

Fear of self in eating disorders

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Abstract

Fear of self has been proposed as a transdiagnostic construct, playing a role in not only obsessive compulsive disorder (OCD), but in related disorders as well. In this article, empirical support for the association between eating disorders (EDs) and the fear of self will be reviewed. Support for the fear of self in EDs will be contextualized within the theory of possible selves, self-discrepancy theory, and motivation frameworks. Most of the research that will be presented pertains to a feared overweight self. The relevance of broadening the scope of feared self-domains attributed to EDs beyond weight to include those pertaining to character will be advocated. Furthermore, risk factors theorized to lead to the development and investment in a feared self in OCD are examined and evidence for their applicability to EDs is presented. Treatment strategies targeting self-concept and the fear of self in EDs are also described, highlighting the clinical relevance of integrating this construct into the conceptualization of EDs. Finally, recommendations for future research are proposed.

Keywords: fear of self, eating disorders, avoidance motivation

Fear of Self in Eating Disorders

Body dissatisfaction and behaviours designed to modify body weight and shape (ex: dieting, excessive exercise, etc.) are ubiquitous in Western society (Berg & Larsson, 2020; Fiske, Fallon, Blissmer, & Redding, 2014; Lipson & Sonnevile, 2017; Slof-Op 't Landt et al., 2017). Yet, only a small proportion of individuals (0.28% to 0.85%) will develop one of the main eating disorder (ED) diagnoses (anorexia nervosa [AN], bulimia nervosa [BN], and binge eating disorder [BED]) in their lifetime (Udo & Grilo, 2018). It remains unclear why pathological eating attitudes and behaviours develop in extreme forms in some individuals, but not others. The answer to this question is complex and multi-faceted, and accordingly, there are several promising areas of research investigating this issue (ex: genetics, personality traits, etc.; see Culbert, Racine, & Klump, 2015 for a review). The potential role of self-concept in contributing to the development and maintenance of EDs is another avenue warranting further exploration.

The construction of the self is highly individualized and may represent a risk factor for the development and maintenance of EDs. The self is recognized as an important factor in contemporary conceptualizations of EDs (for a review, see Bardone-Cone, Thompson, & Miller, 2018), however, certain aspects of self-concept have largely been ignored. The notion of possible selves and in particular, the feared self, has received little direct research attention despite evidence suggesting its relevance in this population. The development of an idiosyncratic feared possible self and subsequent efforts to avoid becoming this feared version of the self may represent an important aspect of the motivation underlying ED symptomatology. Though conceptualizations of EDs often focus on approach motivation in the form of pursuit of the thin ideal, avoidance of a feared self may help to explain why ED behaviours persist even once thinness is 'achieved'.

The present review aims to examine evidence supporting the relevance of fear of self in EDs, including the association between this construct and eating symptomatology as well as the potential pathways contributing to the development of the feared self in this population. The potential importance of targeting fear of self in treatment will also be discussed. Finally, future directions for research into the feared self will be proposed, including the consideration of feared self domains not yet explored in the context of EDs.

Fear of Self and Avoidance Motivation

In their seminal article on possible selves, Markus and Nurius (1986) contrast the actual self (i.e., the self as it is at the present time) with the notion of ‘possible selves’, that is, those self-representations that individuals believe they could become in the future. These authors identified body image as an important self-domain and, illustrating the pervasiveness of the importance attributed to weight in our society, utilised the ‘thin self’ as an example of a positive/ideal possible self and the ‘obese self’ as an example of a feared possible self. The ‘feared self’ is defined as a possible future self possessing undesired qualities or characteristics. Furthermore, possible selves are described as providing a link between cognitive self-representations and motivation (Markus & Nurius, 1986). In the context of EDs, the feared self may represent an overweight self, in contrast with the idealized thin self. Disordered eating behaviours, therefore, may be motivated by approach toward the thin self and/or by avoidance of the feared overweight self.

In other areas of psychology, the primacy of avoidance motivation and the influence of the feared self on behaviour has been noted (ex: Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Carver, Lawrence, & Scheier, 1999; Elliot & Church, 2002). Over a decade ago, Woodman and Hemmings (2008) argued that research on ‘self-representations’, specifically

those relating to the body, had lagged behind self-concept research in other areas. Notably, they highlighted the abundance of research into approach toward the idealized thin body in EDs and contrasted it with the dearth of research examining the role of avoidance of a feared body in this population (Woodman & Hemmings, 2008). Since then, there has been some research on the topic of the fear of self in EDs, and generally speaking, these studies have suggested that it is a relevant construct in this diagnostic group. Moreover, as will be reviewed below, there is evidence to suggest that the feared self (ex: Dalley & Buunk, 2009) and avoidance motivation (for a review, see Harrison, Treasure, & Smillie, 2011) may in fact play a larger role in motivating ED behaviours than pursuit of the thin ideal.

Fear of self in EDs: Empirical Support

Differences in the experience of possible selves have been observed in individuals with eating pathology. For example, the possible selves described by participants with AN have been found to be more negative than those reported by healthy control participants (Erikson, Hansson, & Lundblad, 2012). Another study by the same research group demonstrated that women with EDs rate 'desirable' possible selves more negatively as compared to healthy control participants (Erikson, Hansson, & Lundblad, 2014). Though not measured in these studies, the experience of negative possible selves may suggest investment in feared possible selves. There is also some evidence to suggest that individuals with eating pathology may be more likely to invest in possible selves related to the body. Furthermore, in an information processing study, faster reaction times were observed for adjectives describing both hoped-for thin selves and feared overweight selves in women who endorsed eating pathology as compared to those who did not (Girodo, 2003). The findings of these studies illustrate differences in the nature of possible selves

observed in individuals with and without eating pathology and suggest the relevance of investigating the feared overweight self.

Simon Dalley and his collaborators (2009; 2011; 2012; 2013a; 2013b; 2016) have conducted several studies examining the relative influence of the feared overweight self, in comparison to the idealized thin self, in predicting disordered eating attitudes and behaviours. In an initial study (Dalley & Buunk, 2009), a community sample of women was asked to think about two prototypical women: the overweight woman and the thin woman. More negative views of the overweight prototype and greater perceived similarity between the self and this prototype were found to interact to predict dieting, independently of body mass index (Dalley & Buunk, 2009). These findings were replicated and extended in a follow-up study using an idiographic method, which found that perceived similarity to a person's own feared overweight body as well as the cognitive availability (i.e., how easy it is to bring to mind) of this body was predictive of intention to diet and choosing a low-calorie food in a laboratory setting (Dalley & Buunk, 2011). The results of these studies are notable for several reasons. They demonstrate the association between the feared overweight self with eating pathology, in this case dieting. Moreover, these results indicate that the desire to avoid becoming a feared self is a stronger motivator of dieting than is the desire to attain thinness, suggesting the importance of avoidance motivation in this population. These results also demonstrate that not only do individuals internalize an idealized thin self, they also seem to internalize a feared or stigmatized overweight self. The degree to which a person has internalized negative views toward this self-representation and also the degree to which they perceive themselves to be close to being or becoming this feared self plays an important role in the association with dieting behaviour. It is important to highlight that it is perceived similarity/closeness to the feared self, rather than objective closeness (i.e., body mass

index) that is implicated in the relationship between the feared overweight self and dieting, highlighting the importance of self-concept in eating pathology (Dalley & Buunk, 2009; 2011).

Subsequent studies conducted by this research group consistently reported associations between the feared overweight self and eating attitudes and behaviours. Specifically, it was found that the perceived likelihood of becoming the feared overweight self mediated the impact of perfectionistic concerns and strivings on dietary restraint, suggesting that dietary restraint may be more related to avoidance of a feared overweight self than to approach toward thinness (Dalley, Toffanin, & Pollet, 2012). Perceived likelihood of becoming the feared overweight self was also found to mediate the relationship between optimism and positive body image, whereas the likelihood of an idealized thin self was not a significant mediator. The authors suggested that optimistic individuals perceive becoming their feared overweight self as less likely and that this contributes to a more positive body image (Dalley & Vidal, 2013). Furthermore, both the feared overweight self and the idealized thin self were found to mediate the relationship between body mass index and body esteem, but results were stronger for the feared overweight self. Again, the authors highlighted the important role of avoidance motivation and the fear of the overweight self, this time in terms of attitudes toward the body (Dalley, Pollet, & Vidal, 2013). Finally, it was found that both the salience of the feared overweight self and the hoped for thin self were both significant mediators in the relationship between avoidance temperament and dieting, though the pathway through the feared overweight self was stronger (Dalley, 2016). Taken together, these studies suggest that fear of self may be more influential in motivating eating attitudes and behaviours than the pursuit of an idealized thin self. This series of studies provides support for the association between fear of self and ED symptoms, highlights the importance of perceptions of the self over and above actual body weight and shape, and demonstrates the

importance of both approach and avoidance motivation while comparing their relative contributions to ED symptoms and self-concept. It should be noted, however, that these studies utilised large community and undergraduate samples of women. Future research should aim to replicate these findings in clinical samples of individuals with EDs.

Self-Discrepancy Theory. The feared self in EDs has also been examined from the perspective of self-discrepancy theory (Higgins, 1987). In this theory, three selves are proposed: the ideal (the self we want to be, representing our hopes and aspirations), the ought (the self we believe we should be), and the actual (the self we are currently). The perceived distance of the actual self from the ideal and/or ought self can have either positive (if the distance is small) or negative (if there is a large discrepancy) effects on affective states (Higgins, 1987). Indeed, research has demonstrated a link between actual/ought and actual/ideal discrepancies and different forms of psychopathology (see Mason et al., 2019 for a review).

Many studies have examined the role of actual body/ideal body discrepancy and have found a relationship with various ED symptoms and body image (Anton, Perri, & Riley, 2000; Heron & Smyth, 2013; Mason et al., 2016; Strauman, Vookles, Berenstein, Chaiken, & Higgins, 1991). Moreover, a psychotherapeutic treatment that addresses self-discrepancies, known as integrative cognitive-affective therapy (ICAT), has been found to be effective for the treatment of BN (Wonderlich et al., 2014; Peterson et al., 2017). This research, however, has been criticized for not taking into account the feared bodily self and actual body/feared body discrepancies (see Woodman & Hemmings, 2008). The absence of this aspect of the self may be reflected in the results of these studies. For example, in a study that found women who diet have a greater actual/ideal discrepancy than those who do not diet, it was also demonstrated that this

group difference was unrelated to thinness ideals, but was instead driven by ‘distorted perceptions of their fatness’ (Gruber, Pope, Lalonde, Hudson, 2001).

In their examination of both the actual/feared body discrepancy and the actual/ideal body discrepancy, Woodman & Hemmings (2008) concluded that the feared body is meaningfully distinct from the ideal body. Furthermore, it has been found that affective state is most related to the self that the individual perceives themselves to be closest to, in this case, either the feared overweight self or the idealized thin self (Woodman & Hemmings, 2008; Woodman & Steer, 2011). The findings pertaining to the importance of perceived proximity is in line with what has been reported in other populations as well (Carver et al., 1999; Heppen & Ogilvie, 2003). This has important implications for EDs. Body image disturbance (i.e., altered or distorted experience of one’s body weight and shape) is a common feature of EDs (Carey & Preston, 2019; Cash & Deagle, 1997; Espeset, Gulliksen, Nordbo, Skarderud, & Holte, 2012; Frank & Treasure, 2016). Distorted body image may lead an individual to (erroneously) believe they are in close proximity to their feared overweight self, activating negative affect and prompting avoidance behaviours (ex: restriction, compensatory behaviours, etc.) in response to this more salient self. Overall, an examination of the self-discrepancy literature suggests that there is some evidence for the importance of the feared overweight self and avoidance motivation in EDs. Though actual/ideal body discrepancies certainly play a significant role in eating pathology, ‘body image research that neglects the role of the feared self tells only part of a complex picture’ (Woodman & Steer, 2011, pp. 149).

Avoidance Motivation. Though approach motivation (i.e., pursuit of thinness) has been established as important in EDs (Stice, Gau, Rohde, & Shaw, 2017; Stice & van Ryzin, 2019), it is also worthwhile to examine research supporting avoidance motivation and its relationship with

disordered eating symptoms relative to approach motivation. As described above, fear of self reflects avoidance motivation (Carver et al., 1999; Markus & Nurius, 1986) and so evidence highlighting the relevance of this motivation orientation may indirectly support the role of fear of self in this population. Indeed, disordered eating behaviours (ex: dietary restriction, compensatory behaviours, etc.) can be conceptualized as being motivated by a desire to avoid becoming a feared overweight self.

Other constructs explored in the context of EDs, such as reinforcement sensitivity (i.e., sensitivity to punishment versus sensitivity to reward; Gray, 1991), may also be relevant to the present discussion as possible indicators of avoidance or approach motivation. Moreover, in addition to fear of self, fear of fat, fear of weight gain, and fear of food may also be indicators of avoidance motivation. For example, Levitt (2003) concluded that fear of fat is distinct from drive for thinness and also suggested that this construct may represent avoidance motivation as it may reflect the desire to avoid the negative consequences associated with being overweight (i.e., weight-based stigma). Furthermore, this author indicated that drive for thinness may be a form of approach motivation as it represents striving toward a socially desirable goal (Levitt, 2003).

Several studies have found that indicators of avoidance motivation (i.e., fear of fat, fear of weight gain, fear of food, sensitivity to punishment) are associated with eating pathology and specific symptoms in clinical and non-clinical samples (Bailey & Waller, 2017; Bellew, Gilbert, Mills, McEwan, & Gale, 2006; Chernyak & Lowe, 2010; Chow, Ruhl, Tan, & Ellis, 2017; Cserjesi et al., 2010; Dodd, Velkoff, Forrest, Fussner, & Smith, 2017; Latner, 2008; Levinson et al., 2017; MacLeod, MacLeod, Dondzillo, & Bell, 2019; Mussap, 2007; Spring & Bulik, 2014; Williamson et al., 2002; Woud, Anschutz, Van Strien, & Becker, 2011). Some studies also compared the relative influence of indicators of both types of motivation and found that

indicators of avoidance motivation were found to have stronger relationships with eating pathology than indicators of approach motivation (i.e., drive for thinness, sensitivity to reward; Cserjesi et al., 2010; Mussap, 2007; Williamson et al., 2002; Woud et al., 2011). For example, Mussap (2007) found that punishment sensitivity accounted for a significantly larger proportion of the variance in bulimic symptoms than did sensitivity to reward (though both were significant predictors). These results complement the findings of previously described studies finding that fear of the overweight self was more strongly related to eating pathology than the pursuit of thinness (Dalley, 2016; Dalley & Buunk, 2009; 2011; Dalley & Vidal, 2013; Dalley et al., 2012; 2013). Other studies, however, have found the opposite pattern of results, that indicators of approach motivation were more relevant to eating pathology than indicators of avoidance motivation (Clarke, Ramoz, Fladung, & Gorwood, 2016; Dondzilo et al., 2017; 2019; Rodgers, DuBois, Frumppkin, & Robinaugh, 2018). It should be noted that this research area is complicated by measurement issues. For example, Chernyak & Lowe (2010) highlighted that some of the most commonly used measures of drive for thinness actually include items assessing fear of weight gain. Moreover, several authors have advanced the idea that indicators of avoidance motivation may be associated with or even predict indicators of approach motivation (ex: Levinson et al., 2017; Milos et al., 2017), suggesting that a complex relationship may exist between these constructs. Taken together, further research is needed to disentangle the relative contribution of avoidance and approach motivation in EDs as well as their relationship with one another. Fear of self represents an important indicator of avoidance motivation and may be related to the other indicators mentioned above. That is, fear of food, fear of fat, and fear of weight gain may speak to a higher order fear of the overweight self, and sensitivity to punishment may contribute to a vulnerability toward investment in a feared possible self.

Fear of Self as a Transdiagnostic Factor: Parallels with Obsessive Compulsive Disorder

The fear of self has been studied most extensively in the context of obsessive compulsive disorder (OCD). EDs and OCD share an elevated rate of comorbidity (Bertrand, Bélanger, & O'Connor, 2011) and demonstrate phenomenological similarities (Formea & Burns, 1995; Pigott et al., 1991). Furthermore, several cognitive processes (ex: thought-fusion, perfectionism, impulsivity, etc.) have already been identified as transdiagnostic to both disorders (Altman & Shankman, 2009; Shafran, 2002; Shafran, Teachman, Kerry, & Rachman, 1999). Given the close relationship between EDs and OCD, it is possible that research into the feared self in OCD may inform our conceptualization of this construct in EDs.

Support for this view comes from studies utilising the Fear of Self Questionnaire (FSQ; Aardema et al., 2013). This self-report measure was developed for use with individuals with OCD and taps into feared self domains common to this disorder (ex: the self as dangerous, negligent, etc.). Despite having been designed for applicability to OCD self concerns, there is some limited research to suggest that the FSQ measures the fear of self as it applies to EDs as well. It has been found that individuals with EDs obtain greater scores on the FSQ as compared to healthy control participants (Purcell Lalonde, O'Connor, Aardema, & Coelho, 2015; Wilson, Aardema, & O'Connor, 2017) and even as compared to participants with most subtypes of OCD (with the exception of those with repugnant obsessions; Aardema et al., 2018). Results pertaining to the relationship between fear of self as measured by the FSQ and specific ED symptoms have been mixed, with one study reporting strong positive correlations (Wilson et al., 2017) and another reporting no association (Purcell Lalonde et al., 2015). Additionally, inference-based therapy (IBT; O'Connor, Aardema, & Pélissier, 2005) is a cognitive treatment designed for use with individuals with OCD that directly targets fear of self and related constructs. This treatment

was adapted for EDs (Bertrand & O'Connor, 2009) and has been found to be effective in reducing both ED symptoms as well as fear of self in individuals with BN (Purcell Lalonde & O'Connor, 2015; Purcell Lalonde, O'Connor, St-Pierre-Delorme, Perreault, & Wilson, 2016). Overall, these studies highlight the transdiagnostic nature of the fear of self in EDs and OCD.

Development of the Fear of Self. In the OCD literature, the feared self is theorized to develop from the interaction between inferential confusion and a vulnerable/incoherent self-identity (Aardema & Wong, this issue).

Inferential confusion. Inferential confusion is a maladaptive inductive reasoning process comprised of the over-investment in possibility-based information and distrust of sensory information (O'Connor et al., 2005). This reasoning process may lead a person to distrust their reality-based self in favour of investing in a feared possible one. Applied to EDs, this may be reflected in a thought such as 'When I look in the mirror I can see that I still look the same, but what if I have gained weight and I just can't tell?'. Relatedly, it is theorized that individuals with OCD place their possible self or 'self-as-could-be' in the foreground of their self-concept at the expense of their actual self or 'self-as-is', which is relegated to the background. This is in contrast to the construction of the self-concept of individuals without OCD in which the self-as-is takes precedence (Aardema & O'Connor, 2007). It is possible that the same is the case for individuals with EDs. This inverted self-concept construction may help to explain how someone who is at a healthy weight or underweight may fear and behave as though they are overweight or at great risk of becoming overweight.

Using a self-report measure, a link between inferential confusion and EDs has been demonstrated (Purcell Lalonde & O'Connor, 2015; Wilson, Aardema, & O'Connor, 2018a). Additionally, there is evidence suggesting the potential relevance of each individual component

of this construct in this population. For example, the over-investment in possibility-based information is often operationalized in terms of abnormal reasoning processes. Though more research is needed, a few studies have observed impaired reasoning in EDs (Sternheim, Startup, & Schmidt, 2011; Wilson et al., 2017; 2018a). Furthermore, an early theoretical article suggested the potential importance of reasoning errors in the development and maintenance of eating pathology (Vitousek & Hollon, 1990). With regard to the distrust of the senses, it has been found that individuals with EDs experience doubt related to their ability to accurately perceive themselves (Espeset et al., 2012) and evince decreased perceptual confidence (a form of distrust of the senses) in response to prolonged body checking (Wilson et al., 2018b).

Vulnerable self-identity. Vulnerable self-identity, that is, an unstable or incoherent sense of self, is theorized to interact with inferential confusion to lead to the development of a feared self (Aardema & Wong, this issue). Essentially, uncertainty regarding one's identity increases susceptibility to the investment in a possibility-based feared self at the expense of the reality-based self. There is a vast literature pertaining to the development of identity and self-concept in EDs (for a review, see Bardone-Cone et al., 2018). Similarities with the literature describing identity and self-concept in OCD will be highlighted where applicable to illustrate that vulnerable self-identity may develop and represent a risk factor for the investment in a feared self via comparable processes across disorders.

It has long been theorized that EDs develop as a result of identity disturbance related to, among other factors, a failure to develop a diverse set of self-schemas and reliance instead on external sources to provide a coherent identity (Bruch, 1982; Piran, 2001; Vitousek & Ewald, 1993; Wheeler, Adams, & Keating, 2001). More recent empirical articles have also implicated identity disturbance in EDs. For example, a study employing a large clinical sample found that

individuals with EDs demonstrated greater identity disturbance across several measures as compared to healthy control participants (Verschuere et al., 2017). Furthermore, identity disturbance and impoverished self-concept (i.e., having few positive and many negative self-schemas) have been found to predict eating symptomatology in women with AN and BN cross-sectionally (Stein & Corte, 2007) and in women with ED symptoms longitudinally (Stein & Corte, 2008). These studies support the role of vulnerable self-identity in EDs in that they suggest a link between difficulties in identity formation and these disorders. Identity disturbance coupled with unconditional negative representations of the self (Cooper, 1997; Erikson, Hansson, & Lundblad, 2012; Waller et al., 2003; Waller, Ohanian, Meyer, & Osman, 2000), may reflect susceptibility for investment in a feared self.

With regard to more specific processes that may contribute to the development of a vulnerable self-identity, it has been found that individuals with EDs engage in ‘ruminative exploration’, that is, they repeatedly question aspects of their identity. This has been shown to result in emotional distress as well as feelings of insecurity and incompetence with regard to domains of the self (Verschuere et al., 2017). This repeated questioning of identity mirrors research arguing that OCD is associated with preoccupation and ambivalence with regard to the characteristics of their identity (for a discussion, see Bhar, Kyrios, & Hordern, 2015). Furthermore, a construct known as poor self-concept clarity has been associated with pathological eating attitudes and behaviours and has been suggested as a relevant factor in the development and maintenance of EDs (see Bardone-Cone et al., 2018 for a review). Poor self-concept clarity, defined as an unstable and ill-defined sense of self accompanied by low confidence in one’s self-beliefs (Campbell et al., 1996), is similar to the concept of ‘self-ambivalence’ studied in the context of OCD. Self-ambivalence encapsulates viewing the self in

terms of competing dichotomies (ex: lovable vs. unlovable) and questioning which category best describes the self as well as feelings of uncertainty pertaining to the self and preoccupation with the self (Bhar & Kyrios, 2007). Self-ambivalence has been found to be associated with OCD symptom severity (Bhar & Kyrios, 2007) and to increase vulnerability to OCD behaviours when elicited experimentally (Perera-Delcourt, Nash, & Thorpe, 2014). Again, these processes underscoring an uncertain sense of self may reflect a vulnerability for the development of a feared self in both OCD and EDs. Moreover, poor self-concept clarity has been associated with thin-ideal internalization (Vartanian, 2009; Vartanian & Dey, 2013; Vartanian, Froreich, & Smyth, 2016), demonstrating its link to investment in externally driven identities. Further research is needed to determine whether poor self-concept clarity is also associated with internalization of a feared overweight self in EDs.

In addition to identity disturbance and uncertain/unstable self-concept, feelings of incompetence in specific self-domains may contribute to a vulnerable self-identity and the development of a feared self. Drawn from the OCD literature, vulnerable self-themes are defined as domains that are valued by the person, but in which they feel incompetent (Doron & Kyrios, 2005). In EDs, thinness reflects a highly valued domain. Indeed, research has consistently supported a link between internalization of the thin ideal propagated in Western society and EDs (Thompson & Stice, 2001) and this construct is thought to be representative of the importance attributed to thinness in the self-concept of individuals with EDs (see Bardone-Cone et al., 2018). Though thinness is valued by society and in particular by those with EDs, individuals with EDs may feel ‘incompetent’ in this domain. For example, the past experience of weight-related teasing has been associated with ED symptoms (ex: Keery, Boutelle, van den Berg, & Thompson, 2005). This type of experience not only reinforces the value of the weight domain

(i.e., the idea that it is so important to be thin that not conforming to this body type results in social ostracism and exclusion), but also elicits feelings of incompetence (i.e., that a person has failed to attain this idealized body type). This proposed pathway is consistent with the postulate that the feared self, as compared to other selves (i.e., ideal, ought), is more likely to develop from salient personal experiences (Ogilvie, 1987). Feelings of incompetence in valued self-domains may contribute to a vulnerable self-identity, which in turn may lead to investment in a feared self.

Overall, vulnerable self-identity, in addition to inferential confusion, is one of the factors that is thought to contribute to the development of the feared self in OCD. Identity disturbance as well as feelings of ambivalence and incompetence in regard to the self may increase the risk of developing pathology in the form of OCD and EDs. Research demonstrating the association between indicators of vulnerable self-identity, inferential confusion, and EDs highlights that the feared self may develop similarly in this population as occurs in OCD.

Construction of the Feared Self in EDs

This paper has reviewed the evidence demonstrating the relevance of the feared self in EDs, drawing parallels with the OCD literature on this topic when applicable. One key difference between studies examining the feared self in EDs as compared to those examining this construct in OCD are the feared self-themes ascribed to each group. Studies investigating this construct in ED samples have focused almost exclusively on a ‘feared overweight self’, while the feared selves attributed to individuals with OCD often pertain to issues of character and morality and do not seem to be as limited in scope. Aardema and colleagues (2018) highlight this perceived distinction well, arguing that OCD is characterized by a fear of a ‘tainted inner self’ whereas

individuals with EDs experience a ‘feared bodily self’ (Aardema et al., 2018). This distinction, however, may not be accurate or necessary.

As described above, the FSQ was developed as a measure of the feared self and designed with OCD in mind. The questions included on this measure tap into several self-themes, including the dangerous self, the insane self, and the immoral self. Despite no mention of weight, individuals with EDs score similarly or even higher than OCD groups on this measure (Aardema et al., 2018), which suggests that the feared self in EDs may be broader than merely a feared overweight self. Historical accounts (Keel, 2005) and modern ethnographies (Cheney, Sullivan, & Grubbs, 2018) identify the importance of social and cultural themes such as asceticism, self-sacrifice, and self-discipline in EDs. Furthermore, EDs have been described in terms of ‘embodied morality’ and perceived links with heroism, power, and spirituality have been reported (see Cheney et al., 2018 for a discussion). Further evidence for a feared self that goes beyond weight comes from a qualitative study examining interviews with individuals participating in a weight loss program. It was determined that, though weight was directly implicated in identity for some, the majority of participants reported that the motivation to lose weight was linked to goals related to other valued aspects of their identity (Granberg, 2006). Additionally, research applying expectancy theory to EDs has demonstrated that expectations regarding the consequences of attaining thinness or being thin also go beyond weight and tap into domains of the inner self. Indeed, the Thinness and Restricting Expectancy Inventory has a one factor structure termed ‘overgeneralized self-improvement’ relating to the expectation that thinness is accompanied by feelings of attractiveness, but also increased competency, capability, confidence, and respect from others (Hohlstein, Smith, & Atlas, 1998). Thus, the desire to be thin or the fear of weight gain may reflect larger characterological desires and fears.

Furthermore, in Western society it is almost impossible to disentangle weight from character. There are many negative stereotypes associated with being overweight. Qualities attributed to overweight individuals include being lazy, having poor self-control, being unfriendly, and being incompetent (see Bartels, 2020). Aardema & Wong (this issue) provide examples from popular media (movies, television, etc.) supporting the fusion between appearance and inner self, with outward ugliness being consistently associated with flaws of character and morality. The same applies to weight, with evidence highlighting the distinction between thin and overweight characters in terms of the characteristics and circumstances assigned to them, with overweight characters portrayed as lazy, stupid, and subject to ridicule by others (Ata & Thompson, 2010). Additionally, weight-based stigma has been shown to have important, real-world implications. For example, overweight children are often teased and excluded. It has also been found that overweight women are evaluated more negatively by health and mental health professionals, and are less likely to receive financial aid, to be selected as romantic partners, or to receive a promotion at work (for a discussion, see Bacon, Scheltema, & Robinson, 2001). Weight-based stereotypes and anti-fat attitudes begin at an early age (ex: Cramer & Steinwert, 1998) and persist across time. One study found that nearly half of their sample of adults would give up one year of their life to avoid being obese and 15% indicated they would be willing to give up ten years to avoid this outcome (Schwartz, Vartanian, Nosek, & Brownell, 2006). Internalized weight bias has also been found to have biological consequences (independent of actual weight) such as higher cortisol levels and increased risk of dementia (for a discussion, see Williams & Annandale, 2019). These studies demonstrate the perceived association between weight and character highlighting the negative consequences of these erroneous beliefs especially in the social sphere. Finally, there is evidence to suggest that the

relationship between the feared overweight self and ED symptoms is modulated by beliefs linking fat to negative character traits. As described in a previous section, Dalley and Buunk (2009) found that the relationship between fear of the overweight self and dieting was strongest in those who perceived the prototypical overweight woman less ‘favourably’. In this study, favourability was measured not only in terms of attractiveness, but also in terms of character traits such as reliability, assertiveness, and laziness. Results from this study highlight the link between fear of self, negative beliefs linking weight to character, and eating symptoms (Dalley & Buunk, 2009).

The research presented above highlights the influence of sociocultural factors in EDs. Thin-ideal internalization, a construct implicated in the development and maintenance of EDs, is theorized to develop via social reinforcement (Thompson & Stice, 2001). Both positive reinforcement of thinness as well as the punishment associated with not conforming to the thin ideal (i.e., criticism, teasing, etc.) at the hands of family, peers, and the media contributes to the development of thin-ideal internalization (Thompson & Stice, 2001). An internalized feared overweight self may also reflect this social element, that is, the desire to be accepted and to avoid rejection. In support of this idea are studies that have found that individuals with EDs view weight and shape as a means to gain acceptance from others (Cooper, Cohen-Tovée, Todd, Wells, & Tovée, 1997) and that fear of weight gain may in fact represent a fear of the social consequences of being overweight (Levinson, Rapp, & Riley, 2014; Levinson, Vanzhula, & Christian, 2019). Furthermore, eating pathology has been linked to a tendency to strive to avoid being perceived as inferior (Bellew et al., 2006) and to avoid social exclusion (Wertheim, Paxton, Schutz, & Muir, 1997). Given pervasive beliefs tying weight to character in addition to the negative effects of weight stigma, it seems reductive to limit the definition of the feared self

in EDs to weight. Instead, the feared self in EDs may represent the fear of a rejected self, an unsuccessful self, and an unloved self, among others.

Treatment Implications

The integration of notions related to the self and specifically, fear of self, into clinical conceptualization as well as the application of therapeutic strategies targeting this construct may help to increase the efficacy of current treatments for EDs. It has been suggested that developing a clearer sense of self (Verschuere et al., 2017) and new, more positive selves (either with regard to the conceptualization of the current self or to future possible selves) represent an important avenue for treatment (Stein & Corte, 2007; 2008). Indeed, it has been argued that investment in possible selves are important motivating factors with regard to goal-directed behaviour and behavioural change, especially when linked to salient and valued self-schemas (Stein & Markus, 1996). Taken together, this suggests that treatment strategies targeting the fear of self and self-concept may be an important addition to the treatment of EDs. Several treatments already incorporate or focus on fear of self and/or self-concept. Bardone-Cone and colleagues (2018) review several different treatments (ex: enhanced cognitive behavioural therapy, mindfulness-based interventions, etc.) that target self-related constructs such as self-esteem and self-efficacy, among others (Bardone-Cone et al., 2018). Treatment based on self-discrepancy theory targeting ideal/ought/actual discrepancies has also been shown to be effective in treating EDs (ex: Wonderlich et al., 2014; Peterson et al., 2017), though this treatment does not address feared/actual discrepancies which may perhaps limit its efficacy. Finally, IBT (O'Connor et al., 2005), originally developed for OCD and adapted for EDs (Bertrand & O'Connor, 2009), includes a module that directly addresses the feared self. In this module, psychoeducation is provided pertaining to how identity disturbance can result in defining the self in terms of who a

person does not want to be/become (i.e., a feared self) as opposed to who they are/want to be (i.e., actual and ideal selves). In an accompanied writing exercise, clients are asked to articulate their feared selves and are then asked to re-state these descriptions in the affirmative (i.e., in terms of who they want to be), which also serves the purpose of bringing to the foreground the client's values and goals (O'Connor et al., 2005; Bertrand & O'Connor, 2009). As mentioned previously, there is some limited support for the efficacy of IBT in the treatment of EDs (Purcell Lalonde & O'Connor, 2015; Purcell Lalonde et al., 2016). Future studies should continue to investigate the efficacy of IBT and the integration of this promising strategy for targeting the fear of self in EDs.

Conclusion

The study of the fear of self may contribute to our understanding of the motivation underlying disordered eating behaviours. Variations in content and salience of feared self-themes may help to explain differences across individuals in terms of the development of EDs. Though there is a vast literature demonstrating that approach motivation (ideal/actual discrepancy, pursuit of thinness, etc.) is vitally important to the conceptualization of EDs, this review highlights the relevance of integrating avoidance motivation and the fear of self into our understanding of these disorders. There is evidence from studies employing self-report (ex: Aardema et al., 2018) and behavioural (ex: Dalley & Buunk, 2009) measures supporting the association between fear of self and EDs in clinical and analogue samples. Moreover, research adopting a self-discrepancy framework and studies examining motivation orientation lend support to the assertion that there is merit in exploring avoidance motivation, and particularly the fear of self. Using a transdiagnostic lens, evidence for the proposed etiological pathways of the

feared self in OCD were examined in EDs. Several points of similarity were noted suggesting the possibility that this construct may develop in a similar fashion in EDs as well.

Overall, the limited research available investigating fear of self in EDs suggests that it is a relevant construct in this population warranting further research. Future studies should aim to replicate and extend previous findings linking fear of self to EDs and specific symptoms. For example, a study that is currently underway is utilising a psychophysiological paradigm measuring both approach and avoidance responses to different body types and linking implicit reactions to explicit self-reported pursuit of thinness and fear of self (Wilson & Racine, in preparation). Finally, future research would benefit from the investigation of the construction of the feared self in EDs, specifically, examining self-themes that go beyond weight.

References

- Aardema, F., Moulding, R., Melli, G., Radomsky, A. S., Doron, G., Audet, J-S., & Purcell Lalonde, M. (2018). The role of feared possible selves in obsessive-compulsive and related disorders: A comparative analysis of a core cognitive self-construct in clinical samples. *Clinical Psychology and Psychotherapy*, 25, 19-29. doi: 10.1002/cpp.2121
- Aardema, F., Moulding, R., Radomsky, A. S., Doron, G., Allamby, J., & Souki, E. (2013). Fear of self and obsessionality: Development and validation of the fear of self questionnaire. *Journal of Obsessive-Compulsive and Related Disorders*, 2, 306-315. doi: 10.1016/j.jocrd.2013.05.005
- Aardema, F. & O'Connor, K. (2007). The menace within: Obsessions and the self. *Journal of Cognitive Psychotherapy: An International Quarterly*, 21, 182-197. doi: 10.1891/088983907781494573
- Aardema, F., & Wong, S. F. (2020). Feared possible selves in cognitive-behavioral theory: An analysis of its historical and empirical context, and introduction of a working model. *Journal of Obsessive-Compulsive and Related Disorders*, 24, e100479. doi: 10.1016/j.jocrd.2019.100479
- Altman, S. E. & Shankman, S. A. (2009). What is the association between obsessive-compulsive disorder and eating disorders? *Clinical Psychology Review*, 29, 638-646. doi: 10.1016/j.cpr. 2009.08.001
- Anton, S. D., Perri, M. G., & Riley, J. R. (2000). Discrepancy between actual and ideal body images. *Eating Behaviors*, 1, 153–160. doi: 10.1016/s1471-0153(00)00015-5
- Ata, R. N., & Thompson, J. K. (2010). Weight bias in the media: A review of recent research. *Obesity Facts*, 3, 41–46. doi: 10.1159/000276547

- Bacon, J., Scheltema, K., & Robinson, B. (2001). Fat phobia scale revisited: The short form. *International Journal of Obesity*, 25, 252–257. doi: 10.1038/sj.ijo.0801537
- Bailey, N., & Waller, G. (2017). Body checking in non-clinical women: Experimental evidence of a specific impact on fear of uncontrollable weight gain. *International Journal of Eating Disorders*, 50, 693–697. doi: 10.1002/eat.22676
- Bardone-Cone, A. M., Thompson, K. A., & Miller, A. J. (2018). The self and eating disorders. *Journal of Personality*, 88, 59–75. doi: 10.1111/jopy.12448
- Bartels, L. (2020). Weight stereotypes. In J. T. Nadler & E. C. Voyles (Eds.), *Stereotypes: The Incidence and Impacts of Bias* (pp. 226-242). California: Praeger Publishing.
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5, 323–370. doi: 10.1037/1089-2680.5.4.323
- Bellew, R., Gilbert, P., Mills, A., Mcewan, K., & Gale, C. (2006). Eating attitudes and striving to avoid inferiority. *Eating Disorders*, 14, 313–322. doi: 10.1080/10640260600796242
- Berg, C., & Larsson, C. (2020). Dieting, body weight concerns and health: trends and associations in Swedish schoolchildren. *BMC Public Health*, 20(187), 1-9. doi: 10.1186/s12889-020-8295-7
- Bertrand, A. & O'Connor, K. (2009). Manuel de traitement des troubles de l'alimentation par une thérapie cognitive: l'approche basée sur les inférences [Treatment manual for eating disorders using a cognitive therapy: The inference based approach]. Unpublished manuscript. Centre de recherche Fernand-Seguin, Montréal, Canada.
- Bertrand, A., Bélanger, C., & O'Connor, K. (2011). Troubles de l'alimentation et trouble obsessionnel-compulsif: Facteurs communs. *Santé Mentale au Québec*, 36, 149-179.

- Bhar, S. S., & Kyrios, M. (2007). An investigation of self-ambivalence in obsessive-compulsive disorder. *Behaviour Research and Therapy*, 45, 1845-1857. doi: 10.1016/j.brat.2007.02.005
- Bhar, S. S., Kyrios, M., & Hordern, C. (2015). Self-ambivalence in the cognitive-behavioural treatment of obsessive-compulsive disorder. *Psychopathology*, 48, 349-356. doi: 10.1159/000438676
- Bruch, H. (1982). Anorexia nervosa: Therapy and theory. *American Journal of Psychiatry*, 139, 1531-1538. doi: 10.1176/ajp.139.12.1531
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, 70, 141-156. doi: 10.1037/0022-3514.70.1.141
- Carey, M., & Preston, C. (2019). Investigating the components of body image disturbance within eating disorders. *Frontiers in Psychiatry*, 10(635), 1-15. doi: 10.3389/fpsy.2019.00635
- Carver, C. S., Lawrence, J. W., & Scheier, M. F. (1999). Self-Discrepancies and affect: Incorporating the role of feared selves. *Personality and Social Psychology Bulletin*, 25, 783-792. doi: 10.1177/0146167299025007002
- Cash, T. F. & Deagle, E. D. III. (1997). The nature and extent of body image disturbances in anorexia nervosa and bulimia nervosa: A meta-analysis. *International Journal of Eating Disorders*, 22, 107-125. doi: 10.1002/(sici)1098-108x(199709)22:2<107::aid-eat1>3.0.co;2-j

- Cheney, A. M., Sullivan, S., & Grubbs, K. (2018). The morality of disordered eating and recovery in southern Italy. *Medical Anthropology Quarterly*, 32, 443–457. doi: 10.1111/maq.12429
- Chernyak, Y., & Lowe, M. R. (2010). Motivations for dieting: Drive for thinness is different from drive for objective thinness. *Journal of Abnormal Psychology*, 119, 276–281. doi: 10.1037/a0018398
- Chow, C. M., Ruhl, H., Tan, C. C., & Ellis, L. (2017). Fear of fat and restrained eating: Negative body talk between female friends as a moderator. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 24, 1181–1188. doi: 10.1007/s40519-017-0459-9
- Clarke, J., Ramoz, N., Fladung, A.-K., & Gorwood, P. (2016). Higher reward value of starvation imagery in anorexia nervosa and association with the Val66Met BDNF polymorphism. *Translational Psychiatry*, 6(e829), 1-7. doi: 10.1038/tp.2016.98
- Cooper, M. (1997). Cognitive theory in anorexia nervosa and bulimia nervosa: A review. *Behavioural and Cognitive Psychotherapy*, 25, 113–145. doi: 10.1017/S1352465800018348
- Cooper, M., Cohen-Tovée, E., Todd, G., Wells, A., & Tovée, M. (1997). The eating disorder belief questionnaire: Preliminary development. *Behaviour Research and Therapy*, 35, 381–388. doi: 10.1016/s0005-7967(96)00115-5
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin? *Journal of Applied Developmental Psychology*, 19, 429–451. doi: 10.1016/S0193-3973(99)80049-5
- Cserjési, R., Vermeulen, N., Luminet, O., Marechal, C., Nef, F., Simon, Y., & Lénárd, L. (2010). Explicit vs. implicit body image evaluation in restrictive anorexia nervosa. *Psychiatry Research*, 175, 148–153. doi: 10.1016/j.psychres.2009.07.002

- Culbert, K. M., Racine, S. E., & Klump, K. L. (2015). Research Review: What we have learned about the causes of eating disorders - A synthesis of sociocultural, psychological, and biological research. *Journal of Child Psychology and Psychiatry*, 56, 1141–1164. doi: 10.1111/jcpp.12441
- Dalley, S. (2016). Does the salience of possible selves mediate the impact of approach and avoidance temperaments on women's weight-loss dieting? *Personality and Individual Differences*, 88, 267-271. doi: 10.1016/j.paid.2015.09.010
- Dalley, S. E., & Buunk, A. P. (2009). "Thinspiration" vs. "fear of fat". Using prototypes to predict frequent weight-loss dieting in females. *Appetite*, 52, 217-221. doi:10.1016/j.appet.2008.09.019
- Dalley, S. E., & Buunk, A. P. (2011). The motivation to diet in young women: Fear is stronger than hope. *European Journal of Social Psychology*, 41, 672-680. doi: 10.1002/ejsp.816
- Dalley, S. E., Pollet, T. V., & Vidal, J. (2013). Body size and body esteem in women: The mediating role of possible self expectancy. *Body Image*, 10, 411-414. doi: 10.1016/j.bodyim.2013.03.002
- Dalley, S. E., Toffanin, P., & Pollet, T. V. (2012). Dietary restraint in college women: Fear of an imperfect fat self is stronger than hope of a perfect thin self. *Body Image*, 9, 441-447. doi: 10.1016/j.bodyim.2012.06.005
- Dalley, S. E., & Vidal, J. (2013). Optimism and positive body image in women: The mediating role of the feared fat self. *Personality and Individual Differences*, 55, 465-468. doi: 10.1016/j.paid.2013.04.006
- Dodd, D. R., Velkoff, E. A., Forrest, L. N., Fussner, L. M., & Smith, A. (2017). Beauty in the eye of the beholder: Using facial electromyography to examine the association between

eating disorder symptoms and perceptions of emaciation among undergraduate women.

Body Image, 21, 47–56. doi: 10.1016/j.bodyim.2017.02.002

Dondzilo, L., Rieger, E., Jayawardena, N., & Bell, J. (2019). Drive for thinness versus fear of fat:

Approach and avoidance motivation regarding thin and non-thin images in women.

Cognitive Therapy and Research, 43, 585–593. doi: 10.1007/s10608-018-9989-3

Dondzilo, L., Rieger, E., Palermo, R., Byrne, S., & Bell, J. (2017). The mediating role of

rumination in the relation between attentional bias towards thin female bodies and eating disorder symptomatology. *PLOS ONE*, 12(5), e0177870. doi: 10.1371/journal.pone.

0177870

Doron, G. & Kyrios, M. (2005). Obsessive-compulsive disorder: a review of possible specific

internal representations within a broader cognitive theory. *Clinical Psychology Review*, 25,

415-432. doi: 10.1016/j.cpr.2005.02.002

Elliot, A. J., & Church, M. A. (2002). Client articulated avoidance goals in the therapy context.

Journal of Counseling Psychology, 49, 243–254. doi: 10.1037/0022-0167.49.2.243

Erikson, M. G., Hansson, B., & Lundblad, S. (2012). The possible selves of adult women with

anorexia nervosa. *Eating Disorders: The Journal of Treatment and Prevention*, 20, 288-299. doi: 10.1080/10640266.2012.689212

Espeset, E. M. S., Gulliksen, K. S. Nordbo, R. H. S., Skarderud, F., & Holte, A. (2012).

Fluctuations of body images in anorexia nervosa: Patients' perceptions of contextual triggers. *Clinical Psychology and Psychotherapy*, 19, 518-530. doi: 10.1002/cpp.760

Fiske, L., Fallon, E. A., Blissmer, B., & Redding, C. A. (2014). Prevalence of body

dissatisfaction among United States adults: Review and recommendations for future research. *Eating Behaviors*, 15, 357–365. doi: 10.1016/j.eatbeh.2014.04.010

- Formea, G. M. & Burns, G. L. (1995). Relation between the syndromes of bulimia nervosa and obsessive compulsive disorder. *Journal of Psychopathology and Behavioral Assessment*, 17, 167-176. doi: 10.1007/BF02229016
- Frank, G. K., & Treasure, J. (2016). Author's reply: Cognitive and emotional factors are involved in body image distortion. *Nature Reviews Disease Primers*, 16027. doi: 10.1038/nrdp.2016.27
- Girodo, M. (2003). Actual and possible body-image self-schemas in young women with bulimic tendencies. *Perceptual and Motor Skills*, 96, 1123. doi: 10.2466/pms.96.4.1123-1132
- Granberg, E. (2006). "Is That All There Is?" Possible selves, self-change, and weight loss. *Social Psychology Quarterly*, 69, 109–126. doi: 10.1177/019027250606900201
- Gray, J. A. (1991). The neuropsychology of temperament. In J. Strelau, & A. Angleitner (Eds.). *Explorations in temperament: International perspectives on theory and measurement* (pp. 105–128). New York: Plenum.
- Gruber, A. J., Pope, H. G., Lalonde, J. K., & Hudson, J. I. (2001). Why do young women diet? The roles of body fat, body perception, and body ideal. *The Journal of Clinical Psychiatry*, 62, 609–611. doi: 10.4088/jcp.v62n0806
- Harrison, A., Treasure, J., & Smillie, L. D. (2011). Approach and avoidance motivation in eating disorders. *Psychiatry Research*, 188, 396–401. doi: 10.1016/j.psychres.2011.04.022
- Heppen, J. B., & Ogilvie, D. M. (2003). Predicting affect from global self-discrepancies: The dual role of the undesired self. *Journal of Social and Clinical Psychology*, 22, 347–368. doi: 10.1521/jscp.22.4.347.22898
- Heron, K. E., & Smyth, J. M. (2013). Body image discrepancy and negative affect in women's everyday lives: An ecological momentary assessment evaluation of self-discrepancy

- theory. *Journal of Social and Clinical Psychology*, 32, 276–295. doi: 10.1521/jscp.2013.32.3.276
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94, 319 – 340. doi: 10.1037/0033-295X.94.3.319
- Hohlstein, L. A., Smith, G. T., & Atlas, J. G. (1998). An application of expectancy theory to eating disorders: Development and validation of measures of eating and dieting expectancies. *Psychological Assessment*, 10, 49–58. doi: 10.1037/1040-3590.10.1.49
- Keel, P. K. (2005). Are eating disorders culture-bound syndromes? In *Eating Disorders* (pp. 13-31). Upper Saddle River, NJ: Pearson Prentice Hall.
- Keery, H., Boutelle, K., van den Berg, P., Thompson, J. K. (2005). The impact of appearance-related teasing by family members. *Journal of Adolescent Health*, 37, 120-127. doi: 10.1016/j.jadohealth.2004.08.015
- Latner, J. D. (2008). Body checking and avoidance among behavioral weight-loss participants. *Body Image*, 5, 91–98. doi: 10.1016/j.bodyim.2007.08.001
- Levinson, C. A., Brosos, L. C., Ma, J., Fewell, L., & Lenze, E. J. (2017). Fear of food prospectively predicts drive for thinness in an eating disorder sample recently discharged from intensive treatment. *Eating Behaviors*, 27, 45–51. doi: 10.1016/j.eatbeh.2017.11.004
- Levinson, C. A., Rapp, J., & Riley, E. N. (2014). Addressing the fear of fat: Extending imaginal exposure therapy for anxiety disorders to anorexia nervosa. *Eating and Weight Disorders*, 19, 521–524. doi: 10.1007/s40519-014-0115-6.
- Levinson, C. A., Vanzhula, I. A., & Christian, C. (2019). Development and validation of the eating disorder fear questionnaire and interview: Preliminary investigation of eating disorder fears. *Eating Behaviors*, 35, 101320. doi: 10.1016/j.eatbeh.2019.101320

- Levitt, D. H. (2003). Drive for thinness and fear of fat: Separate yet related constructs? *Eating Disorders, 11*, 221–234. doi: 10.1080/10640260390218729
- Lipson, S., & Sonnevile, K. (2017). Eating disorder symptoms among undergraduate and graduate students at 12 U.S. colleges and universities. *Eating Behaviors, 24*, 81–88. doi: 10.1016/j.eatbeh.2016.12.003
- Macleod, J. S., Macleod, C., Dondzilo, L., & Bell, J. (2019). The role of fear of fatness and avoidance of fatness in predicting eating restraint. *Cognitive Therapy and Research, 44*, 196–207. doi: 10.1007/s10608-019-10052-9
- Mason, T. B., Lavender, J. M., Wonderlich, S. A., Crosby, R. D., Engel, S. G., Strauman, T. J., ... Peterson, C. B. (2016). Self-discrepancy and eating disorder symptoms across eating disorder diagnostic groups. *European Eating Disorders Review, 24*, 541–545. doi: 10.1002/erv.2483
- Mason, T. B., Smith, K. E., Engwall, A., Lass, A., Mead, M., Sorby, M., ... Wonderlich, S. (2019). Self-discrepancy theory as a transdiagnostic framework: A meta-analysis of self-discrepancy and psychopathology. *Psychological Bulletin, 145*, 372–389. doi: 10.1037/bul0000186
- Markus, H. & Nurius, P. (1986). Possible selves. *American Psychologist, 41*, 954–969. doi: 10.1037//0003-066X.41.9.954
- Milos, G., Baur, V., Schumacher, S., Kuenzli, C., Schnyder, U., Mueller-Pfeiffer, C., & Martin-Soelch, C. (2017). How fat will it make me? Estimation of weight gain in anorexia nervosa. *Appetite, 114*, 368–373. doi: 10.1016/j.appet.2017.04.002
- Mussap, A. J. (2007). Motivational processes associated with unhealthy body change attitudes and behaviours. *Eating Behaviors, 8*, 423–428. doi: 10.1016/j.eatbeh.2006.12.001

- O'Connor, K., Aardema, F., & Pélissier, M. C. (2005). *Beyond reasonable doubt: Reasoning processes in obsessive-compulsive and related disorders*. Chichester, UK: Wiley & Sons.
- Ogilvie, D. M. (1987). The undesired self: A neglected variable in personality research. *Journal of Personality and Social Psychology*, 52, 379-385. doi: 10.1037/0022-3514.52.2.379
- Perera-Delcourt, R., Nash, R. A., & Thorpe, S. J. (2014). Priming moral self-ambivalence heightens deliberative behaviour in self-ambivalent individuals. *Behavioural and Cognitive Psychotherapy*, 42, 682–692. doi: 10.1017/s1352465813000507
- Peterson, C. B., Berg, K. C., Crosby, R. D., Lavender, J. M., Accurso, E. C., Ciao, A. C., ... Wonderlich, S. A. (2017). The effects of psychotherapy treatment on outcome in bulimia nervosa: Examining indirect effects through emotion regulation, self-directed behavior, and self-discrepancy within the mediation model. *International Journal of Eating Disorders*, 50, 636–647. doi: 10.1002/eat.22669
- Pigott, T. A., Altemus, M., Rubenstein, C. S., Hill, J. L., Bihari, K., & L'Heureux, F. ... Murphy, D. L. (1991). Symptoms of eating disorders in patients with obsessive-compulsive disorder. *American Journal of Psychiatry*, 148, 1552-1557. doi: 10.1176/ajp.148.11.1552
- Piran, N. (2001). Reinhabiting the body. *Feminism & Psychology*, 11, 172–176. doi: 10.1177/0959353501011002006
- Purcell Lalonde, M., & O'Connor, K. (2015). Food for thought: Change in ego-dystonicity and fear of self in bulimia nervosa over the course of inference based treatment. *Journal of Psychology and Clinical Psychiatry*, 3(3), 1-10. doi: 10.15406/jpcpy.2015.03.00133
- Purcell Lalonde, M. & O'Connor, K., Aardema, F. & Coelho, J. S. (2015). Food for thought: Ego-dystonicity and fear of self in eating disorders. *European Eating Disorders Review*, 23, 179-184. doi: 10.1002/erv.2349

- Purcell Lalonde, M., O'Connor, K., St-Pierre Delorme, M. E., Perreault, V., & Wilson, S. (2016). Diet and Doubt: A Clinical Case Study of Inference-Based Therapy for Bulimia Nervosa. *Journal of Cognitive Psychotherapy*, 30(4), 1-14. doi: 10.1891/0889-8391.30.4.263
- Rodgers, R. F., DuBois, R., Frumkin, M. R., & Robinaugh, D. J. (2018). A network approach to eating disorder symptomatology: Do desire for thinness and fear of gaining weight play unique roles in the network? *Body Image*, 27, 1–9. doi: 10.1016/j.bodyim.2018.07.004
- Schwartz, M. B., Vartanian, L. R., Nosek, B. A., & Brownell, K. D. (2006). The influence of one's own body weight on implicit and explicit anti-fat bias. *Obesity*, 14, 440–447. doi: 10.1038/oby.2006.58
- Shafran, R. (2002). Eating disorders. In R. O. Frost and G. Steketee (Eds.), *Cognitive approaches to obsessions and compulsions: Theory, assessment, and treatment* (pp. 215-232). Oxford: Pergamon/Elsevier Science Inc.
- Shafran, R., Teachman, B. A., Kerry, S., & Rachman, S. (1999). A cognitive distortion associated with eating disorders: Thought-shape fusion. *British Journal of Clinical Psychology*, 38, 167-179. doi: 10.1348/014466599162728
- Slof-Op 't Landt, M. C. T., van Furth, E. F., van Beijsterveldt, C. E. M., Bartels, M., Willemsen, G., de Geus, E. J., ... Boomsma, D. I. (2017). Prevalence of dieting and fear of weight gain across ages: a community sample from adolescents to the elderly. *International Journal of Public Health*, 62, 911–919. doi: 10.1007/s00038-017-0948-7
- Spring, V. L., & Bulik, C. M. (2014). Implicit and explicit affect toward food and weight stimuli in anorexia nervosa. *Eating Behaviors*, 15, 91–94. doi: 10.1016/j.eatbeh.2013.10.017

- Stein, K. F., & Corte, C. (2007). Identity impairment and the eating disorders: Content and organization of the self-concept in women with anorexia nervosa and bulimia nervosa. *European Eating Disorders Review*, 15, 58–69. doi: 10.1002/erv.726
- Stein, K. F., & Corte, C. (2008). The identity impairment model: A longitudinal study of self-Schemas as predictors of disordered eating behaviors. *Nursing Research*, 57, 182–190. doi: 10.1097/01.nnr.0000319494.21628.08
- Stein, K. F., & Markus, H. R. (1996). The role of the self in behavioral change. *Journal of Psychotherapy Integration*, 6, 349–384. doi: 10.1037/h0101118
- Sternheim, L., Startup, H., & Schmidt, U. (2011). An experimental exploration of behavioural and cognitive-emotional aspects of intolerance of uncertainty in eating disorder patients. *Journal of Anxiety Disorders*, 25, 806–812. doi: 10.1016/j.janxdis.2011.03.020
- Stice, E., Gau, J. M., Rohde, P., & Shaw, H. (2017). Risk factors that predict future onset of each DSM–5 eating disorder: Predictive specificity in high-risk adolescent females. *Journal of Abnormal Psychology*, 126, 38–51. doi: 10.1037/abn0000219
- Stice, E., & Ryzin, M. J. V. (2019). A prospective test of the temporal sequencing of risk factor emergence in the dual pathway model of eating disorders. *Journal of Abnormal Psychology*, 128, 119–128. doi: 10.1037/abn0000400
- Strauman, T. J., Vookles, J., Berenstein, V., Chaiken, S., & Higgins, E. T. (1991). Self-discrepancies and vulnerability to body dissatisfaction and disordered eating. *Journal of Personality and Social Psychology*, 61, 946–956. doi: 10.1037/0022-3514.61.6.946
- Thompson, J. K., & Stice, E. (2001). Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. *Current Directions in Psychological Science*, 10, 181–183. doi: 10.1111/1467-8721.00144

- Udo, T., & Grilo, C. M. (2018). Prevalence and correlates of DSM-5–defined eating disorders in a nationally representative sample of U.S. adults. *Biological Psychiatry*, 84, 345–354. doi: 10.1016/j.biopsych.2018.03.014
- Vartanian, L. R. (2009). When the body defines the self: Self-concept clarity, internalization, and body image. *Journal of Social and Clinical Psychology*, 28, 94-126. doi: 10.1521/jscp.2009.28.1.94
- Vartanian, L. R., & Dey, S. (2013). Self-concept clarity, thin-ideal internalization, and appearance-related social comparisons as predictors of body dissatisfaction. *Body Image*, 10, 495–500. doi: 10.1016/j.bodyim.2013.05.004
- Vartanian, L. R., Foreich, F. V., & Smyth, J. M. (2016). A serial mediation model testing early adversity, self-concept clarity, and thin-ideal internalization as predictors of body dissatisfaction. *Body Image*, 19, 98–103. doi: 10.1016/j.bodyim.2016.08.013
- Verschueren, M., Luyckx, K., Kaufman, E. A., Vansteenkiste, M., Moons, P., Sleuwaegen, E., ... Claes, L. (2017). Identity processes and statuses in patients with and without eating disorders. *European Eating Disorders Review*, 25, 26–35. doi: 10.1002/erv.2487
- Vitousek, K. B., & Ewald, L. S. (1993). Self-representation in the eating disorders: A cognitive perspective. In Z. Segal, & S. Blatt (Eds.), *The self in emotional disorders: Cognitive and psychodynamic perspective* (pp. 221–257). New York: Guilford Press.
- Vitousek, K. B., & Hollon, S. D. (1990). The investigation of schematic content and processing in eating disorders. *Cognitive Therapy and Research*, 14, 191-214. doi: 10.1007/BF01176209

- Waller, G., Babbs, M., Milligan, R., Meyer, C., Ohanian, V., & Leung, N. (2003). Anger and core beliefs in the eating disorders. *International Journal of Eating Disorders*, 34, 118-124. doi: 10.1002/eat.10163
- Waller, G., Ohanian, V., Meyer, C., & Osman, S. (2000). Cognitive content among bulimic women: The role of core beliefs. *International Journal of Eating Disorders*, 28, 235–241. doi: 10.1002/1098-108x(200009)28:2<235::aid-eat15>3.0.co;2-1
- Wertheim, E., Paxton, S., Schutz, H., & Muir, S. (1997). Why do adolescent girls watch their weight? An interview study examining sociocultural pressures to be thin. *Journal of Psychosomatic Research*, 42, 345–355. doi: 10.1016/s0022-3999(96)00368-6
- Williams, O., & Annandale, E. (2019). Weight bias internalization as an embodied process: Understanding how obesity stigma gets under the skin. *Frontiers in Psychology*, 10, 1-5. doi: 10.3389/fpsyg.2019.00953
- Williamson, D. A., Womble, L. G., Smeets, M. A., Netemeyer, R. G., Thaw, J. M., Kutlesic, V., & Gleaves, D. H. (2002). Latent structure of eating disorder symptoms: A factor analytic and taxometric investigation. *American Journal of Psychiatry*, 159, 412–418. doi: 10.1176/appi.ajp.159.3.412
- Wilson, S., Aardema, F., & O'Connor, K. (2017). Doubt and fear of self in bulimia nervosa. *International Journal of Eating Disorders*, 50, 1437-1441. doi: 10.1002/eat.22789
- Wilson, S., Aardema, F., & O'Connor, K. (2018a). Possibility-based information elicits doubt in bulimia nervosa: A study of inductive reasoning. *International Journal of Cognitive Therapy*, 11, 410-420. doi: 10.1007/s41811-018-0032-y

- Wilson, S., Aardema, F., & O'Connor, K. (2018b). What do I look like? Perceptual confidence in bulimia nervosa. *Eating and Weight Disorders*, 25, 177-183. doi: 10.1007/s40519-018-0542-x
- Wheeler, H. A., Adams, G. R., & Keating, L. (2001). Binge eating as a means for evading identity issues: The association between an avoidance identity style and bulimic behavior. *Identity*, 1, 161–178. 10.1207/S1532706XID0102_04.
- Wonderlich, S. A., Peterson, C. B., Crosby, R. D., Smith, T. L., Klein, M. H., Mitchell, J. E., & Crow, S. J. (2014). A randomized controlled comparison of integrative cognitive-affective therapy (ICAT) and enhanced cognitive-behavioral therapy (CBT-E) for bulimia nervosa. *Psychological Medicine*, 44, 543–553. doi: 10.1017/s0033291713001098
- Woodman, T., & Hemmings, S. (2008). Body image self-discrepancies and affect: Exploring the feared body self. *Self and Identity*, 7, 413–429. doi: 10.1080/15298860701800225
- Woodman, T., & Steer, R. (2011). Body self-discrepancies and women's social physique anxiety: The moderating role of the feared body. *British Journal of Psychology*, 102, 147–160. doi: 10.1348/000712610x507821
- Woud, M. L., Anschutz, D. J., Strien, T. V., & Becker, E. S. (2011). Measuring thinspiration and fear of fat indirectly. A matter of approach and avoidance. *Appetite*, 56, 451–455. doi: 10.1016/j.appet.2010.12.012