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# Why Pet Owners Overfeed: A Self-Regulation Perspective

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## Abstract

Reducing obesity in companion animals requires owners to set appropriate feeding goals, monitor food intake and weight, and overcome the temptation to overfeed or excessively treat their pet. This paper discusses how research into the psychology of self-regulation can help to understand these processes. Using control theory as a conceptual framework, problems are identified in three areas: setting goals, monitoring food intake and its impact, and acting as needed. This paper also discusses potential solutions including self-affirmation and strategic “if-then” planning or “implementation intentions” that might help people to deal with these self-regulatory problems and thus reduce overfeeding.

## Introduction

Over half of the domestic dogs and cats in the U.S. are obese<sup>1</sup> and are, therefore, at risk for a number of health conditions including, but not limited to, osteoarthritis, insulin resistance and Type 2 diabetes, high blood pressure, heart and respiratory disease, cranial cruciate ligament injury, kidney disease, and many forms of cancer.<sup>1</sup> Given that feeding regimes are typically decided by the owners of these animals,<sup>1</sup> understanding why owners overfeed is crucial.<sup>2</sup> Furthermore, understanding the determinants of overfeeding holds the potential to inform intervention because strategies can be targeted toward the putative determinants.<sup>3</sup>

This article suggests that research into the psychology of self-regulation might offer a novel and fruitful perspective on why owners overfeed their pets. Self-regulation refers to “the exercise of control over oneself especially with regard to bringing the self in line with preferred standards.”<sup>4</sup> In the context of feeding a companion animal, self-regulation is likely required to select an appropriate amount of food and to resist the temptation to overfeed or to succumb to begging. Essentially then, this article suggests that owners overfeed companion animals because they encounter problems regulating their feeding behavior.

So what kind of problems might people encounter? Theoretical frameworks for understanding self-regulation, such as Carver and Scheier’s Control Theory,<sup>5</sup> typically view self-regulation as involving three main processes: goal setting, goal monitoring and goal operating.<sup>6,7</sup> Problems can occur at each of these stages. Goal setting is the starting point for

self-control.<sup>8</sup> Without goals people may not realize that they need to apply self-control. Therefore, it is possible that people overfeed their pets because they do not realize (1) the dangers of obesity and/or (2) their pet is overweight.

As a result, owners may not try to regulate the amount of food they provide to the animal. Although this hypothesis is intuitively appealing and potentially contributes to overfeeding, people are well aware of the health risks associated with obesity in humans,<sup>9</sup> yet obesity remains a very significant problem.<sup>10-12</sup> Given that many of the health risks associated with obesity in animals are similar to those associated with obesity in humans, it seems unlikely that owners of companion animals fail to appreciate that an overweight animal is at greater risk of health problems than a normal weight animal. Supporting this idea, 93% of pet owners say they would be concerned to discover that their pet is overweight.<sup>13</sup> Therefore, it seems unlikely that overfeeding is solely the result of a lack of knowledge about the dangers of obesity.

It is, however, possible that owners of companion animals do not recognize that their pets are obese.<sup>2,14</sup> For example, Mason<sup>15</sup> showed that one-third of owners underestimated their dog’s body weight when compared with a professional assessment. Similarly, the Association for Pet Obesity Prevention reported in 2012 that 22% of dog owners and 15% of cat owners characterized their pet as normal weight when it was actually overweight or obese.<sup>16</sup>

One reason people may not think that their animal is overweight is the preponderance of overweight domestic animals.<sup>1</sup> That is, people probably compare their animal to other similar (and likely similarly overweight) domesticated animals, rather than to their wild counterparts, leading to the normalization of obesity<sup>16</sup> or even the belief that an overweight condition is the standard of beauty.<sup>2</sup> This is clearly one area in which veterinarians can provide guidance on the healthy weight for the animal in question and objective data as part of an annual examination. However, this information needs to be accompanied by the understanding that it may be difficult for owners to accept the reality that their companion animal is overweight because doing so may reflect badly on them as owners. For example, accepting that a companion animal is overweight might mean accepting that one has jeopardized the health of that animal.

Having set a goal (e.g., “I must feed my pet an appropriate

amount of food”), the next stage in the self-regulatory process is to monitor the relation between this goal and the current state. This is referred to as goal monitoring.<sup>6,7</sup> Monitoring involves periodically noting the qualities of goal-related behavior or its outcomes and comparing these perceptions with salient reference values.<sup>17</sup> In the context of striving to feed a companion animal an appropriate amount of food, monitoring may involve keeping track of the amount of food that is provided to the animal (both at mealtime and as treats) and/or the weight of the animal. However, there is evidence that problems can arise at this stage of the self-regulatory process as well. First, evidence suggests that there are times when people prefer not to monitor their progress (a phenomena that has been termed “the ostrich problem”<sup>18</sup>), particularly when this may require them to confront information that reflects badly on themselves. Therefore, owners may ignore the weight of their pet in an effort to protect their own self-image.

Even if owners do try to monitor the amount of food they provide their animal, it is possible that they struggle to accurately do so. Evidence suggests that owners typically overestimate the amount of food required<sup>19</sup> and underestimate the amount of food they are providing,<sup>20</sup> particularly when feeding high-calorie treats.<sup>21</sup> Perhaps this is not surprising given that calorie information currently is not required on pet treats. But even if it were, would people use such information? Evidence suggests that people are not able to accurately estimate their own energy intake<sup>22,23</sup> and that a number of environmental factors can influence perceptions of food quantities.<sup>24</sup>

For example, Brian Wansink and colleagues found that people at a Chinese buffet who were given large, rather than small, plates served themselves 52% more food and ate 45% more.<sup>25</sup> Murphy and colleagues<sup>26</sup> similarly reported that the size of food bowls and scoops affects the amount of food that owners feed their dogs. Such findings suggest that people use visual cues to estimate food quantities. It is no surprise then that veterinarians recommend that owners weigh their pet’s food and that manufacturers provide feeding guidelines on packaging. However, it is unclear how many owners weigh their pet’s food. Taken together with the evidence suggesting that owners often do not recognize that their pet is overweight, a reluctance or failure to accurately monitor how much food is provided or its impact on the animal’s weight and health is likely to be one reason why owners overfeed their animals.

When monitoring indicates a discrepancy between the current and desired state (e.g., a visit to the veterinarian reveals that a companion animal is overweight), the owner needs to act in order to reduce that discrepancy (termed goal operating<sup>6,7</sup>). The alternative is to revise the goal (e.g., decide that it is not important to regulate the animal’s weight), but here it is assumed that people remain engaged with the focal goal and attempt to change the current reality (e.g., the

weight of their animal). Unfortunately, evidence suggests that motivation alone is unlikely to suffice in this instance. Although intentions (e.g., to feed appropriately) influence behavior,<sup>27</sup> evidence also attests to a substantial gap between intention and action<sup>28</sup> such that people struggle to act on their good intentions. New Year’s resolutions are a classic example.<sup>29</sup> One reason people may struggle to address discrepancies between current and desired states is that they have a limited capacity for self-control.<sup>30</sup> Specifically, there is evidence that initial exertions of self-control temporarily deplete the capacity to subsequently exert self-control,<sup>31</sup> a phenomena that has been termed “ego-depletion.”<sup>32</sup>

In an illustrative experiment, Roy Baumeister and colleagues<sup>32</sup> recruited participants for a study ostensibly about taste perception and, as such, were told not to eat anything for three hours before the experiment. These hungry participants then entered a laboratory in which the researchers had just baked chocolate chip cookies. They were seated at a table with two bowls — one containing radishes and the other containing the cookies. Participants were then randomly allocated to one of two conditions. Participants in the first condition were told that they would be tasting the radishes and should eat two or three of the radishes and ignore the cookies. Participants in the second condition were told that they would be tasting the cookies and should eat two or three cookies and ignore the radishes. These tasks were considered to differ in the amount of self-control they require based on the assumption that the majority of people would prefer to eat cookies than radishes to satisfy their hunger. The question was what effect would the exertion of self-control that was required to resist cookies have on subsequent self-control efforts?

The findings were quite striking. In the next part of the study, participants were given a series of tracing puzzles and told that they could take as much time and have as many attempts to solve them as they wished. In fact, the puzzles were impossible to solve and the real purpose of this task was to see how long participants kept trying before giving up (the idea being that persistence requires self-control because participants have to keep trying in the face of repeated failures). Participants who were allowed to eat the cookies (thus, had not exerted self-control prior to the puzzle task) persisted on the unsolvable puzzles for an average of nearly 19 minutes. In contrast, participants who were told to resist the cookies (thus, had to exert self-control) persisted on the unsolvable puzzles for just 8 minutes. Since this seminal study, there have been nearly 100 studies showing that that doing one task requiring self-control apparently reduces the capacity to exert self-control in a second task.<sup>31</sup>

What are the implications of ego-depletion for our understanding of why the owners of companion animals overfeed? Given that appropriate feeding likely requires self-control (e.g., to ignore an animal begging for leftovers or the desire

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to show affection by providing treats<sup>2</sup>), prior exertions of self-control (e.g., dealing with difficult colleagues at work, tolerating rush-hour traffic on the commute home) may hamper efforts to feed appropriately. In short, even if owners identify the need to limit the amount of food they provide their animal and strive to monitor intake, they may lack the resources needed to translate these good intentions into action.

## Potential Solutions and Future Directions

Fortunately, it is not all bad news. Using a self-regulatory framework to understand the challenges that owners of companion animals likely face in regulating food intake and preventing overfeeding also can serve to identify interventions that may help in overcoming these challenges. The final part of this paper focuses on two such interventions — self-affirmation<sup>33</sup> and “if-then” planning or “implementation intentions”<sup>34-36</sup> — that have been shown to increase the likelihood that people are able to (1) accept information that may reflect badly on them and (2) translate their intentions into action, respectively. Overcoming these two self-regulatory problems may help owners to identify and accept that their pet is overweight and implement an appropriate feeding regime.

Self-affirmation tackles the problem that it may be difficult for owners to accept that their companion animal is overweight, as it likely reflects badly on them as owners (e.g., it suggests that they have not been feeding or exercising the animal appropriately). Self-enhancement theorists suggest that such defensive responses are the result of efforts to protect the self from potential threat.<sup>33,37</sup> However, research on self-affirmation suggests that affirming an important aspect of the self unrelated to the threatened domain (e.g., one is hardworking or helpful to others) can serve as a buffer or coping resource when the self is threatened, thereby reducing self-defeating responses (for reviews, see<sup>38,39</sup>).

In an illustrative experiment, Lannin and colleagues<sup>40</sup> asked one-half of a sample of undergraduates who were experiencing psychological distress to identify a personal characteristic that was important to them (e.g., a sense of humor) and then to write about personal experiences in which this characteristic made them feel good about themselves. The other half of the sample completed a control task that involved describing the flavor of jelly beans. All participants then read an article about the benefits of psychotherapy before being asked to rate their willingness to seek help for the distress they were experiencing. The findings suggested that participants who did not complete the self-affirmation exercise felt that seeking professional help would reflect badly on them (e.g., they agreed with statements such as “If I went to a therapist, I would be less satisfied with myself”) and so were relatively unwilling to do so. However, participants who affirmed a core value before reading about the benefits of psychotherapy rated psychotherapy as less stigmatizing and were more willing to seek such help. The implication of the

findings is that interventions that prompt owners of companion animals to affirm a core value before receiving information on their pets’ health status could reduce the likelihood that they will react defensively when confronted with information that their animal is overweight.

One possible way to test this idea would be to measure the extent to which owners accept, and are prepared to act on, information on their animal’s weight provided, for example, during an annual health check. The extent to which self-affirmation reduces defensive processing and allows owners to set appropriate feeding goals could be established by comparing owners who are simply provided with this information in the traditional fashion with those who are given the opportunity to affirm another aspect of themselves prior to receiving this information.

A range of different methods have been developed to promote self-affirmation including writing about core values, receiving positive feedback, or endorsing certain beliefs (for a review, see<sup>41</sup>). Although some of these interventions may feel somewhat “artificial” (e.g., owners may wonder why they are being asked to write about a core value), there may be ways to integrate such interventions into treatment procedures. For example, owners could be asked to complete a brief questionnaire that includes a self-affirmation exercise while waiting for their appointment, or the veterinarian could invite the owner to reflect on something positive that happened to them, ostensibly as part of “small talk” at the start of the appointment. Accepting that a companion animal is overweight should help owners to set the goal of helping the animal lose weight.

However, as described, good intentions (e.g., to implement a new feeding regime) might not be sufficient to promote action.<sup>27,28</sup> One potential solution to this problem is to form implementation intentions that specify a good opportunity in which to act (the “if” part of the plan) and a suitable response to that opportunity (the “then” part of the plan). For example, the owner of an obese dog might plan how to respond when the dog begs for food (e.g., “If Jed begs for food, then I will fetch his toy for him!”) or to weigh food before giving it to their pet (e.g., “If I am feeding Jed in the morning, then I will weigh his food to ensure that I do not overfeed him”). Forming implementation intentions has been shown to be an effective strategy for promoting the achievement of a range of goals<sup>42</sup> including (personal) dietary behavior.<sup>43-45</sup>

In an illustrative study, Armitage and colleagues randomly allocated overweight people either to form implementation intentions designed to help them deal with situations that might elicit eating (e.g., “If I am tempted to eat when I am watching TV, then I will remove things from my home that remind me of eating”) or simply to read a list of situations and possible responses. One month later, participants in both conditions had lost weight, but participants who formed

implementation intentions lost significantly more weight than those in the control condition.

Evidence suggests that forming implementation intentions is an effective strategy because control of behavior is delegated to the specified cues (e.g., a dog begging for food) and the person does not have to deliberate *in situ* about how to respond. Instead, the intended response (e.g., fetching a toy) is elicited relatively automatically — quickly and without the need for additional thought — a process that is referred to as “strategic automaticity.”<sup>46</sup> The consequence is that detrimental states such as ego-depletion<sup>47</sup> or worry about stigma<sup>48</sup> are less likely to hamper self-control efforts.<sup>49</sup>

Given the beneficial effects of forming implementation intentions in other contexts, future research might usefully examine whether if-then planning could reduce the likelihood of owners overfeeding their pets. One possible approach would be to have veterinarians identify owners with obese pets who might benefit from self-control strategies (e.g., those whose pets are on weight-management programs). Owners would be randomly allocated either to treatment as usual (no additional instructions) or to form implementation intentions specifying how they will deal with critical situations (e.g., temptations to treat their pet).

One way to help owners to identify critical situations and functional responses might be to develop a “volitional help sheet”<sup>50-53</sup> that lists potentially problematic situations and possible responses to these situations. The owner would be asked to identify which situations are relevant to them and link these to responses that they believe will help. In this way, owners form their own plans (something that may be important for fostering commitment<sup>54</sup>) but are given some guidance in the content of those plans. The effectiveness of the intervention could be assessed by having owners self-report on their behavior (e.g., the number of treats provided to the companion animal and/or the number of times that the animal is given leftovers) but also by weighing the animal in question on a regular basis.

## Conclusion

This paper has taken an unashamedly psychological approach to understanding obesity among companion animals. In common with assertions that pet obesity is a people problem not a pet problem,<sup>2,16</sup> the approach places the owner center stage and uses a self-regulatory framework to suggest that owners of companion animals are likely to face a number of challenges in identifying the need to regulate feeding (termed “goal setting”), monitoring food intake and its impact on the animal (termed “goal monitoring”), and implementing an appropriate feeding regime (termed “goal operating”). Although the focus has been on regulating energy intake, it is recognized that weight is the product of the balance between energy intake and expenditure, and a similar perspective also could be applied to physical activity (and

has been among humans<sup>55</sup>). The advantage of adopting a self-regulation perspective on the problem of pet obesity is that it provides a relatively novel direction for interventions. This paper has outlined two possibilities (that may also be combined<sup>56-61</sup>): (1) self-affirmation can be used to reduce defensive processing and increase the likelihood that owners accept that their animal is overweight, and (2) forming implementation intentions can help increase the likelihood that intentions to feed appropriately are enacted. Although there is considerable evidence for the efficacy of each of these strategies in other domains, empirical studies are needed to test the feasibility and efficacy of such interventions for reducing obesity in pets.

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