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**To report, or not to report animal abuse: The role of perceived self-efficacy in
veterinarians' decision-making**

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Abstract

Background: Veterinarians are on the frontline of animal welfare, but little is known about the factors that facilitate their decision to report cases of abuse to authorities. Using *perceived self-efficacy* as a basis, the primary aim of this study was to examine the psychological and experiential factors linked to veterinarians' reporting behaviour.

Method: We administered questionnaires to 176 veterinarians assessing the amount of training received on detecting/reporting animal abuse, perceived self-efficacy to report animal abuse, and whether they have reported animal abuse incidents to the relevant authorities.

Results: We found that perceived self-efficacy positively correlated with suspecting and reporting animal abuse, number of hours of specialised training, and years working in practice. As hypothesised, we also found that perceived self-efficacy explained the relationship between specialised training (in hours) and reporting animal abuse.

Conclusions: These findings highlight the psychological impact of specialised training on veterinarians' reporting behaviour. Simply put, specialist training equips veterinarians with the confidence and self-efficacy to report suspected cases of animal abuse. The implications for training curriculum and veterinary policy are discussed.

Keywords: Animal abuse, non-accidental injury, veterinary curriculum, reporting behaviour

Introduction

Animal abuse as a standalone behaviour has a negative impact on society broadly, and animal owners specifically, but we also know animal abuse has been linked to other criminal behaviours [1,2], underlining the importance of improving detection and reporting.

Veterinary practitioners are on the 'frontline' of assessing and reporting animal abuse, but what facilitates reporting behaviour? The aim of the current study is to identify key psychological factors that influence the reporting behaviour of veterinarians in the UK.

Since animals are *voiceless*, there are challenges in determining the cause of injuries. When we use the term 'animal abuse' we refer specifically to physical abuse (also termed non-accidental injury), sexual abuse, emotional abuse, and neglect. This terminology was adopted from the child abuse literature because it bridges veterinary practitioners and medical health professionals via a 'common language', which is particularly important given the link between animal abuse and child abuse [3]. There are also, however, broader concerns that animal abuse is indicative of future antisocial behaviour. For example, it has been found that those who abuse animals are likely to engage in interpersonal violence [4-6], sexual abuse [7], and other criminal behaviours such as drug and property offences [8,9], as well as have antisocial attitudes [10]. Past research has also shown that the perpetration of animal abuse is common amongst victims of sexual abuse [11]. Therefore, by improving identification and detection rates of animal abuse, there is the potential to intervene on those at risk of committing future crime as well as protect those at risk of future victimisation; both for humans and animals [1].

Reporting animal abuse is not mandated in the UK [12], and there is variation in the amount of training/guidance provided in veterinary curriculum. When we examine the literature on reporting we find only a small proportion of veterinarians in a US study [13] report suspected cases (i.e., 192 of 719 suspected cases). Reasons given included fears of

being bound by confidentiality and uncertainty that the injury was, indeed, abusive. A further report from New Zealand [14] indicated fear of loss of business. In Australia and New Zealand the most reported reason for non-referral of cases was the perceived lack of adequate training of best practice [12,15,16]. A report from the United States [17] concluded that, during veterinarians' professional training, an average of 76 minutes was dedicated to detecting abuse and the referral procedures. The importance of the veterinary role is underlined by a New Zealand study [15] in which two thirds of veterinarians indicated they had suspicions of abuse. This suggests that veterinarians are well placed to detect incidents of abuse.

Theoretical backdrop: Perceived self-efficacy

The reasons to not report are relatively clear, but no research to date has explored the psychological constructs that facilitate veterinarians' reporting behaviour; for example, perceived self-efficacy. Perceived self-efficacy, proposed by Bandura [18], is one's belief in their capability to achieve given accomplishments. Bandura argued that there were four sources of efficacy, namely: previous experiences (or, developed mastery of the skill), modelling through vicarious experiences, persuasion from others (external sources of positive reinforcement in one's ability), and emotional/physiological states during task execution. As such, you can relate perceived self-efficacy to human self-development across various domains, but specifically, self-efficacy is most intuitively applied in settings where performance outcomes are evaluated. For example, sport performance [19] and academic performance [20] have been positively correlated with perceived self-efficacy.

Perceived self-efficacy has been linked to decision-making in other related professions; more specifically, the detection and reporting of child abuse. Paediatricians are often the first to encounter cases of child abuse and they are in an ideal position to report suspicions to prevent the abuse from continuing and escalating [21]. One of the more robust

findings shows that a lack of adequate resources (e.g., time, knowledge of reporting procedures and protocols, training, etc.) is the reason why paediatricians do not report suspicions of child abuse [21-23]. Vulliamy and Sullivan [21] found that paediatricians who felt more *comfortable* reporting child abuse were more likely to do so. Arguably, perceived comfort could, at least partly, be a proxy for perceived self-efficacy. Teachers also play an important role in the detection of child abuse; most stating they have a legal, moral, and professional obligation to report suspicions [24]. It was identified that teachers who had encountered child abuse were more likely to report higher levels of perceived self-efficacy in suspecting and reporting the abuse than those teachers who had never encountered child abuse [25]. The impact of research such as this has led to the development of guidelines and policies that assist professionals in the reporting of child abuse, such as the Children Act, which places a statutory duty on professionals to safeguard and promote child welfare [26].

Both children and animals are particularly vulnerable due to their limited ability to report the abuse [27,28]. This highlights that the detection of abuse lies with the responsibility of frontline practitioners; paediatricians and teachers in cases of child abuse [21], and veterinarians in cases of animal abuse. Therefore, pursuing research on veterinary reporting behaviour can reap long-term practical and policy benefits, and there is an existing framework of research from a related field of child abuse to use as a model for the initial steps forward.

Current Study

There is a clear gap in our understanding of the psychological factors that facilitate veterinary reporting behaviour. It is also important to acknowledge the importance of context when researching this area. Much of what we know regarding veterinary reporting behaviour (e.g., reasons [not] to report) comes from the US, Australia, Canada, and New Zealand, with very little known about the UK context. One vital reason why context is so important, in the

US, for example, in some states it is legally mandated to report suspicions of animal abuse and in other states it is not [29]; whereas, in the UK there is no legal mandate to report.

Therefore, it is important to be clear on the presence/absence of legal mandates because these can influence reporting behaviour as can be seen in the US [1].

Our study, examined the role of perceived self-efficacy in veterinarians' decisions to report suspected cases of animal abuse. In a sample of veterinarians, we predicted the following:

H₁: Perceived self-efficacy would positively correlate with suspecting animal abuse, reporting animal abuse, and amount of specialised training.

H₂: Perceived self-efficacy would mediate the relationship between amount of specialised training and reporting behaviour.

Methods

We collected self-report, questionnaire data from UK-based veterinarians on age, gender, ethnicity, practice type (e.g., companion animal, equine, etc.), and number of years in practice. Participants were also asked to report number of hours of specialised training they received on detecting and reporting animal abuse, whether they had suspected cases of animal abuse¹ in the past year, and if they reported those cases to the appropriate authorities. We devised a scale assessing perceived self-efficacy to report animal abuse based on Bandura's "Guide for Constructing Self-Efficacy Scales" [30] and a previous related study [31]. This scale consisted of eight items (e.g., 'I am able to recognise and identify the signs of animal abuse in practice' and 'I feel confident reporting suspicions of animal abuse to appropriate authorities'). The internal consistency of the scale was good ($\alpha = .80$).

Procedure

¹ We did not provide a definition for 'animal abuse' to allow for respondents to indicate any/all injuries that they deemed as abuse. We also chose not to provide a definition because there was not one given in the Royal College of Veterinary Surgeons' (RCVS) Code of Professional Conduct where guidance is provided on reporting animal abuse.

First, we gained ethical approval from the University's Ethics Committee and ensured that our method for data collection and management was in accordance with the British Psychological Society's Code of Conduct. We then disseminated a secure link to our study via social media (e.g., Twitter), discipline-specific news outlets (e.g., Vet Times, Globe Animal Network), veterinary membership mailing lists (i.e., People's Dispensary for Sick Animals [PDSA], Links Group), and we emailed veterinary surgeries directly. To be eligible for the study, we asked for participants who currently worked, or previously worked in the UK as a veterinarian. Participants were asked to read an information sheet that highlighted how their data would be used and stored, as well as the main aims of the study. It was explained that all responses were to remain anonymous and no identifiable information would be asked or collected². After reading the information sheet, participants were invited to indicate their consent. Participants were given a series of measures to complete (as indicated above), and upon completion of the questionnaires, participants were debriefed and provided further details on the study including the contact details of the researchers should they require any more information and/or withdraw their data from the study. No incentive was provided for participation.

Data analyses

The data were exported into IBM SPSS Statistics Version 20 where analyses were conducted using a $p < .05$ level of significance. We first conducted bivariate analyses (i.e., correlations) examining the relationships between perceived self-efficacy, years in practice, suspicions of animal abuse, reporting of animal abuse, and number of hours of specialised training. We conducted a logistic regression to see which variables (i.e., perceived self-efficacy, years in practice, and specialised training) predicted reporting animal abuse (yes or

² It has been shown that social evaluative concerns, when completing self-efficacy questionnaires, can be reduced by stressing anonymity of data [30].

no). We followed up the logistic regression with mediation analyses using the PROCESS macro for SPSS [32].

Results

We recruited a total sample of 176 UK-based veterinarians consisting of 124 females (71%), with a mean age of 38.35 ($SD = 11.12$, $range = 23-68$), and predominantly White British ($n = 140$; 80%). The majority worked in a companion animal practice ($n = 158$; 90%) for an average of 14.26 years ($SD = 11.32$, $range = 1-45$). Participants reported they received, on average, 1.74 hours ($SD = 3.80$, $range = 0-33$) of specialised training on detecting and reporting animal abuse. When asked “during the past 12 months” whether they had suspected an incident of animal abuse, 32% ($n = 57$) indicated yes, and of those who suspected, 46% ($n = 25$) reported the cases to the authorities.

Bivariate Analyses

We conducted bivariate correlation analyses (see Table 1) and found that perceived self-efficacy positively correlated with suspecting and reporting animal abuse, number of hours of specialised training, and years working in practice. We also found that specialised training and years in practice did not correlate directly with reporting animal abuse.

Multivariate Analyses

We conducted a logistic regression and found perceived self-efficacy to be the only significant variable in the model (see Table 2). To follow-up on this finding, we proposed that perceived self-efficacy would explain the relationship between specialised training (originally not correlated with reporting behaviour) and reporting behaviour, and we tested this mediation pathway. Our data fit model 4 in the PROCESS macro for SPSS [32] showing that perceived self-efficacy did indeed mediate the training – reporting relationship in our sample of veterinarians (see Figure 1).

Discussion

The main aim of this study was to replicate results from comparable research in other disciplines. Specifically, we wanted to see if perceived self-efficacy played a facilitative role in veterinarians' reporting behaviour, similar to what is found when examining teachers' and paediatricians' reporting of child abuse. We found that in a sample of veterinarians, perceived self-efficacy positively correlated with years in practice, amount of specialised training, and suspecting and reporting incidents of animal abuse. We also found, as expected, that perceived self-efficacy mediated the relationship between specialised training and reporting animal abuse. In other words, specialised training on what to do if you suspect abuse gives veterinarians the confidence (or rather, self-efficacy) to report the abuse to the relevant authorities.

In our sample, nearly a third of veterinarians had suspected animal abuse and nearly half of these reported it. With these findings in mind, it is unsurprising that animal abuse is such a difficult behaviour to prosecute and secure a successful conviction. As mentioned previously, in the UK, reporting is not mandated [12] compounding additional barriers such as client confidentiality issues [13], and fear of loss in business earnings [15]. Most importantly, we can not be surprised by low reporting rates if veterinarians receive less than two hours of training on how to deal with suspected cases and echoed consistently in previous studies [12,15,16]. Given that we know one of the reasons for not reporting is uncertainty (or a lack of confidence) in deciding whether to report [15], we wanted to not only confirm these findings on limited training, but also examine the effect of training, in psychological terms, on reporting behaviour.

Animals, much like children, are voiceless. Unlike children, there is limited policy and research on how to deal with animals who may be at risk (or being abused) making them particularly vulnerable. But by looking at what we know from the child abuse literature, there is an existing framework within which to work [21]. Vital to the decision-making of

paediatricians and teachers is their perceived self-efficacy, and we found it to be equally vital amongst veterinarians. Perceived self-efficacy, unlike years of practice and specialised training, was the only variable to be independently correlated with reporting abuse, and when controlling for these other factors, it remained significant. However, perceived self-efficacy does not happen on its own, as found in other settings such as academia and sport (18,20); rather it is learned. We exemplified this relationship when we found that specialised training was related to reporting animal abuse via the perceived self-efficacy pathway.

There are significant implications to take away from these findings. Veterinarians are pivotal to early detection of abuse, prevention of future abuse, and possible intervention of interpersonal violence (e.g., family violence [6]). There also may be an argument for mandating reporting which reduces the perceived responsibility of the consequences on veterinarians (but this is outside the scope of this paper). However, what is clear from this study is that specialised training enables veterinarians with the skills and confidence to report. There already exists resources that veterinarians can turn to for evidence-based guidance; for example, the recent publication by the Animal Welfare Foundation and Links Group [33]. Also, there may be a further argument for encouraging attendance on Continuing Professional Development (CPD) courses on animal abuse (e.g., Links Group Veterinary Training Initiative) to capture practicing veterinarians who qualified prior to any training (formal or informal) being implemented.

This study is not without its limitations. Our participants self-selected on to the study, so their responses may not be representative of the field. Also, most of our veterinarians reported working predominantly with companion animals. We did not have sufficient numbers from the other practice types to make any meaningful comparisons. This begs the question of whether there are differences in the experiences of veterinarians working in other types of practices, for example equine or farm animals. We also limited our study to

veterinarians and excluded other types of practitioners (e.g., veterinary nurses) given the potential differences in job role (e.g., in relation to interactions with clients), but these other practitioners also play a pivotal role in detecting and reporting animal abuse that warrants further exploration. Finally, we did not give a definition for ‘animal abuse’ in our study to not restrict participants’ responding. However, we also do not know if participants’ responses were affected by any misunderstanding as to what was meant by the term used.

Conclusions

Despite these limitations, this study demonstrates the importance of perceived self-efficacy in the reporting of animal abuse, and that specialised training can develop it. This study also highlights exciting new avenues for future research. Our study did not capture the breadth of experiences and challenges that veterinarians face. A future qualitative study would be useful to glean more on why they do not report (e.g., past adverse experiences [client retaliation, misdiagnoses, and/or investigators not taking the referral forward]). We would also like to see future research examine additional factors such as collective efficacy (within and beyond veterinary practices), and the physical and emotional wellbeing of veterinarians. Much is known about burnout amongst medical doctors [34], but little is known in the veterinary profession. Although our study is cross-sectional, it is a first step towards understanding why and when veterinarians report abuse.

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Table 1. Bivariate correlations between perceived self-efficacy, years in practice, suspicions of animal abuse, reporting behaviour, and hours of specialised training amongst UK-based veterinarians

	1	2	3	4	5
1. Perceived self-efficacy	-				
2. Years in practice	.25*	-			
3. Suspect abuse	.23*	-.05	-		
4. Report abuse	.35*	.11	.60*	-	
5. Specialised training	.29*	.16	.15	.15	-

* $p < .01$.

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Table 2. Logistic regression of experience and training related factors predicting veterinary reporting behaviour amongst study respondents

	<i>B</i>	<i>p</i>	Odds Ratio	95% CI
Number of years in practice	.03	.303	1.03	.97, 1.10
Perceived self-efficacy	.12	.039	1.13	1.01, 1.27
Specialised training	-.04	.516	.96	.86, 1.08

$R^2 = .20$ (Cox & Snell), $.27$ (Nagelkerke). Model $\chi^2 = 10.00$, $p < .02$.

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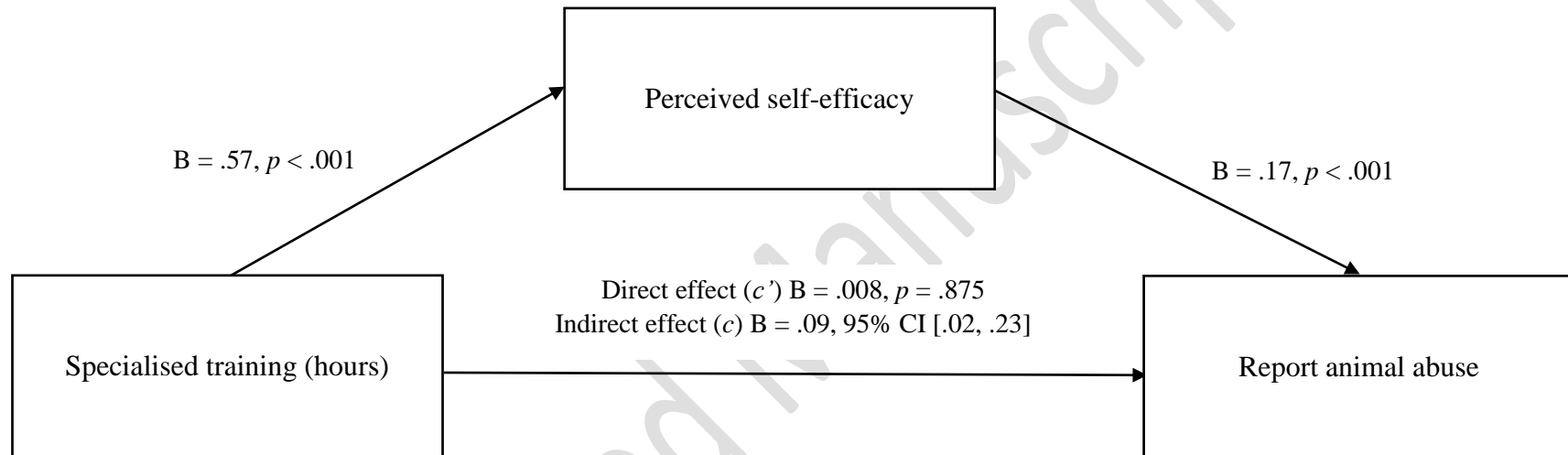


Figure 1. The relationship between specialised training and reporting behaviour mediated by perceived self-efficacy to report animal abuse.