Academic/Research Article

The role of body image in eating disorders and disordered eating among midlife and older women: A biopsychosocial perspective

By Susi Lodola



The relationship between body image, body satisfaction, and disordered eating in midlife and older women is explored through a biopsychosocial lens. The discussion highlights how societal beauty ideals and ageing-related changes contribute to these challenges and it examines evidence-based approaches to support well-being in this population

Introduction

Body image and body satisfaction are central to an individual's self-concept and significantly impact overall psychological wellbeing (Merino et al., 2024). Body

image refers to an individual's perceptions, thoughts, and feelings about their physical appearance, while body dissatisfaction emerges when there is a perceived gap between one's actual body and

an idealised version of it, often shaped by societal and cultural standards (Quittkat et al., 2019). This dissatisfaction not only affects mental health but also plays a pivotal role in the development of disordered eating (DE) and eating disorders (ED). Consequently, people who are dissatisfied with their bodies are likely to be at greater risk for psychological distress.

The distinction between clinically diagnosed DE behaviours and EDs is well-documented in academic literature. EDs are recognised mental health conditions with specific diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM–5; American Psychiatric Association, 2013). In contrast, DE encompasses a range of irregular eating behaviours that may not meet these criteria but can still negatively impact physical and mental health.

While these issues are well-researched in younger women, there remains a gap in understanding how they affect midlife and older women (Hockey et al., 2021). This article seeks to address the prevalence and impact of body dissatisfaction on EDs and DE among midlife and older women, examining contributing factors through a biopsychosocial lens, and evaluating evidence-based treatment strategies.



Prevalence

The prevalence of EDs and DE among midlife and older women has been steadily increasing, yet these issues remain underdiagnosed (Samuels et al., 2019). Mangweth-Matzek and Hoek (2017) suggest that ageism and societal perceptions play a significant role in the under-diagnosis and under-treatment of EDs in older women. They highlight the need for more inclusive diagnostic criteria and treatment approaches that account for the unique experiences of ageing women. These findings underscore the importance of addressing agerelated barriers to ensure that older women receive appropriate and effective care for EDs.

Body dissatisfaction remains a significant driver of DE and EDs, with patterns in midlife women closely mirroring those seen in younger populations (Samuels et al., 2019). It has been suggested that the psychological and physical changes associated with ageing and menopause may parallel the changes associated with puberty, producing eating and weight-related concerns that are similar in the different age groups of women (Gupta & Schork, 1993). Large-scale studies underscore the widespread nature of these challenges. The Gender and Body Image (GABI) Study (Gagne et al., 2012) surveyed over 1,800 women aged 50 and older and found that 61.8% reported concerns related to eating, weight, or shape, with 70% expressing dissatisfaction with their current weight and shape compared to their younger years.

Similarly, a survey by Mangweth-Matzek et al. (2006) surveyed over 1,000 women aged 60–70 and found that nearly 90% felt "very" or "moderately" fat. This was irrespective of their body mass index (BMI), a standard measure that uses weight and height to estimate body fat. Additionally, 45.2% reported that their self-esteem was closely tied to their weight and shape,

underscoring the strong connection between body image and self-worth. Even among women with a BMI classified as "normal" (18.5-24.9), 50.6% reported body dissatisfaction, suggesting that concerns about body image are pervasive and not limited to any specific weight category. This concern is further reflected in a large-scale study of over 31,000 participants, which found that dieting behaviours were most prevalent among women aged 35-65 years, illustrating how dissatisfaction with body image influences behaviours across a broad age range (Slof-Op't Landt et al., 2017).

In contrast, a more recent longitudinal study involving over 15,000 adults (63% of whom were women) by Hockey et al. (2021) identified a slight increase in body satisfaction among women, particularly beyond the age of 60. One explanation offered for this stabilisation of body image concerns is the influence of shifting societal trends (Hockey et al., 2021). Over the past two decades, feminist perspectives have increasingly challenged societal beauty ideals, aiming to disconnect a woman's worth from her appearance (Murnen & Smolak, 2009) and promote inclusivity and body acceptance (Bacon & Aphramor, 2011; Wood-Barcalow et al., 2010).

Body image and body dissatisfaction: A biopsychosocial view

The biopsychosocial model provides a holistic approach to understanding the link between body dissatisfaction and DE and EDs. This framework moves beyond single-cause explanations, showing how physical changes, emotional vulnerabilities, and societal influences work together to shape body image concerns.

Biological factors

Research indicates that BMI is a significant biological factor

influencing body dissatisfaction, dieting behaviours, and problematic eating patterns in midlife women. Women with higher BMI are more likely to report a stronger drive for thinness, greater body shame, increased dieting behaviours, and heightened preoccupation with food (Forrester-Knauss & Zemp Stutz, 2012; Gagne et al., 2012; Sarwer et al., 2005; Tiggemann, 2004). These patterns are not limited to midlife women; Hockey et al. (2021) found similar links between BMI, body dissatisfaction, and unhealthy eating behaviours across a broader adult population, emphasising that these challenges are widespread across different age groups.

In addition, hormonal changes during menopause, particularly the decline in oestrogen levels, contribute to shifts in fat distribution. such as increased abdominal fat. which can heighten body image concerns among postmenopausal women (Lovejoy et al., 2008). Similar to the pubescent transition from childhood to adulthood, the shift from reproductive years to menopause is proposed to be a high-risk phase where body dissatisfaction and related symptoms are particularly likely to emerge (Baker & Runfola, 2016).

These physical changes, combined with menopausal symptoms such as vasomotor symptoms (e.g., hot flushes and night sweats) and psychological issues, have been strongly associated with heightened body dissatisfaction (Becker et al., 2001). Chronic illnesses, mobility limitations, pain, and declining physical abilities further exacerbate negative body perceptions and impact overall well-being (Clarke et al., 2008).

Furthermore, neurobiological factors may also influence body dissatisfaction in ageing women. Although much of the research has focused on younger populations, where neurotransmitter imbalances



such as serotonin and dopamine are linked to body dissatisfaction and eating disorders (Kaye et al., 2013), it is plausible that similar mechanisms are at play in older women.

Psychological factors

Depression and anxiety can serve as both triggers and consequences of body dissatisfaction, creating a self-perpetuating cycle that reinforces DE behaviours (Sharpe et al., 2018). This cycle can be further perpetuated by negative self-talk (Keel et al., 2007), with women internalising harsh criticisms of their appearance, leading to diminished self-esteem and greater body dissatisfaction (Liechty & Yarnal, 2010).

This internalised criticism often extends beyond appearance to behaviours, as shown by Cash and Pruzinsky's (2005) exploration of food moralisation. Societal norms that categorise foods as "good" or "bad" can lead women to internalise blame when they perceive themselves as failing to adhere to restrictive dietary standards. Such moral judgments reinforce feelings of guilt and shame, deepening the cycle of self-criticism and psychological distress that perpetuates body dissatisfaction and DE.

A systematic review by Slevec and Tiggemann (2011) explored predictors of body dissatisfaction and DE in middle-aged women, identifying key contributors such as depression and anxiety. The findings highlight the significant role of psychological factors in shaping these issues in this demographic.

Building on this, Jackson et al. (2014) examined the relationship between body image dissatisfaction and depression in a diverse cohort of 405 women aged 42–52. The study found that women dissatisfied with their body image were nearly twice as likely to experience

clinically significant depressive symptoms compared to those satisfied with their appearance, regardless of racial background.

More recently, Kilpela et al. (2023) investigated the longitudinal associations between body dissatisfaction and health and wellness behaviours in women aged 50 and above. Their findings revealed that higher levels of body dissatisfaction were strongly linked to increased depressive symptoms and poorer health-related quality of life over time, underscoring the enduring impact of body image concerns on mental health and wellbeing in later life.

Additionally, ageing anxiety has been identified as a significant contributor to body dissatisfaction and mental health challenges among midlife and older women. A study of 331 women aged 45-65 revealed that higher levels of ageing anxiety and body dissatisfaction were strong predictors of depression (Carrard et al., 2019).

Social factors

To explore the causes and effects of thin-ideal internalisation and body image concerns, it is helpful to draw on established theoretical models. The Tripartite Influence Model (TIM: Thompson et al., 1999), a widely validated sociocultural framework for understanding body dissatisfaction, suggests that societal beauty ideals are primarily transmitted and reinforced by three key sociocultural influences: peers, family, and the media. These influences promote thin-ideal internalisation and appearance-based social comparisons, both of which can intensify body dissatisfaction. Body dissatisfaction is, in turn, linked to DE and subsequent psychological distress. Hockey et al. (2021) applied the TIM in a study of 206 women aged 40-55, finding that media pressures drive appearance comparisons and the internalisation

of thin ideals, ultimately increasing body dissatisfaction. Notably, Hockey et al. (2021) found that family pressure directly predicted body dissatisfaction, bypassing appearance comparisons and thinideal internalisation. These findings suggest that family dynamics play a distinct and significant role in midlife women's body image issues and should be considered in treatment interventions. The emphasis on thinness, youthfulness, and specific body proportions creates an ideal that is continuously amplified by media and advertising, setting unattainable benchmarks for appearance (Goldbach et al., 2022). Reinforced by cultural narratives, these ideals shape women's selfperception, often linking self-worth to physical appearance. As women age and their appearance increasingly diverges from these societal standards, feelings of inadequacy can intensify (Clarke, 2001).

Media plays a particularly profound role in shaping women's body image. From traditional outlets, such as fashion magazines, to newer platforms, such as social media, women are inundated with images of idealised body types, often digitally manipulated to convey perfection (Barene et al., 2022). Such comparisons frequently result in body dissatisfaction, driving cycles of negative self-evaluation and unhealthy behaviours in the pursuit of unattainable ideals (Grabe et al., 2008).

Neoliberal and ageist narratives further intensify these challenges by promoting the notion that ageing equates to a decline in health and vitality. Such narratives encourage behaviours like restrictive dieting or anti-ageing treatments, not only to maintain health but also to delay visible signs of ageing (Laliberte Rudman, 2015). While some practices, such as healthy eating and physical activity, offer benefits, they may lead to heightened body



monitoring and appearance anxiety. These behaviours can drive unhealthy patterns, including restrictive dieting and social withdrawal, contributing to further psychological distress (Zhao et al., 2024).

While societal pressures can significantly contribute to body dissatisfaction and related mental health challenges, the role of social support networks in mitigating these effects is critical. For example, Fairweather-Schmidt et al. (2014) found that social support mediated the relationship between DE and quality of life (QoL), underscoring the importance of fostering strong support systems to buffer against the negative impacts of societal ideals.

Eating disorders and disordered eating in midlife

A lifetime of engaging with diet culture and internalising societal ideals has normalised DE for many women. This persistent "language of fat", as Samuels et al. (2019) describe, coupled with biological, psychological, and social influences, perpetuates body dissatisfaction and DE in later life.

When examining EDs in later life, researchers have identified three primary pathways: chronic, lifelong EDs, where the disorder persists from adolescence or early adulthood into later years; remission-relapse cycles, where individuals experience periods of recovery interspersed with episodes of recurrence; and late-onset EDs, which typically emerge in midlife or later adulthood, often triggered by significant life transitions such as menopause, divorce, or the loss of a loved one (Baker et al., 2019).

Pruis and Janowsky (2010) found that women aged 45–60 who reported higher levels of body dissatisfaction were more likely to engage in behaviours such as binge eating and restrictive dieting in an attempt to regain

control over their changing bodies. Similarly, Mangweth-Matzek et al. (2006) demonstrated that body dissatisfaction in older women frequently leads to unhealthy DE behaviours, such as extreme dieting or purging. The GABI study further highlighted the prevalence of DE in midlife women, when Gagne et al. (2012) reported that many participants engaged in frequent weight loss attempts and restrictive dieting and, in some cases, resorted to unhealthy methods such as use of laxatives and diuretics.

The lasting impact of DE on QoL has been well-documented in longitudinal research. Fairweather-Schmidt et al. (2014) conducted a 14-year study of over 12,000 women and found that those experiencing DE consistently reported poorer mental and physical QoL compared to those without DE. This was particularly significant in midlife women, who faced declining physical health compounded by depressive symptoms. Supporting this, Hilbert et al. (2012) identified a second peak in DE behaviours among women aged 45-55, suggesting that midlife represents a vulnerable period for the resurgence of EDs.

Treatment

Addressing body dissatisfaction requires a comprehensive approach that integrates biological, psychological, and social factors (Guest et al., 2022). The following section examines a range of evidence-based treatment options aimed at addressing these interconnected factors.

Cognitive Behavioural Therapy (CBT)

CBT has been identified as providing effective interventions for improving not only body image and reducing DE, but also addressing a variety of other mental health concerns (Zhao &

Yin, 2024). Interventions focus on challenging distorted beliefs by applying Socratic questioning and using behavioural experiments. One example of a behavioural experiment is mirror exposure (González-Sánchez et al., 2024) which directly addresses body image concerns by guiding participants to view themselves in a mirror while practicing neutral or positive self-talk.

CBT for Eating Disorders (CBT-E), recognised for its transdiagnostic effectiveness, is particularly suited to addressing a wide range of ED symptoms (Fairburn, 2008). Clinical interventions may benefit from targeting appearance comparisons and thin-ideal internalisation to mitigate their negative effects. Cognitive dissonance-based programmes have been shown to reduce thin-ideal internalisation, body dissatisfaction, dieting behaviours, and bulimic symptoms in younger women (McLean et al., 2011; Stice et al., 2000).

Acceptance and Commitment Therapy (ACT)

ACT complements CBT by encouraging women to accept their thoughts and feelings about ageing and appearance without judgment, while committing to values-based actions. For example, ACT uses mindfulness exercises, such as observing body sensations without labelling them as "good" or "bad", to reduce the emotional intensity of body image concerns (Seekis et al., 2020).

Research demonstrates that the ability to experience body-related thoughts without acting on or avoiding them is associated with greater self-compassion and, this ability – which emphasises how individuals relate to their thoughts rather than their content – can reduce reliance on maladaptive behaviours such as restriction or binge eating (Hayes, 2004),



Interpersonal psychotherapy (IPT)

IPT can address body image concerns by focusing on interpersonal factors that influence self-perception, helping individuals understand how social interactions and societal expectations impact their body image. By exploring and improving relationships, this approach fosters healthier interpersonal dynamics to enhance self-esteem and reduce body dissatisfaction (Duffy et al., 2021).

Mind-body interventions

Interventions such as yoga practices and dance movements that emphasise mindfulness, breathwork, and gentle movement have been shown to improve body satisfaction and reduce anxiety (Tylka, 2019).

Psychoeducation

Psychoeducation plays a vital role in addressing body image concerns and DE by empowering individuals through improving knowledge about the psychological, biological, and social influences on their mental health. Providing information about societal pressures, such as unrealistic beauty ideals and the pervasive impact of diet culture, helps individuals critically evaluate the external influences contributing to their body dissatisfaction (Cash & Pruzinsky, 2005).

Furthermore, educating women about the natural changes associated with ageing, such as hormonal shifts and changes in body composition and their impact on mental health, can reduce anxiety and foster acceptance (Gupta & Schork, 1993). By understanding how psychological factors, like negative self-talk and anxiety, exacerbate body image distress, women can begin to break harmful thought patterns (Government Equalities Office, 2021).

Compassion focused therapy (CFT)

People with body image issues often struggle with feelings of shame, self-blame, and a harsh inner critic. CFT (Gilbert & Simos, 2022) works to counteract these patterns by encouraging individuals to develop a compassionate inner voice, which promotes acceptance and understanding toward their bodies.

Group therapy

Group therapy has been shown to be effective in addressing body image concerns and various mental health issues among women. For instance, a study by Mehrabi et al. (2024) evaluated the impact of group CFT on body image and interpersonal stress among women with breast cancer. The findings indicated that group CFT significantly improved body image and reduced interpersonal stress in the participants.

Nutritional guidance

Psychotherapists can provide a space for clients to discuss healthy nutrition but should refer clients to a nutrition expert should personalised, evidence-based dietary advice be required. Such experts can help women better understand the physiological changes that come with ageing.

Hormone replacement therapy (HRT)

HRT may address menopausal symptoms like mood changes and body composition shifts, which contribute to body dissatisfaction. Consultation with a GP is necessary to ensure HRT is safe and appropriate, making it a potential component in a holistic treatment approach.

Screening and outcome measures

Screening for EDs and body image issues can be a valuable tool in identifying concerns early and enabling timely intervention,

particularly for older women who may not recognise their symptoms. Instruments such as the Screen for Disordered Eating (SDE) assess emotional eating, control over eating, and distorted self-perceptions (Maguen et al., 2018). The Body Image Disturbance Questionnaire (BIDQ; Cash et al., 2004) evaluates negative body image, appearance investment, and functional impairments due to body image concerns.

Part of evidence-based best practice and treatment is incorporating validated outcome measures to monitor the effectiveness of interventions. Examples of measures that can be used to evaluate eating behaviours and body image concerns include the Eating Disorder-15 (ED-15; Tatham et al., 2015), Binge Eating Scale (BES; Gormally et al., 1982), Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008) and the Body Shape Questionnaire (BSQ; Cooper et al., 1987).

Additionally, tools like the Beck Depression Inventory (BDI-II; Beck et al., 1996) and the Generalised Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006) effectively assess co-occurring psychological issues.

Conclusion

Body dissatisfaction, mental health challenges, and DE form a deeply interconnected cycle that significantly impacts the well-being of midlife and older women. The biopsychosocial model provides a comprehensive framework for understanding the complex interplay between biological, psychological, and social factors contributing to these issues. Biological changes, such as menopause-related hormonal shifts and age-related weight redistribution, intersect with psychological vulnerabilities like negative self-talk and anxiety, as well as social pressures rooted in



unattainable beauty standards. Together, these factors amplify body dissatisfaction and drive DE behaviours.

Effective treatment requires a multifaceted, evidence-based approach that addresses these interconnected dimensions. Additionally, therapists must remain mindful of client nondisclosure, approaching the topic of body image and EDs with sensitivity and trust-building to uncover underlying concerns. Incorporating validated outcome measures further enhances the effectiveness of interventions, providing essential feedback to tailor treatment approaches. Ultimately, addressing body dissatisfaction and its associated challenges is not just about improving physical and psychological outcomes but also about empowering midlife and older women to redefine their sense of self-worth beyond societal standards of appearance. A holistic and compassionate approach to treatment has the potential to foster long-lasting resilience, enhance QoL, and support women in navigating the complex interplay between body image, mental health, and ageing. \bigcirc

Susi Lodola

Susi Lodola is an IACP-accredited psychotherapist working in private practice with adults and teens. She is also a clinical supervisor and a lecturer at IICP College. Alongside an MSc in CBT and Motivational Interviewing, Susi obtained a degree in psychotherapy from IICP and a degree in psychology from University College Dublin.

Contact Susi at info@susilodolacounselling.com or visit her website www.susilodolacounselling.com

REFERENCES

- American Psychiatric Association. (2013). *Diagnostic* and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596
- Baker, J. H. & Runfola, C. D. (2016). Eating disorders in midlife women: A perimenopausal eating disorder hypothesis. *Eating Disorders*, 24(1), 1–10. https:// doi.org/10.1016/j.maturitas.2015.12.017
- Baker, J. H., Eisenlohr-Moul, T., Wu, Y. K., Schiller, C. E., Bulik, C. M. & Girdler, S. S. (2019). Ovarian hormones influence eating disorder symptom variability during the menopause transition: A pilot study. *Eating Behaviors*, 35, 101337. https://doi. org/10.1016/j.eatbeh.2019.101337
- Bacon, L. & Aphramor, L. (2011). Weight science: Evaluating the evidence for a paradigm shift. *Nutrition Journal*, 10, 9. https://doi.org/10.1186/1475-2891-10-9
- Barene, S., Ruud-Tronsmoen, A. & Johansen, P. F. (2022). Associations between demographic characteristics, lifestyle factors, and school-related conditions and symptoms of mental health problems in Norwegian upper secondary school students. International Journal of Environmental Research and Public Health, 19(9575). https://doi.org/10.3390/ijerph19159575
- Beck, A. T., Steer, R. A. & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. Psychological Corporation. https://doi.org/10.1037/t00742-000
- Becker D., Lomranz J., Pines A., Shmotkin D., Nitza E., BennAmitay G. & Mester R. (2001). Psychological distress around menopause. *Psychosomatics*, 42(3), 252-257. https://doi.org/10.1176/appi.psy.42.3.252
- Carrard, I., Argyrides, M., Ioannou, X., Kvalem, I. L., Waldherr, K., Harcourt, D., & McArdle, S. (2019). Associations between body dissatisfaction, importance of appearance, and aging anxiety with depression, and appearance-related behaviors in women in mid-life. *Journal of Women & Aging*, 33(1), 70–83. https://doi.org/10.1080/08952841.2019.1681882
- Cash, T. F., Phillips, K. A., Santos, M. T. & Hrabosky, J. I. (2004). Measuring "negative body image": Validation of the Body Image Disturbance Questionnaire in a nonclinical population. *Body Image*, 1(4), 363–372. https://doi.org/10.1016/j.bodyim.2004.10.001
- Cash, T. F. & Pruzinsky, T. (2005). Body image: A handbook of theory, research, and clinical practice. Guilford Press.
- Clarke, L. H. (2001). Older women's perceptions of ideal body weights: The tensions between health and appearance motivations for weight loss. Ageing & Society, 20(6), 737-754. https://doi.org/10.1017/S0144686X02008905
- Clarke, L. H., Griffin, M. & PACC Research Team (2008). Failing bodies: Body image and multiple chronic conditions in later life. *Qualitative Health Research*, 18(8), 1084–1095. https://doi.org/10.1177/1049732308320113
- Cooper, P. J., Taylor, M. J., Cooper, Z. & Fairburn, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of Eating Disorders*, 6(4), 485-494. https://doi.org/10.1002/1098-108X(198707)6:4<485::AID-EAT2260060405>3.0.CO;2-0

- Duffy, F., Sharpe, H., Beveridge, E., Osborne, K. & Richards, C. (2021). Mixed methods pilot evaluation of interpersonal psychotherapy for body image for adolescents. *Journal of Health Psychology*, 26(13), 2410–2423. https://doi.org/10.1177/1359104520963371
- Fairburn, C. G., & Beglin, S. (2008). Eating disorder examination questionnaire. In C. G. Fairburn (Ed.), Cognitive behavior therapy and eating disorders (pp. 309–313). The Guilford Press.
- Fairburn, C. G. (2008). Cognitive behavior therapy and eating disorders. The Guilford Press.
- Fairweather-Schmidt, A. K., Lee, C., & Wade, T. D. (2014). Disordered eating among mid-age women: Is quality of life impacted over time? *Journal of Eating Disorders*, 2(Suppl 1), 059. https://doi.org/10.1186/2050-2974-2-S1-059
- Forrester-Knauss, C., & Zemp Stutz, E. (2012). Gender differences in disordered eating and weight dissatisfaction in Swiss adults: Which factors matter? *BMC Public Health*, *12*(1), 809. https://doi.org/10.1186/1471-2458-12-809
- Gagne, D. A., Von Holle, A., Brownley, K. A., Runfola, C. D., Hofmeier, S., Branch, K. E. & Bulik, C. M. (2012). Eating disorder symptoms and weight and shape concerns in a large web-based convenience sample of women ages 50 and above: Results of the Gender and Body Image (GABI) study. *The International Journal of Eating Disorders*, 45(7), 832–844. https://doi.org/10.1002/eat.22030
- Gilbert, P. & Simos, G. (Eds.). (2022). Compassion focused therapy: Clinical practice and applications. Routledge. https://doi.org/10.4324/9781003035879
- Goldbach, C., Lindley, L., Anzani, A. & Galupo, M. P. (2022). Resisting trans medicalization: Body satisfaction and social contextual factors as predictors of sexual experiences among trans feminine and nonbinary individuals. *Journal of Sex Research*, 60(8), 868–879. https://doi.org/10.1080/00224499.2021.2004384
- González-Sánchez, C., Jiménez-Cabello, J. M., Rodríguez-Ruiz, S., & Mata-Martín, J. L. (2024). "I'm not only a body": Change in thoughts about the body after mirror exposure treatment in women with obesity—An exploratory study. *Healthcare*, 12(6), 624. https://doi.org/10.3390/healthcare12060624
- Gormally, J., Black, S., Daston, S. & Rardin, D. (1982). The assessment of binge eating severity among obese persons. *Addictive Behaviors*, 7(1), 47–55. https://doi.org/10.1016/0306-4603(82)90024-7
- Government Equalities Office. (2021). Negative body image: Causes, consequences and intervention ideas. GOV.UK. https://www.gov.uk/government/publications/negative-body-image-causes-consequences-and-intervention-ideas
- Grabe, S., Ward, L. M. & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460–476. https://doi.org/10.1037/0033-2909.134.3.460
- Guest, E., Zucchelli, F., Costa, B., Bhatia, R., Halliwell, E. & Harcourt, D. (2022). A systematic review of interventions aiming to promote positive body image in children and adolescents. *Body Image*, 42, 58–74.



- https://doi.org/10.1016/j.bodyim.2022.04.009
- Gupta, M. A. & Schork, N. J. (1993). Aging-related concerns and body image: Fear of aging and body dissatisfaction. *International Journal of Eating Disorders*, 14(2), 203–210. https://doi.org/10.1002/1098-108X(199312)14:4<481::AID-EAT2260140411>3.0.C0;2-G
- Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, 35(4), 639–665. https://doi.org/10.1016/S0005-7894(04)80013-3
- Hilbert, A., de Zwaan, M. & Braehler, E. (2012). How frequent are eating disturbances in the population? Norms of the Eating Disorder Examination-Questionnaire. *PLOS ONE*, 7(1), e29125. https://doi.org/10.1371/journal.pone.0029125
- Hockey, A., Milojev, P., Sibley, C. G., Donovan, C. L. & Barlow, F. K. (2021). Body image across the adult lifespan: A longitudinal investigation of developmental and cohort effects. *Body Image*, 39, 114–124. https://doi.org/10.1016/j.bodyim.2021.06.007
- Jackson, S. E., Beeken, R. J. & Wardle, J. (2014). Body image satisfaction and depression in midlife women: The Study of Women's Health Across the Nation (SWAN). Archives of Women's Mental Health, 17(6), 465–473. https://doi.org/10.1007/s00737-014-0416-9
- Kaye, W. H., Wierenga, C. E., Bailer, U. F., Simmons, A. N. & Bischoff-Grethe, A. (2013). Nothing tastes as good as skinny feels: The neurobiology of anorexia nervosa. *Trends in Neurosciences*, 36(2), 110–120. https://doi.org/10.1016/j.tins.2013.01.003
- Keel, P. K., Baxter, M. G., Heatherton, T. F. & Joiner, T. E. (2007). A 20-year longitudinal study of body weight, dieting, and eating disorder symptoms. *Journal of Abnormal Psychology*, 116(2), 422–432. https://doi.org/10.1037/0021-843X.116.2.422
- Kilpela, L. S., Hooper, S. C., Straud, C. L. & Becker, C. B. (2023). The longitudinal associations of body dissatisfaction with health and wellness behaviors in midlife and older women. *International Journal of Environmental Research and Public Health*, 20(24), 7143. https://doi.org/10.3390/ijerph20247143
- Laliberte Rudman, D. (2015). Embodying positive aging and neoliberal rationality: Talking about the aging body within narratives of retirement. *Journal of Aging Studies*, *34*, 10–20. https://doi.org/10.1016/j.jaging.2015.03.005
- Liechty, J. M. & Yarnal, C. M. (2010). Older women's body image: A life course perspective. *Ageing & Society*, 30(7), 1197-1218. https://doi.org/10.1017/S0144686X10000346
- Lovejoy, J. C., Champagne, C. M., de Jonge, L., Xie, H., & Smith, S. R. (2008). Increased visceral fat and decreased energy expenditure during the menopausal transition. *International Journal of Obesity*, 32(6), 949–958. https://doi.org/10.1038/ijo.2008.25
- Maguen, S., Hebenstreit, C., Li, Y., Dinh, J. V., Donalson, R., Dalton, S., Rubin, E., & Masheb, R. (2018). Screen for disordered eating: Improving the accuracy of eating disorder screening in primary care. *General Hospital Psychiatry*, 50, 20–25. https://doi.org/10.1016/j.genhosppsych.2017.09.004
- Mangweth-Matzek, B., Rupp, C. I., Hausmann, A.,

- Assmayr, K., Mariacher, E., Kemmler, G., Whitworth, A. B. & Biebl, W. (2006). Never too old for eating disorders or body dissatisfaction: a community study of elderly women. *The International Journal of Eating Disorders*, 39(7), 583–586. https://doi.org/10.1002/eat.20327
- Mangweth-Matzek, B. & Hoek, H. W. (2017). Epidemiology and treatment of eating disorders in men and women of middle and older age. *Current Opinion in Psychiatry*, 30(6), 446-451. https://doi.org/10.1097/YC0.00000000000000356
- McLean, S. A., Paxton, S. J. & Wertheim, E. H. (2011). A body image and disordered eating intervention for women in midlife: A randomized controlled trial. Journal of Consulting and Clinical Psychology, 79(6), 751-758. https://doi.org/10.1037/a0026094
- Mehrabi, N., Amiri, H., Omidi, A. & Sarvizadeh, M. (2024). The effectiveness of group compassion-focused therapy on body image and interpersonal stress among women with breast cancer: A randomized controlled trial. *Iranian Journal of Psychiatry and Behavioral Sciences*, *18*(1), e139764. https://doi.org/10.5812/ijpbs-139764
- Merino, M., Tornero-Aguilera, J. F., Rubio-Zarapuz, A., Villanueva-Tobaldo, C. V., Martín-Rodríguez, A. & Clemente-Suárez, V. J. (2024). Body perceptions and psychological well-being: A review of the impact of social media and physical measurements on self-esteem and mental health with a focus on body image satisfaction and its relationship with cultural and gender factors. Healthcare (Basel, Switzerland), 12(14), 1396. https://doi.org/10.3390/healthcare12141396
- Murnen, S. K. & Smolak, L. (2009). Are feminist women protected from body image problems? A meta-analytic review of relevant research. Sex Roles, 60(3–4), 186–197. https://doi.org/10.1007/s11199-008-9523-2
- Pruis, T. A. & Janowsky, J. S. (2010). Assessment of body image in younger and older women. *The Journal of General Psychology*, 137(3), 225–238. https://doi.org/10.1080/00221309.2010.484446
- Quittkat, H. L., Hartmann, A. S., Düsing, R., Buhlmann, U. & Vocks, S. (2019). Body dissatisfaction, importance of appearance, and body appreciation in men and women over the lifespan. Frontiers in Psychiatry, 10, 864. https://doi.org/10.3389/fpsyt.2019.00864
- Samuels, K. L., Maine, M. M. & Tantillo, M. (2019). Disordered eating, eating disorders, and body image in midlife and older women. *Current Psychiatry Reports*, 21(70). https://doi.org/10.1007/s11920-019-1057-5
- Sarwer, D. B., Thompson, J. K., & Cash, T. F. (2005). Body image and obesity in adulthood. Psychiatric Clinics of North America, 28(1), 69–87. https:// doi.org/10.1016/j.psc.2004.09.002
- Seekis, V., Bradley, G. L. & Duffy, A. L. (2020). Does a Facebook-enhanced mindful self-compassion intervention improve body image? An evaluation study. *Body Image*, 34, 259-269. https://doi.org/10.1016/j.bodyim.2020.07.006
- Sharpe, H., Griffiths, S., Choo, T. H., Eisenberg, M. E. & Neumark-Sztainer, D. (2018). Bidirectional associations between body dissatisfaction and depressive symptoms from adolescence through

- early adulthood. *Development and Psychopathology*, 30(4), 1447–1458. https://doi.org/10.1017/S0954579417001663
- Slevec, J. H. & Tiggemann, M. (2011). Predictors of body dissatisfaction and disordered eating in middle-aged women. Clinical Psychology Review, 31(4), 515-524. https://doi.org/10.1016/j. cpr.2010.12.002
- Slof-Op't Landt, M. C., van Furth, E. F., van Beijsterveldt, C. E., 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(8), 911–919. https://doi.org/10.1007/s00038-017-0948-7
- Spitzer, R. L., Kroenke, K., Williams, J. B. W. & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092
- Stice, E., Mazotti, L., Weibel, D. & Agras, W. S. (2000). Dissonance prevention program decreases thin-ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms: A preliminary experiment. *International Journal of Eating Disorders*, 27(2), 206–217. https://doi.org/10.1002/(SICI)1098-108X(200003)27:2<206::AID-EAT9>3.0.C0;2-D
- Tatham, M., Turner, H., Mountford, V. A., Tritt, A., Dyas, R., & Waller, G. (2015). Development, psychometric properties and preliminary clinical validation of a brief, session-by-session measure of eating disorder cognitions and behaviors: The ED-15. The International Journal of Eating Disorders, 48(7), 1005–1015. https://doi.org/10.1002/eat.22430
- Thompson, J. K., Heinberg, L. J., Altabe, M. & Tantleff-Dunn, S. (1999). Exacting beauty: Theory, assessment, and treatment of body image disturbance. American Psychological Association.
- https://doi.org/10.1037/10312-000
- Tiggemann, M. (2004). Body image across the adult life span: Stability and change. Body Image, 1(1), 29–41. https://doi.org/10.1016/S1740-1445(03)00002-0
- Tylka, T. L. (2019). Mindfulness training to facilitate positive body image and embodiment. In T. L. Tylka (Ed.), Handbook of positive body image and embodiment: Constructs, protective factors, and interventions (online ed., pp. 30). Oxford Academic. https://doi.org/10.1093/med-psych/9780190841874.003.0030
- Wood-Barcalow, N. L., Tylka, T. L. & Augustus-Horvath, C. L. (2010). "But I like my body": Positive body image characteristics and a holistic model for young-adult women. *Body Image*, 7(2), 106–116. https://doi.org/10.1016/j.bodyim.2010.01.001
- Zhao, Y. F., & Yin, M. X. C. (2024). A systematic review of psychosocial interventions on women's body image. In S. Chen & L. Wei (Eds.), *Interdisciplinary research on healthcare and social service* (pp.163-191). Springer. https://doi.org/10.1007/978-3-031-69602-2_10
- Zhao, L., Zhu, G., Man, X., & Zhang, Y. (2024). A longitudinal study of the relationship between self-objectification and restrictive eating: The role of appearance anxiety and sense of control. *Current Psychology, 43,* 32102–32113. https://doi.org/10.1007/s12144-024-06779-8

