspirations. Participant 12 said that no image represented their future aspirations of wildlife and conservation. However, a majority of participants (n=16, 80%) expressed a desire to work in clinical practice in the future (images A – D) with half of those (n=8, 40%) aspiring to work in the surgical field (Figure 3).

When asked why these images were selected, 5 participants (25%) said they were directly influenced by their work experience, 3 participants (15%) spoke of a desire to work with a particular species and 4 participants (20%) commented that growing up around a particular species had influenced their decision. Of the 8 participants (40%) who selected image D, depicting two vets performing surgery, 2 participants (25%) specified that they enjoy the problem-solving component:

“It’s always intrigued me how you can think of a problem and solve it through surgery. It’s good to see the transition from start to finish and how surgery can make an impact in the health or the problem that the animal’s got.” – Participant 3

“I like the practical aspect of surgery and the thought process of solving what the possible problem is... using surgery to fix the problem.” – Participant 10

A further 3 participants (37.5%) who chose surgery as their future aspiration used elaborate descriptive words to justify their choice.

“Because surgery is the best.” – Participant 15

“I think it would be really interesting to do a lot of surgeries and different ones. It’s pretty cool to do able to do all of that.” – Participant 4

One participant went on to explain that she wished to work away from people:

"I love watching surgeries...I get really excited about them so I want to focus on specialising in them and I definitely want to be a surgeon for animals. I feel I get really nervous around people so I feel as though I would be better behind the scenes." – Participant 1

Discussion

The veterinary profession has come a long way since it was established 250 years ago, in 1761, with a focus on improving the health and longevity of equids to aid with war and agriculture^{42,43,44}. In the 19th and early 20th centuries, its interests broadened to include epizootic disease research, meat inspection and disease eradication, all with a primary focus of benefiting humanity^{44,45,46}. Then, following the end of the Second World War, and the progression of the second agricultural revolution, the existing small animal practice base massively expanded⁴⁶ and, in 1956, the British Small Animal Veterinary Association was founded⁴². The evolution of the profession and change of emphasis within has led to changes in the public perception, variably informed by both direct contact with veterinarians and mainstream media publications.

The modern public image of a veterinarian is often portrayed as a vet examining a small animal, as revealed by typing the word 'vet' into Google images⁴⁷. Other domains, even those belonging to farm organisations, use similar images to portray the profession. Despite the range of information provided in veterinary university prospectuses, many use stereotypical small animal clinical images of the profession to advertise their courses⁴⁸. As the saying goes, "a picture is worth a thousand words" and it could therefore be argued that it is not only the public reflecting a stereotypical image of the veterinary profession onto aspiring veterinary students.

The current study has revealed that the dominant image for the majority of this group of students entering the RVC is clinical, in particular small animal, practice, and that they also see this as the dominant public perception of the profession in the 21st century. At this stage, this image also frames their aspirations, which particularly embrace a technical focus on the use of surgery to "fix the problem". Reference was made to student and public direct encounters with veterinary surgeons through pets, so this linkage between experience, image and career aspirations accords with other studies that have highlighted the way in which past experience shapes educational choices and career aspirations⁴⁹. Student background experience affects their choice of educational track (small animal versus mixed animal species) within the veterinary programme⁵⁰; veterinary graduates from urban areas demonstrate a preference for small animal practice and those from rural areas are more likely

to choose farm animal practice⁵¹. This is important when considering the education of a diverse cohort of veterinarians for the full range of career opportunities. Either, much more educational input is required within 4-6 year degree programmes to inspire and empower individual graduates with different skill sets, or entry criteria focused on diversity need to include entrant upbringing that has exposed them to a full range of animal and food production environments⁵¹.

The sequencing of exposure to, and discussion of, the two photograph collections – professional interactions and job roles – revealed a tendency to focus on role and interaction with the animal by both preferential selection of images and discussion of the animal even by those who selected an image in which it was absent. This patient focus was a particular trend for the small animal set, with participants suggesting that an image of small animal surgery would have been a preferred choice. In contrast to doctors dealing with human health, veterinarians are recognised as having to address two sets of needs, those of the animal and those of the client⁵². Thus veterinarians work across a spectrum from patient advocate (likened to the paediatrician, as in human medicine, being an advocate for the inarticulate child in the face of parental wishes) to client servant (likened to the garage mechanic who follows the owner's directions in relation to their property), with individuals showing preferences for different approaches to resolving any tensions that this creates. This work suggests that even these first year students are expecting a more "paediatric" approach to be possible in small animal practice, in contrast to their recognition of greater client interaction in farm animal and equine practice. Thus, their preference for a patient-focus, and, in some cases, their concerns about dealing with owners, may reinforce their background experiences in delivering their aspirations for a career in small animal practice¹¹.

At a superficial level, it can be argued that student ambitions to enter small animal practice are aligned with the major clinical career opportunity for graduates¹. However, "consultations are the cornerstone of veterinary practice"⁵³, and effective communication is essential to the clinician satisfying both patient and client needs and being appreciated for the quality of the service that they provide^{15,17,18,54}. The dominant student view that the primary activity of the veterinarian relates to patient care has been recognised by others, as well as lack of attention of learners to their broader non-technical skills needs for a successful career in clinical practice⁵⁵. This has led to the suggestion that more attention must be paid both at the student selection stage and during veterinary education to the full range of competences required by professional graduates. These broader competencies for those entering general practice include the ability to deal with uncertainty⁵⁶. The evidence that the student focus on surgery related to solving problems links to the struggle that recent graduates have with uncertainty and dealing with the associated stress and feelings of inadequacy^{57,58}. This emphasises the importance of curricula highlighting uncertainty and associated client communication

as core learning outcomes with which students must engage, rather than experiences that they might prefer to avoid.

The ambition to focus on surgery may have been fed by recent television programmes such as “Hi-Tech Vets” (first screened in 2008), “Supervet” (first screened in 2014), and even “Young Vets” (first screened in 2014) in which the RVC’s specialist small animal hospital was prominent. The disproportionate emphasis on surgery and successful outcomes, alongside an element of celebrity status for various clinicians appearing in these programmes, may be contributing to the perception of a high status professional role, explaining student comments that “surgery is best” and it is “pretty cool to be able to do all that”. However, as in any other professional role, the day-to-day work is far from “reality television”, with clinicians constantly frustrated by an absence of clear diagnoses, limitations in facilities and restrictions in client finances.

Predictably, but disappointingly for those looking to recruit in these areas, no participants expressed a desire to work in food safety or teaching in the future. These jobs make up over 10% of the current veterinary demographic¹ and make vital contributions to public safety and the future of the profession. Photographs depicting teaching, research, food safety and one health were all ranked relatively lowly by most participants, who felt that the public would be even less aware of these veterinary roles. Again, although these rankings are somewhat representative of the veterinary demographic, a greater percentage (9.5%) of UK veterinarians work in the education sector than in referral practices (8.1%)¹. With the effects of exit from the EU threatening to increase the workload in food production-related activities by 325%^{20,61} and the anticipated reduction in the number of EU veterinarians (who contribute disproportionately to both the food production and university sectors) practising in the UK after the exit²¹, the veterinary profession needs UK veterinary entrants who aspire to work in these areas.

Limitations

For the interaction-focused collection of photographs, continuity was created using the same subjects in each image and identifying the vet with a stethoscope. However, the environment in these photographs did not always remain consistent, which may have affected participant responses to them.

Participants were more inclined to discuss images relating to job roles within the veterinary profession than interaction roles. This fits with a more technical, animal-focused perspective of the profession than one associated with, and dependent on, human interactions. However, in future

research, it would be interesting to introduce job role selection of images first, to see if this led on to wider discussion stimulated by the images portraying interactions.

Interviewers used for PEI were clinical year BVetMed students, none of whom had previously completed a task of this nature. Despite the interviewers stimulating considerable discussion, it may have been that even experienced interviewers could have elicited wider discussion.

Conclusion

This research confirms the transition over the last 40 years from a James Herriot image of rural mixed practice to a dominant image of the veterinary profession as small animal practice, concentrated on the treatment of diseases, with a particular focus on surgery, and the strong vocation of many veterinary students to undertake a career in this type of practice. Inevitably, the link between reality and these mental images has been distorted by media coverage of the profession, so the failure to recognise that the majority of general practice, the destination for most veterinary graduates, is spent working with people – clients and the veterinary team – outside the operating theatre, is not a surprise. However, stress among members of the veterinary profession is an increasing concern, and suicide is over three times that of the national population⁶³ and higher than other medical professions⁶⁴. Therefore, it is vital for the safety and welfare of our future vets that we portray an accurate image of the profession to the public, in order for aspiring vets to set realistic career goals, and consider options that may better support their aspirations than clinical practice. Of course, due to the limited number of participants, it cannot be assumed that this study is representative of all students embarking on a veterinary education. However, this study does suggest that education of the public and aspiring vets is important to the health of the profession as a whole, as well as its individual members.

An action arising from the VetFutures Project involves researching ways of raising the profile of wider veterinary roles amongst the UK public^{2, 65}. However, a large percentage of UK vets choose their career path whilst in primary education¹¹. Educating these years could allow the younger generation to build a vocation for a career with wider opportunities. Other areas to consider, in order to prepare students to deal with the complexity of primary care, and emphasise the reality of practice, are the photographs chosen for prospectuses, the selection of veterinary students and educational work experience programmes.

This research has concentrated on veterinary students at the start of their education. Clearly, it will be important to follow students through their education and monitor how their image of the

profession and career aspirations evolve. In particular, it will be important for veterinary educators to establish the kinds of influences and experiences that can stimulate broader thinking around career opportunities, based on informed knowledge of the nature of each area for which a veterinary degree very ably equips graduates.

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Figure 1: A bar graph to show the distribution of image selection for each image

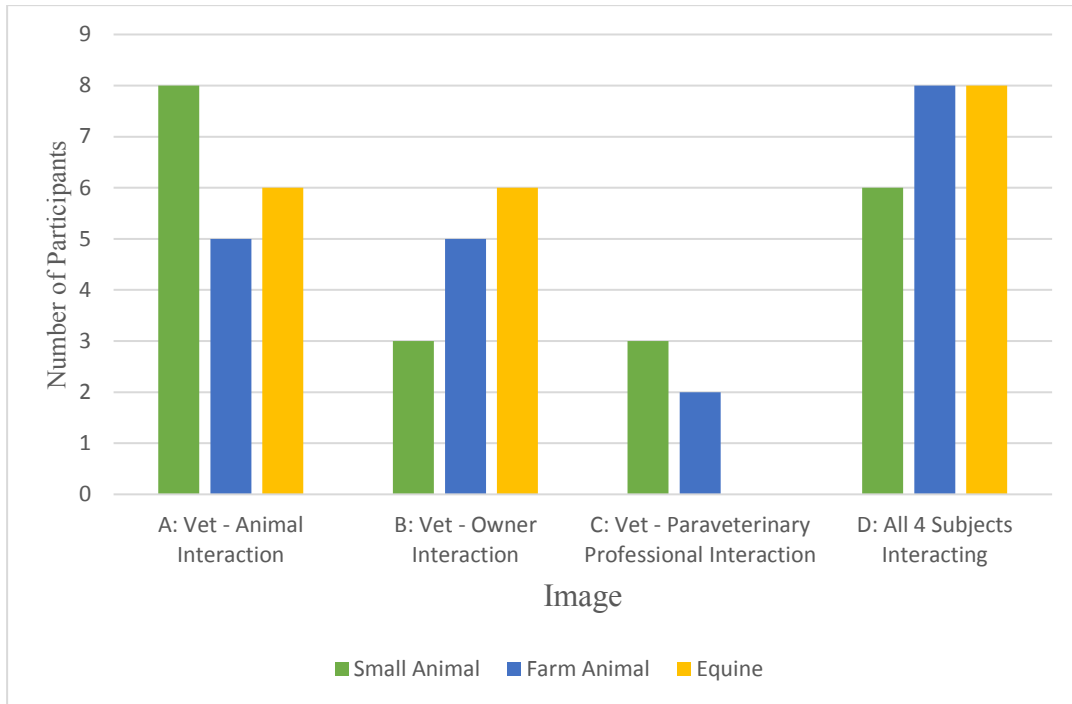
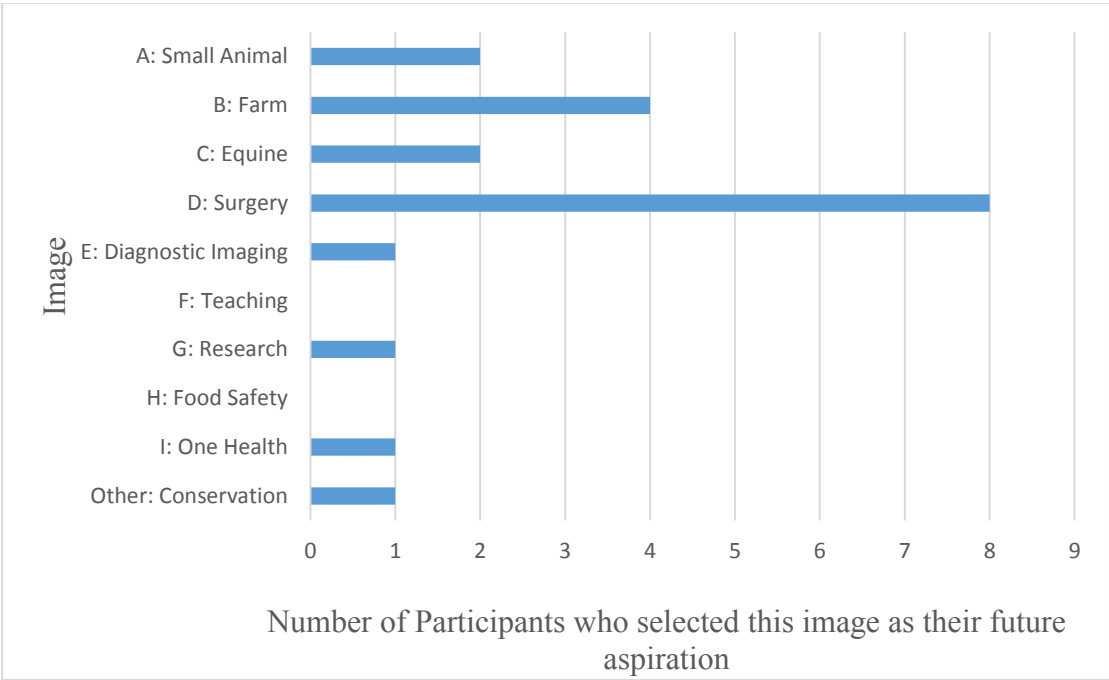


Figure 2: Distribution of image ranking for own image for veterinary role in the UK.

Photo Collection 4, Section 1: own mental image of the veterinary role in the UK

Rank	Participant no.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	E	A	A	A	A	E	A	A	A	A	E	D	C	D	A	A	A	D	D	A
2	G	H	E	D	E	B	D	B	B	B	A	A	E	A	D	D	D	E	A	C
3	A	I	D	E	B	A	E	D	C	D	B	B	D	E	G	B	E	A	B	D
4	B	D	B	G	G	D	I	E	E	E	C	E	A	B	C	C	B	I	E	G
5	D	E	C	C	D	I	C	C	D	G	D	C	B	C	E	E	C	G	C	E
6	H	B	G	B	I	G	B	G	I	H	G	G	I	H	B	F	G	F	I	B
7	I	C	I	F	C	H	G	H	G	F	I	I	G	G	F	H	F	B	G	F
8	C	F	H	H	F	C	H	I	F	C	H	H	F	I	I	G	I	H	H	I
9	F	G	F	I	H	F	F	F	H	I	F	F	H	F	H	I	H	C	F	H

Figure 3: A Bar Graph to Show the Number of Participants who selected each Image to Represent their Future Aspiration.



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