Portfolio 1: Major Research Project

Trainee Clinical Psychologists' Attitudes and Clinical Judgements in Relation to Client Weight in Eating Disorder Presentations

Jennifer McNicholas

20067149

Submitted to the University of Hertfordshire in partial fulfilment of the requirement of the degree of Doctor of Clinical Psychology

October 2024

Word Count: 27440

Acknowledgements

Firstly, I would like to give a HUGE thanks to all the participants who gave their time to participate in the project. Without your participation, this research would not have been possible. I am truly grateful!

To my parents, I am deeply grateful for your unwavering love and support throughout the last 3 years. Even when I was moody and horrible! The last 6 months have been the toughest yet, but your belief in me has been a constant source of strength and has allowed me to carry on in times where I wanted nothing more than to just throw in the towel. Thank you for putting up with the despair and tears. I promise this is the last academic undertaking!

To all my beautiful besties, your humour and reassurance has helped me stay grounded and motivated throughout the duration of the course. All the check ins, all the reassuring chats, all the cheerleading – it really means the world to me. I promise to spoil you all rotten once this is all over.

I also would like to thank my supervisors for their support and guidance. Angela, your knowledge of the topic area was invaluable and the time you spent supporting me through the early stages of the thesis and guiding me with my analysis was so deeply appreciated.

Jen, you've seen me ugly cry more than most! I can't even begin to express how much your support has meant to me throughout this entire journey, especially during these final stages of thesis. Truly, I couldn't have done it without you.

I would like to dedicate a special acknowledgment to my late supervisor, John Done, whose guidance and support were invaluable to me throughout the beginning of my research journey. I'm so very grateful for the insights he provided, and I have him to thank for getting the idea off the ground and into a feasible project. This thesis is a testament to his belief in the topic!

Abstract

Aims: Weight stigma remains an acceptable form of prejudice within society (Puhl & Heuer, 2009) and its prevalence in those who specialise in eating disorder care (Puhl et al., 2014) is deeply concerning. Despite the evidence indicating that higher weight individuals are more at risk of developing eating disorders (Neumark-Sztainer et al., 2006; Darby et al., 2007), and often have more severe levels of impairment (Forney et al., 2017), they are often mistreated and misdiagnosed by eating disorder healthcare professionals (Harrop, 2019; Lebow et al., 2015; Sim et al., 2013; Veillette et al., 2018). Clinical psychologists play a central role in eating disorder care, making it essential to understand how weight bias manifests and influences practice of trainees who will soon be entering the workforce. To date, there is only one US based study that explores weight stigma in mental health professionals and how it impacts on the conceptualisation and treatment of restrictive eating disorders like Anorexia Nervosa (AN) (Veillette et al., 2018). The current research aimed to replicate this study in a UK sample of Trainee Clinical Psychologists (TCPs) to assess how anti-fat attitudes may impact eating disorder treatment for higher-weight individuals, specifically those who present with Atypical Anorexia Nervosa (AAN).

Method: The current study adopted a quantitative approach, recruiting 283 TCPs, who responded to questions regarding their attitudes and clinical treatment decisions for a client presenting with AAN. The data collected was statistically analysed to evaluate trainees' anti-fat attitudes and treatment recommendations for either an AAN clients or AN client, allowing for a comparison of how these attitudes differed based on the client weight.

Findings: The study revealed that TCPs are not immune to negative attitudes towards weight. Trainees were found to report more weight-based stereotypes. They were also found to be less likely to diagnose the AAN client appropriately, offer less treatment sessions, and rate some important treatment goals as less important for the AAN client.

Clinical Implications: These weight biases may negatively influence clinical practice for higher weight clients with atypical eating disorders, manifesting in reduced access to appropriate treatment opportunities, inefficient treatment protocols and overall substandard care from providers and clinicians. Clinical recommendations, as well suggestions to improve and expand on future research in this area, are discussed.

Table of Contents

1 Introduction

1.1 Overview

The current study aimed to investigate how weight stigma within the UK clinical psychology profession can impact eating disorder treatment for higher-weight individuals, specifically those who present with Atypical Anorexia Nervosa (AAN). Using a quantitative method, it assessed the clinical judgments and attitudes of Trainee Clinical Psychologists (TCPs) who will represent the next generation of Clinical Psychologist's (CPs) treating eating disorders in the UK. This study will consider the implications of the prevalence of weight stigma within the profession and make recommendations based on the current literature of how this can be addressed to ensure adequate and equitable treatment for those who present with atypical eating disorder presentations.

The introduction begins by outlining the researcher's personal position, including personal experiences and professional acknowledgements that informed the research topic. It also details the researcher's epistemological position and world view which has also informed the research topic and underpins the choice of methodology. The chapter proceeds to outline the terminology used throughout the study. It concludes with a comprehensive review of the weight stigma literature, covering key topics such as historical and societal weight stigma, it's impact in healthcare and mental health care, and its role in the treatment of eating disorders.

1.2 Personal position[1]

I have three prominent reasons which inform my passion for pursuing this topic area. One, is informed by my personal experience of weight stigma, having been a person who for most of her life has lived in a body that would be described as "overweight". I, among a few unfortunate others, was the "fat kid" in the classroom throughout infant school, junior school, and secondary school. Despite having narrowly escaped torment and bullying in infant school, it was in junior school I felt the full force of harassment for my weight. I experienced this from friends and non-friends, boys and girls, and it became common place for me to regularly be teased for my size. It didn't matter much to my fellow peers, or to my doctors for

[1] To convey the rationale and passion for the project, this section will adopt a first-person story telling of experiences and beliefs rather than the traditional academic style of writing

that matter, that I was fit, sporty and dominated a lot of the team sports for my athleticism and skill. All that really mattered was that I was bigger than the average kid.

When I experienced problems with my periods at age 10, my parents were told by my doctor, (without no more than an eyeballing from the GP) it was unequivocally the result of my weight. I was sent on my way, having to think about my diet and what I should and shouldn't be eating. The combination of bullying and having to focus on dieting, led to the start of my destructive relationship with my body and food. For years to come, I would binge, then starve, binge then starve. In a desperation to be accepted, this behaviour continued into my adult life, and just like most of the other women in the UK (Ipsos, 2024), I was consistently "on a diet" and my goal above all else was to achieve thinness.

My disordered eating, although undiagnosed, but meeting the classification for a binge-eating disorder, was regularly congratulated and encouraged by health professionals. If the weight came off, it didn't matter much to those around me how it happened. Even my hypnotherapist (an attempt to work through further bullying in adulthood) congratulated me on the pounds I would lose each week, knowing I'd starved myself for days to achieve it. All weight loss attempts were futile and only ever resulted in further weight regain and a myriad of health problems.

None of this is a true tragedy in comparison to some, and it would be perverse to expect sympathy. Despite having endured difficult experiences with bullying, and what one could describe as an unpredictable home life, I have still experienced love, safety and security. These privileges have provided me with enough stability to secure a place in a doctoral programme, promising a lifelong career. Nevertheless, my experience is a very small window into a large global scale problem, and it highlights how weight stigma informs a lifetime of poor care, which has now sadly contributed to a lifetime of poor health.

Reason two, I am a trainee clinical psychologist who has recognised a gap in her own profession when it comes to education about weight stigma and how this leaves higher weight individuals vulnerable to biased attitudes that will be perpetuated through the next generation of clinical psychologists. In recent years, UK DClinPsy courses have declared their commitment to social justice and have taken steps to embed this into the clinical psychology curriculum (University of Hertfordshire, 2024). In my experience, I have witnessed this to be a commitment to anti-racist and anti-oppressive practice through supporting trainees to become more aware of their unconscious bias and privilege. Throughout my doctoral

experience, the focus on anti-racism, admittedly of utmost importance, appears to have overshadowed issues for other groups subject to discrimination, prejudice, and abuse, including those who are higher weight.

I say this as someone who is sometimes cautious to adopt the broad brush categorisation of identity markers as signifiers of oppression often used in social justice scholarship. For example, Crenshaw's (1989) model of Intersectionality which aims to aid understanding of where inequalities lie between different human positions and identities. It's simplistic painting by numbers approach, often ignores the infinite number of factors impacting a person's life and can encourage the attribution of victimhood in those who sit across intersections. I recognise the necessity of vigilance by privileged individuals to avoid the perpetuation of oppression, but struggle with the encouragement of hypervigilance in individuals, to the smallest levels of indiscretions, which can border on infantilisation. As such, we should acknowledge the existence of weight stigma in society and our profession, along with its destructive effects, without encouraging permanent notions of victimhood and hypervigilance to oppression.

The belief that weight is controllable, and that higher weight people are products of their own laziness and lack of self-discipline is ingrained into the fabric of our society (Puhl et al., 2015; Sikorski et al., 2012; Tiggemann & Anesbury, 2000), and even though you could argue that clinical psychologists are professionals particularly adept at compassion and empathy for their fellow human being, they have not escaped these prejudicial attitudes towards higher weight people (Brochu et al., 2018). If left unrevealed and unchecked, these prejudices will continue to inform potentially harmful clinical practice, underserving those in larger bodies. My aim is to highlight the weight stigma that still lurks within my own profession and demonstrate how this impacts the care of higher weight people, with the hope of improving attitudes and improving clinical care.

Reason three, given my belief in a deterministic world, the blame and shame for one's weight is fundamentally flawed, and the belief that people should be held morally responsible for their actions should be rejected. As a hard determinist, I am most convinced by psychological and social models that explore how every internal and external event impacts on the way we as humans present in the world. All events, from the flap of a butterfly's wing to a large-scale global crisis, will impact on our experience, in different ways, and all to varying degrees.

Through the physical laws of cause and effect, we are all subjected to a specific overall experience based on our differing contexts and different physical make-up. All events, including human decisions and choices, are the consequence of preceding events in accordance with laws of nature and the causal chain extends back to the beginning of time, leaving no room for what we describe as 'free will' (Sapolsky, 2017, p. 594).

We are unable to transcend the flow of causative relations. Our decisions and choices are indeed 'ours' but we are not ultimately self-made. In this context, notions of praise and blame only make sense as motivators or discouragers in relation to behaviour rather than judgments and stigmatisation of individuals. In relation to the research topic, I would contend that 'weight stigma' is born of a mistaken belief that individuals could simply and freely choose to control all the factors which combine to result in their weight. The failure to conform to culturally defined ideals of appropriate weight are understood (mistakenly) to be due to a failure of 'willpower' (Crandall, 1994). Accordingly, those people whose weight does not conform to these ideals are blamed.

However, the origins of any individual's relationship with diet and exercise, which one might argue is the simple way an individual can control their weight, is the product of a lifetime of influences starting in the womb and transitioning through infant parenting and bonding, social class, family finances, cultural norms, education and schooling, community activities, access to facilities, peer group pressure, partnerships and on and on. Behaviour is not, and never has been, a simple matter of choice.

My belief in a deterministic world, interwoven with my personal and academic experiences, fuels my passion for changing attitudes and beliefs that drive weight stigma, in hopes of fostering compassion and empathy for my fellow higher weight humans.

"To be ultimately responsible for what you do, you have to be ultimately responsible for the way you are" – Galen Strawson (1994).

1.3 Epistemological position

The researcher's fundamental belief in a deterministic world, one governed by physical laws of cause and effect, concurs with a belief that there exists an objective reality, in which humans can empirically explore and agree on universal truths though our inter-subjective shared situatedness. However, despite the existence of a mind-independent reality, the researcher accepts that the exploration of a knowable reality is forever bound within

human perception and cognition. Consequently, the researcher's epistemological position is one of critical realism.

Critical realism combines a realist ontology, the premise that a reality exists independent of our perceptions or beliefs, with a critical approach to knowledge and methodology, which recognises the influence of human subjectivity (Pilgrim, 2020, p.3) It asserts that our reality is "out there," existing independently of our cultural interpretations, and is open for exploration by scientific means.

Critical realism suggests that data collected can reflect this objective reality, whilst acknowledging that these are approximations that contain bias, measurement errors and subjective interpretations. However, despite these imperfect approximations, statistical relationships observed at the empirical level may in fact reflect underlying structures and generative mechanisms at the real level (Park et al., 2020). For example, Einstein's theory cannot be fully reconciled with quantum theory but is such a successful working hypothesis of the physical world at the macro level that we are able to develop satellite navigation systems that direct us in our cars. Despite our inherent limitations, the underlying reality remains constant, and our scientific theories are not a declaration of unbreakable truth but attempts to describe this reality as accurately as possible.

Quantitative analysis is the empirical tool in which we can collect reliable, if not provable, knowledge, using a logical framework and analytical techniques to identify patterns and make causal inferences. As such, this research will adopt a quantitative methodology to measure, as accurately as possible, the prevalence of weight stigma among a population, in hopes that an observed statistical relationship at the empirical level may reflect "real" underlying structures, that have an impact at the "real" level. It will be assumed that the data collected in this study adequately reflects the experiences of the participants, while acknowledging and reporting on the potential for bias, error, and subjective interpretation of the results.

1.4 Terminology

The approach, study, and description of weight and weight stigma in the literature varies greatly and is often influenced by the researcher's epistemological position. Fat activists, whose position is largely underpinned by social constructionism (Rice, 2015), have advocated for reclaiming the word 'fat' as an 'objective adjective to describe our bodies' (Gordon, 2020, p. 8). They use this terminology in opposition to the word 'obesity,' which is

deemed pathologizing. For others, 'fat' remains a derogatory slur, and having a medicalised term like 'overweight' to describe their body is less stigmatising (Brochu & Esses, 2011; Brown, & Flint, 2021). The researcher acknowledges both perspectives as valid within society and consequently will attempt to adopt a neutral stance by using the term 'higher weight'. The descriptor ‘higher weight’ will be used throughout, unless using the language of other researchers, which can include ‘fat’ ‘overweight’ and ‘obese’.

1.5 Background

1.5.1 The definition of weight stigma

According to Goffman (1963), in his groundbreaking work on identity, stigma is defined as “an attribute that is deeply discrediting” (p.3). He describes how one’s characteristics and behaviours, become the tool in which they are classified as socially undesirable, leading to their rejection from the wider society. He argues that stigma is not inherent but emerges from relationships and social interactions between those who are stigmatised and those who stigmatise.

Therefore, weight stigma is defined as the negative attitudes and stereotypes (also referred to as anti-fat attitudes) towards people who are perceived to carry excess weight (Veillette et al., 2018). This form of stigma remains a widely accepted prejudice in society (Puhl & Heuer, 2009). It leads to weight discrimination, the unfair or unequal treatment of higher weight individuals (Brownell et al., 2005), which manifests in various ways in society today.

1.5.2 The history of weight stigma in Western culture

The representation and interpretation of the larger body has varied considerably across different cultures, philosophies, and historical time periods. The larger body has been described in a variety of often contradictory ways, such as impoverished, wealthy, lazy, strong, unattractive, and voluptuous (Dinh, 2012; Hutson, 2017). From the Palaeolithic era (20,000–30,000 years BC) to Medieval Britain (13th to 17th century), larger bodies, especially those of women, were often idealised and seen as symbols of beauty, good health, and fertility (Ferrucci et al., 2010). Larger bodies were also associated with high socioeconomic status as they had access to high quality and higher quantities of food during times of war and famine (Eknoyan, 2006).

Respect for larger bodies was frequently depicted in ancient art, portraying individuals with larger physiques as powerful, strong, and of higher status (Ferrucci et al.,

2010). One of the oldest known sculptures, the Venus of Willendorf (Figure 1), from the Palaeolithic era, depicts a faceless, short, fat woman with large breasts and buttocks. Similarly, Alessandro del Borro, a Tuscan nobleman and soldier, was painted by Diego Velasquez during the mid-17th century wars against the Ottoman Empire, emphasising his immense power and large frame (Figure 2).

The shift in attitudes towards weight can be traced back to the 17th century, when the larger body became less accepted and often feared by society. As outlined in Arnold's (2023) thesis, it's theorised that this change was influenced by the transatlantic slave trade, where fatness became associated with African slaves (Strings, 2019). This coincided with the rise of Protestant dogmatism that posited "overeating was ungodly" (Strings, 2019, p. 6). Crandall and Martinez (1996) argue that the foundation of weight stigma is rooted in traditional conservative American values of self-determination and individualism, reflecting the Protestant work ethic that emphasises hard work and the belief that people get what they deserve. These values have led to the widespread perceptions that weight is an individual's responsibility, that weight gain or loss is under personal control, and that fatness results from a lack of self-discipline and laziness (Teixeira et al., 2012).

In the early 19th century, these ideas became embedded into medicine through eugenics, a movement among race scientists that promoted "better breeding." Their goal was to selectively breed humans by promoting qualities deemed as desirable, and eradicating what they perceived to be defects, such as larger bodies and particular racial groups (Norrgard, 2008). This created a racial and class hierarchy, positioning white men at the top and black people at the bottom, using fatness and other differing body characteristics as markers of being "less civilized," while thinness was seen as "more evolved" (Montgomery, 2021). American zoologist and Eugenicist, Charles Davenport, argued that fatness was a constitutional flaw (Strings, 2023).

In the 1830s, mathematician Adolphe Quetelet developed the Quetelet Index, which aimed to identify the "l'homme moyen," or "average man" (Eknoyan, 2008). Quetelet was interested in quantifying how much an individual deviated from the population average by dividing their weight by the square of their height (Strings, 2023). His measure of man by the height-weight ratio did not become popular until the late 20th century when nutritionist Ancel Keys and colleagues (1972) argued that Quetelet's index was an accurate description of 'normal' human growth (Rasmussen, 2019).

From here, Keys renamed the index the Body Mass Index (BMI) and suggested that it could be used as medical tool to assess if a patient 'deviated' too far from the average, and as such were at greater risk of disease (Keys et al., 1972). This is despite Keys' (1980) study, revealing a person's weight not to be a significant factor in any death, related to heart attack and stroke, across any population. Nevertheless, it's popularity continued in the west and, in the turn of the 20th century, started to be used by insurance companies as a way of establishing mortality rates which informed customer premiums (Gordon, 2020). It remains a worldwide tool, used for assessing a person's risk of disease, suitability for healthcare and a tool of exclusion, particularly in women's reproductive care (Koning et al., 2017).

Figure 1.

Venus of Willendorf (authors unknown, Superior Palaeolithic, 20–30 thousand years BC.) (Ferrucci et al., 2010).

Figure 2.

Portrait of the Tuscan General Alessandro del Borro, 1645, attributed to Charles Mellin (Ferrucci et al., 2010).

1.5.3 Attribution theory and the myth of controllability

Weiner's attribution theory is the primary model that is used to explain weight stigma (Weiner et al., 1988). It proposes that when we encounter a person with a stigmatised characteristic, we seek out information about its cause and then form reactions based on the causal information (Puhl & Brownell, 2003). How much a person will stigmatise is dependent on how much they believe a person to be in control of that characteristic (Weiner at al., 1998). The discrimination of higher weight people is the result of people believing a person's weight is simply down to individual choices and is therefore controllable (Musher-Eizenmann et al., 2004; Puhl & Brownell, 2003).

The relationship between weight controllability beliefs and anti-fat attitudes has been well established within the literature, showing that the more people believe weight is controllable, the more they will stigmatise (Puhl et al., 2015; Sikorski et al., 2012; Tiggemann & Anesbury, 2000). Crandall (1994) demonstrated that when you teach people that weight is determined by genetics, something outside of a person's control, it can reduce

the negative attitudes held about higher weight individuals. The belief that weight is a simple matter of "calories in, calories out" is a common one, and the complex aetiology of a person's weight is often misunderstood or completely disregarded. In reality, a person's weight results from a complex interaction of biological factors such as genes, life experiences, and socioeconomic environments (Gregg & O'Hara, 2007; Krieger, 1994; VanLeeuwen et al., 1999).

Stunkard et al. (1986) explored the influence of genetics on body weight within a group of adopted adults. He found that their weight class was like that of their biological parents and found no significant relation between adoptees and their adoptive parents. A recent systematic review exploring weight and its relationship with the environmental context (Dixon et al., 2021) showed that weight is influenced by factors such as, access to food and opportunities for physical activity. They found that those who were higher weight were less likely to have safe walkways and pavements and had less access to recreational facilities. Whereas those with lower body weight has access to open spaces such as nearby parks (Dixon et al., 2021). Furthermore, a recent UK-based study investigating the relationship between childhood trauma and body weight revealed a significant association between experiences of childhood trauma and increased body weight (Offer et al., 2022). This correlation was attributed to food addiction, which may be a coping mechanism in response to the trauma experienced (Offer et al., 2022).

The complex interplay of factors contributing to body weight is consistently overlooked when assigning responsibility for an individual's weight. Attribution theory suggests that 'personal choices' is the main reason used when attributing blame (Weiner at al., 1988). However, this argument is fundamentally flawed, as it fails to recognise that behaviour is shaped by intricate biological and environmental forces beyond and individual's ultimate control. Therefore, blaming and shaming individuals for their weight based solely on personal choices is a questionable stance that disregards the multifaceted nature of determinants of weight.

The belief that weight loss is within an individual's control feeds a global multibillion-dollar weight loss industry (Callaghan et al., 2021), which makes it a misconception, particularly to businesses, worth upholding in society. This is despite the mounting evidence that shows intentional weight loss is often unsustainable and potentially harmful (Bacon & Aphramor, 2011). Weight loss efforts are consistently seen to be futile as long-term follow up

studies show that the majority of people who lose weight initially, regain virtually all the weight previously lost, irrespective of whether they continue to follow a diet and exercise plan (Foster et al., 1996; Miller, 1999; Siahpush et al., 2015). Furthermore, the success of weight loss studies is likely to be an overestimation, as they are demonstrated to have poor follow up rates and exclude those who don't complete the programmes (Mann et al., 2007).

Contrary to the idea that intentional weight loss in those with higher weight will decrease the risk of disease and increase life expectancy, studies have shown that weight loss in healthy higher weight individuals does not decrease the possibility of mortality but rather increases the likelihood of early death (Andres et al., 1993). A 2009 meta-analysis, which examined the evidence for recommending weight loss by diet and lifestyle change as a means of prolonging life, revealed that healthy higher weight individuals who lost weight intentionally were in fact at higher risk of mortality (Harrington et al., 2009). In fact, the literature demonstrates that the health problems typically associated with "obesity" may be because of the harm caused by weight stigma itself. It's suggested that weight stigma may be responsible for increased mortality rates (Sutin et al., 2015) and increased risk of suicide among those with eating disorder (Douglas et al., 2019).

1.5.4 Societal weight stigma

Despite the evidence outlining the immense complexities of a person's weight, the blaming and shaming of individuals who are higher weight is still consistently tolerated within society. Weight stigma and its detrimental effects have been observed across various societal domains, including the workplace, education, interpersonal relationships, and the media (Puhl & Heuer, 2009).

Workplace weight discrimination can take many forms, such as being treated poorly by colleagues, unequal pay, and higher rates of job insecurity (Puhl et al., 2008). When exploring perspectives on experiences of weight stigma, higher weight individuals report struggling to get recruited for employment, do not get considered for promotions, and are more likely to be unfairly terminated (Puhl et al., 2008). Roehling et al. (2007), when investigating the prevalence of weight discrimination among workplace employees, found that higher weight employees were 12 times more likely than normal weight respondents to report discrimination at work. Furthermore, woman were disproportionately affected, revealing they were 16 times more likely than their male counterparts to experience weight discrimination within their workplace. In an earlier paper, Roehling (1999) reveals that

weight often determines rate of promotion and that higher weight employees are labelled as lazy irrespective of their productively levels.

In educational settings, weight bias can present in a multitude of ways from inter peer relations to systemic institutional discrimination (Nutter et al, 2019). Weight bias between peers starts as early as preschool, and manifests in the form of verbal aggression such as name-calling and making jokes, to physical aggression such as hitting, pushing, or shoving (Bromfield, 2009; Puhl et al., 2016; Shetgiri, 2013). Higher weight adolescents report that weight-based bullying is most likely to occur in the school context and find themselves experiencing more bullying than their lower weight peers (Fox & Farrow, 2009; Puhl, & Luedicke, 2012; Puhl et al., 2011).

Additionally, weight stigma from teachers can translate to lower grades for higher weight students regardless of their academic ability. A recent study conducted in Germany, assessed whether higher weight students receive lower grades by their teachers across two different subjects. In both subjects, the higher weight students were more harshly graded with higher weight males receiving the harshest penalties (Dian & Triventi, 2021). Burmeister et al. (2013) found that higher weight students applying for graduate programmes were less likely to be accepted onto the course of their choice when compared to their lower weight counterparts. This was despite whether they had the necessary academic grades.

A further and particularly pervasive form of societal weight-based discrimination is the portrayal of weight in the media. The several domains of media, including news, television, film and advertising, perpetuates weight stigma by endorsing negative stereotypes (Ata & Thompson, 2010; Himes & Thompson, 2007) and promoting unrealistic appearance standards (Bell & Dittmar, 2011). Both in adult and child media, higher weight people are portrayed as being lazy, unhappy, unattractive and are often the targets of ridicule for their size (Fouts & Burggraf, 2000; Puhl et al., 2013).

A plethora of well-known films and TV shows are notable in reinforcing negative attitudes about higher weight characters, with the most shaming and teasing often directed at female characters. To name just two examples, in the 2001 film “Shallow Hal”, the female protagonist is deemed attractive and lovable only when her love interest perceives her as thin. Similarly, in the 1990’s TV show “Friends”, the character Monica is frequently teased about her former larger self. When her larger body is depicted on screen, it is often to elicit laughs through scenes of her sloppily eating sugary snacks or struggling to find love.

Greenberg et al. (2003) demonstrated the exclusion of higher weight individuals from media representation when they analysed whether prime time TV actors' weight reflected that of the American public. They found that only 25% of men on television reflected higher weight individuals compared to the 60% of American men who represent that population. Whereas for women, they found that 90% of the women on TV represented what would be considered "normal weight", compared to 50% of American women who represent higher weight populations.

The impact of negative media portrayal for higher weight people has been well documented, demonstrating its influence in shaping negative public attitudes and opinions on weight (Latner et al., 2007; Selensky & Carels, 2021). News outlets are a particularly influential source of media that is seen to shape public attitudes by disproportionately framing the larger body as a personal failure and the result of poor personal choices (Bonfiglioli et al., 2007; Kim & Anne Willis, 2007; McClure et al., 2011).

Not only are higher weight individuals subject to indirect discrimination through media, but are subjected to direct discrimination, whether it be interpersonally (Puhl et al., 2008) or via online forums (Peebles, 2014). The term "cyberbullying" has become a relatively common term to describe harassment and victimisation in online spaces (Peebles, 2014). It's hypothesised that because virtual settings offer a high degree of anonymity, this reduces a person's likelihood of being influenced by normative beliefs and socially accepted norms. This anonymity is thought to embolden communications that would otherwise be considered inappropriate when interacting in a face-to-face environment (Peebles, 2014; Scruton, 2010).

Chou et al. (2014) conducted a content analysis exploring the content and nature of comments on popular social media platforms. They analysed 1.37 million posts and their related comments, finding 92% of the posts relating to obesity used the term "fat" as a derogatory slur, and were generally negative in nature. A similar study examining comments on Twitter found that 57% of comments associated with the word "fat" were negative and that the themes related to these comments included gluttonous, unattractive, lazy and stupid (Lydecker et al., 2016). On YouTube, higher weight individuals would be twice as likely to receive attacking comments than comments defending them (Jeon et al., 2018).

1.5.5 Weight stigma in healthcare

Of most concern, higher weight individuals not only face weight stigma at a societal level but also frequently encounter it in healthcare settings. This may be through provider inadequacy (Hammond, 2013) or direct stigmatisation from the healthcare professionals they encounter (Lawrence et al., 2021). Weight stigma among Healthcare Professionals (HCPs) is well documented across many different professional disciplines, including doctors, General Practitioners (GPs), nurses, dietitians, physiotherapists, and mental health professionals (MHPs) (Puhl & Heuer, 2009; Lawrence et al., 2021). HCPs perpetuating harmful stereotypes and fostering negative attitudes towards individuals with higher body weights, has been seen to lead to inadequate care (Phelan et al., 2015).

Several studies have demonstrated that clinicians prefer not to work with higher weight patients (Puhl et al., 2009; Persky & Eccleston, 2011; Phelan et al., 2015) and found that physicians spent less time with their higher weight clients when compared to their thinner counterparts (Hebl & Zu, 2001). Klein (1982) found that doctors associate 'obese' patients with being untrustworthy and having poor cleanliness. They also assessed 'obesity' more unfavourably than mental health issues, substance abuse, including drug addiction, and alcoholism. Even clinicians who specialise and work with 'obesity' are not immune and demonstrate high levels of implicit and explicit stigma (Tomiyama et al., 2015). Puhl and Brownell (2006) found, in their study exploring the most common sources of weight stigma, that 69% of participants reported experiencing stigma from their doctor.

Higher weight patients perceive themselves as being treated less respectfully than their "normal" weight counterparts (Amy et al., 2006), with some women reporting that they have never been treated respectfully by their healthcare professionals during discussions about their weight (Merrill & Grassley, 2008). In a review of the literature, Alberga et al. (2019) showed that higher weight patients often experience contemptuous, patronising, and disrespectful treatment from healthcare professionals (Amy et al., 2006; Merrill & Grassley, 2008; Russell & Carryer, 2013; Buxton & Snethen, 2013). This included insensitive comments (Buxton & Snethen, 2013), verbal insults, and inappropriate humour (Russell & Carryer, 2013).

These experiences prevent individuals with higher body weights from actively participating in the healthcare system as they are more likely to avoid appointments and are less likely to seek treatment (Puhl & Brownell, 2006). This avoidance leads to missing

potentially lifesaving health checks, such as cancer screenings (Alegria Drury & Louis, 2002; Amy et al., 2006; Ostbye et al., 2005; Wee et al., 2000). Olson et al. (1994) found that up to 55% of higher weight women in their study had cancelled or delayed a healthcare appointment if they anticipated being weighed during the consultation. Additionally, women may avoid breast and pelvic scans due to fear of their bodies being judged when they undress (Cohen et al., 2008). Healthcare professionals attributing all health issues to a patient's perceived excess body weight creates an additional barrier to utilising healthcare systems (Amy et al., 2006; Brown et al., 2006; Ferrante et al., 2016). When healthcare professionals make this attribution, patients become more hesitant to consult their primary care physician and are less likely to voice concerns about their current health issues (Brown et al., 2006).

Medical weight stigma for individuals with higher body weights can also manifest through the inadequacy of appropriate medical equipment. This includes patients reporting having to wear improperly sized gowns and blood pressure cuffs, as well as sitting on inappropriately sized examination tables (Pryor, 2002; Merrill & Grassley, 2008). Equipment such as Computed Tomography (CT) scanners and Magnetic Resonance Imaging (MRI) machines are typically only suitable for bodies up to 350 pounds, which results in the reduced ability to accurately assess for health conditions in patients who exceed this weight (Hammond, 2013). These manifestations of weight stigma may contribute to higher weight individuals being misdiagnosed or remaining undiagnosed for potentially life-threatening health conditions.

1.5.6 Weight stigma in mental health care

Mental health professionals are also not immune from stigmatising attitudes regarding weight. Although there is less research on weight stigma among mental health professionals compared to physical health professionals, existing studies indicate that mental health workers are just as likely to exhibit weight bias as their counterparts in physical health (Puhl et al., 2014). Puhl and Brownell (2006), when exploring experiences of weight stigma, showed that 21% of participants reported mental health professionals among those who stigmatise them. Like physical health professionals, mental health practitioners have been found to attribute more negative personal characteristics to higher weight patients (Hassel et al., 2001). Additionally, they tend to rate the symptoms of higher weight patients as more severe than those of their thinner counterparts (Hassel et al., 2001; Young & Powell, 1985). In a study by Davis-Coelho et al. (2000), mental health practitioners were found to be less

inclined to work with higher weight clients and tended to predict worse treatment outcomes for them compared to thinner clients.

The current literature for weight stigma in clinical psychologists is even more limited. However, what does exist shows that psychologists also endorse common negative stereotypes about higher weight clients, such as being more unattractive, more embarrassed, and kinder than thin clients (Agell & Rothblum, 1991). Blencowe (2017), in her thesis on implicit and explicit attitudes in clinical psychologists, found that when exploring bias in characteristics such as race, gender, sexuality and weight, all groups of participants held negative attitudes towards higher weight people.

Psychologists also hold lower expectations for higher weight clients' prognosis, will assign more negative psychological symptoms (Brochu et al., 2018) and are more likely to set treatment goals related to weight and body image for higher weight clients (Carter, 2018; Brochu et al., 2018). Arnold's (2023) discursive analysis of weight stigma in her recent thesis revealed that trainee clinical psychologists, who represent the next generation of the clinical psychology UK workforce, were aware of the negative impact of stereotypes but still perpetuated societal biases regarding weight. These included beliefs that weight is controllable, and that higher weight constitutes a health problem.

1.5.7 Weight stigma in eating disorder treatment

A sub-group of mental health professionals, which also perpetuate weight stigma, are those involved in eating disorder treatment. Puhl et al. (2014), in their hallmark study regarding weight stigma in eating disorder professionals, found that eating disorder professionals are just as likely, if not more likely, to endorse and encourage weight stigma than mental health providers in other specialties. They reported lower treatment expectations and had less confidence in higher weight clients' recovery. This is particularly concerning given the evidence that suggests higher body weight individuals are more susceptible to developing eating disorders (Neumark-Sztainer et al., 2006; Darby et al., 2007; Sim et al., 2013; Lebow et al., 2015) and that experiences of weight stigma are correlated with the development and maintenance of eating disorder pathology (Levinson et al., 2024).

This manifestation of weight bias is unsurprising given that eating disorder treatment has been developed within a weight-centric paradigm, which views higher weight bodies as inherently unhealthy and emphasises that losing weight is essential for improving health (McEntee et al., 2023). BMI remains the primary tool used to classify and diagnose eating

disorders, reinforcing the misconception that these disorders, particularly those that are accompanied by restrictive eating, are only identified through signs of malnutrition or severe emaciation (Zipfel et al., 2015). In fact, eating disorders are seen in individuals across a wide range of body weights. For instance, a diagnosis of Atypical Anorexia Nervosa (AAN), classified under the Eating Disorder Not Otherwise Specified (EDNOS) umbrella in the DSM-5 (American Psychiatric Association, 2013), is given to individuals who meet the criteria for Anorexia Nervosa (AN), including severe food restriction and an overvaluation of shape and weight, yet maintain a 'normal' BMI despite significant weight loss.

This reliance on physical metrics to assess illness severity drives the misconception that atypical presentations of eating disorders, including AAN, are less severe (Cunning & Rancourt, 2023). In fact, studies have shown elevated mortality rates in individuals with atypical eating disorders, are similar to those with typical eating disorder presentations (Crow et al., 2009). Those with AAN are seen to experience similar medical complications to those with AN, including hypertension and bradycardia, which are the most significant medical complications caused by underlying malnutrition (Moskowitz & Weiselberg, 2017). Moreover, higher weight individuals often exhibit higher levels of eating disorder pathology (Forney et al., 2017) and greater distress related to body image (Sawyer et al., 2016).

This misconception has led to the failure to recognise atypical eating disorders as serious, life-threatening conditions, resulting in these individuals being unrecognised, overlooked, and misdiagnosed by services (Lebow et al., 2015; Sim et al., 2013). A case report which studied two young adults with AN and a history of higher weight, highlighted that for 10 months, health professionals missed symptoms of severe restrictive eating disorders, meaning their symptoms were left to progress over a longer term (Lebow et al., 2015). Veillette et al. (2018) found that mental health professionals were less likely to diagnose anorexia nervosa in a higher weight client presenting with the same symptoms as a lower weight client.

This translates into those with atypical eating disorders being less likely to receive inpatient care (Kennedy et al., 2017), with former patients reporting stringent weight-based criteria (Mitrofan et al., 2019) and the perception that they were “not sick enough” (Escobar-Koch et al., 2010), as the barriers to treatment. Some individuals reported deliberately intensifying weight loss efforts to prove that they have an eating disorder to access treatment

(Escobar-Koch et al., 2010). Delays in treatment are barriers to early intervention which is found to be key in making a full recovery (Treasure & Russell, 2011; Von Holle et al., 2008).

Additionally, those who do access treatment often receive inappropriate care. Eating disorder professionals have been found to recommend fewer therapy sessions to higher weight clients (Veillette et al., 2018) and may be more likely to collude with restrictive symptoms and expect the patient to restore less weight than needed for full recovery (Kimber et al., 2019). Harrop (2019), a researcher in the field with AAN reporting on her own experience of inpatient eating disorder treatment, described being put on a restricted caloric meal plan that mirrored her current disordered eating, while her AN counterparts received high amounts of calorific foods. Consequently, individuals with atypical eating disorder presentations often experience prolonged symptoms and poorer prognoses, which have been linked to serious weight loss-related medical complications and, in some cases, even death (Crow et al., 2009; Peebles et al., 2010; Whitelaw et al., 2014)

1.6 Rationale for study

In short, weight stigma remains an acceptable form of prejudice within society (Puhl & Heuer, 2009) and is prevalent among mental health professionals, including those who specialise in eating disorder care (Puhl et al., 2014). Despite the evidence that suggests higher weight individuals are more susceptible to developing eating disorders (Neumark-Sztainer et al., 2006; Darby et al., 2007), and have more severe levels of impairment (Forney et al., 2017) and mortality rates (Crow et al., 2009), compared to those with typical eating disorder presentations, they are often misdiagnosed and mistreated by eating disorder healthcare professionals (Harrop, 2019; Lebow et al., 2015; Sim et al., 2013; Veillette et al., 2018).

The current literature on weight stigma among eating disorder professionals is extremely limited, and even more so regarding the approaches and attitudes of clinical psychologists specialising in eating disorders. To date, there is only one US based study that explores weight stigma in mental health professionals and how it impacts on the conceptualisation and treatment of restrictive eating disorders like Anorexia Nervosa (Veillette et al., 2018). For reasons that are explained below, it's important that this study be replicated in UK settings to see how these attitudes present in UK clinical psychologists working with typical and atypical eating disorder presentations.

Clinical psychologists play a central role in eating disorder care. They are expected to deliver evidence-based psychological therapy for eating disorder presentations, conduct staff

training, offer reflective practice for staff, and be involved in conducting research and service development to improve care within eating disorder services (British Psychological Society, 2021). Consequently, understanding how weight stigma presents in this psychological domain in this area is imperative, to ensure all clients who receive mental health support for eating disorder symptomology, including higher weight people, receive respectful and equitable treatment that does not cause further harm to health.

The systematic literature review, presented in Chapter 2, was developed in response to the review by Levinson et al. (2024). Being subjected to weight stigma negatively impacts all aspects of health and, given that individuals with higher weight are already at an elevated risk for eating disorder pathology and its associated psychological distress, the additional consequences of weight stigma are particularly concerning. Thus, a more comprehensive understanding of the psychological distress caused by weight stigma in individuals with atypical eating disorders is needed. Although Levinson et al. (2024) provided a comprehensive review of the relationship between weight stigma and disordered eating behaviours, their review did not explicitly consider those who have diagnosed eating disorders. The following review aims to consolidate existing literature to give valuable insights into the experience of this specific population, and help clinicians and academics make recommendations for targeted change to address stigma and improve service provision.

2 Systematic Review

2.1 Overview

Experiencing weight stigma is associated with a wide range of negative psychological consequences such as low self-esteem, anxiety, depression, and increased risk of disordered eating behaviours (Alimoradi et al., 2020; Levinson et al., 2024). As higher weight individuals experience higher levels of weight discrimination, they are at higher risk of experiencing the associated psychological distress which is associated with the development and/or maintenance of their eating disorder pathology (Nagata et al., 2018; Neumark-Sztainer et al., 2006; Darby et al., 2007).

Though recent reviews have comprehensively explored the relationship between weight stigma and psychological distress, including disordered eating behaviour (Levinson et al., 2024), and explored how this is reflected in higher weight individuals (Papadopoulos & Brennan, 2015), there has yet to be a review that has explored the psychological impact of weight stigma in higher weight individuals who have a diagnosed eating disorder. Given that those with eating disorders are particularly vulnerable, and that those in higher weight bodies are much more likely to experience weight stigma, it's essential to explore the psychological impact of the weight stigma they experience and whether their psychological distress is related to their disordered eating behaviours.

As such, this review aimed to extend on existing work by systematically reviewing weight stigma, experienced and internalised, and its relationship to psychological distress in higher weight individuals who meet the criteria for an eating disorder. This chapter outlines a systematic literature review (SLR) of research conducted between 1960 (when weight stigma first appeared in academic literature) and 2024. Firstly, the chapter outlines the methodology employed in the systematic literature review (focussing on aim, search strategy and search process), before sharing the results of a narrative synthesis. The chapter closes with a short discussion of the findings, highlighting clinical implications and emphasising the reviews relevance to the current research.

2.2 Introduction

As already highlighted in the introductory chapter of this thesis, higher weight individuals experience weight stigma in numerous areas of life, including the workplace (Roehling et al., 2007), from family and friends (Puhl and Heuer, 2009) and from healthcare

providers (Phul & Heuer, 2009; Lawrence et al., 2021). Weight stigma comprises of several forms of discrimination ranging from the micro-level, person to person discrimination, to the macro-level, structural discrimination. Structural weight stigma is the systematic oppression of higher-weight individuals, through institutions and corporations spreading negative attitudes and prejudices (Corrigan et al., 2005). This can occur through the law, institutional practices, or media that convey negative messaging. Weight stigma at the individual level involves person to person discrimination, which usually involves the perpetuating of negative attitudes and prejudices through inappropriate behaviour (Puhl & Heuer, 2009).

When examining and theorising the impact of weight stigma at the individual level, research often concentrates on two primary constructs: experienced and internalised weight stigma (Major et al., 2018). Experienced weight stigma, sometimes referred to as 'perceived weight discrimination', is when individuals report being treated unfairly or discriminated against because of their weight (Levinson et al., 2024). Internalised weight stigma, sometimes described as 'self-discrimination' is where over time, with continued stigmatisation, higher weight individuals are seen to adopt the pervasive negative stereotypes regarding their weight and believe themselves to be less worthy because of it (Pearl et al., 2023). This aligns with Goffman's (1963) concept of difference, in this case, larger bodies as a visible and sociality unacceptable trait. According to Goffman, the discomfort that comes from social discrimination and prejudice leads those victimised to internalise their feelings of humiliation and inferiority.

Experienced and internalised weight stigma are typically measured through self-report questionnaires such as the Weight Bias Internalization Scale (WBIS) and the Stigmatising Situations Inventory (SSI), as well as implicit or explicit attitude tests (Greenwald et al., 1998). Although these tools focus on different facets of weight stigma, they generally define it as the experience of negative attitudes toward individuals with overweight or obesity. As outlined in the review by Levinson et al. (2024), each facet of weight stigma is highly prevalent, with US based studies reporting over 40% of U.S. adults experiencing some form of weight discrimination (Lee et al., 2021), and 24% indicating high levels of internalised weight stigma (Prunty et al., 2020). These numbers tend to rise as an individual's weight increases.

Perceived and experienced weight stigma serves as a chronic stressor for higher weight individuals and has been associated with a range of adverse outcomes across the

biopsychosocial spectrum. Socially, weight stigma manifests in interpersonal relationships, which sees higher weight individuals sometimes receiving most of their experienced weight stigma from family and friends (Puhl and Heuer, 2009). Those who are stigmatised frequently experience social exclusion and strained relationships, which can negatively impact their overall mental and physical well-being (Brown et al., 2022).

Biologically, both internalised and experienced weight stigma are demonstrated to be associated with stress-induced pathophysiology, such as elevated cortisol levels (Himmelstein et al., 2015; Schvey et al., 2014), increased blood pressure (Major et al., 2012), and the development of hypertension and hyperglycaemia (Wu & Berry, 2018). Psychologically, it results in depression, anxiety, suicidal thoughts, body dissatisfaction and low self-esteem (Papadopoulos & Brennan, 2015). Himmelstein et al. (2018) discovered that perceived weight stigma was also linked to intermediary outcomes, such as avoiding exercise and engaging in maladaptive eating behaviours. These outcomes were subsequently associated with higher levels of depression and poorer physical health.

Given the negative psychological consequences of experiencing weight stigma, it is unsurprising that this has been linked to the maintenance and development of disordered eating behaviours, as described below. Eating disorders have been shown in the literature to be associated with psychopathology, such as increased anxiety, depression, and obsessive-compulsive symptoms (Berkman et al., 2007; Van Alsten & Duncan, 2020). The relationship between eating disorders and psychological distress appears to be bidirectional, indicating they mutually influence and reinforce each other in a cyclical manner. It's been shown that eating disorders worsen mental health symptoms such as depression and low self-esteem, as the experience of having an eating disorder leads to increased emotional instability, guilt and social isolation (Leonidas & dos Santos, 2017). Psychological distress can also contribute to the development or worsening of eating disorders, with individuals using disordered eating as a coping mechanism to manage distress or to regain a sense of control (Fitzsimmons & Bardone-Cone, 2011).

Individuals may turn to disordered eating behaviours, such as restrictive eating or binge eating, to cope with the emotional distress linked to the weight stigma they have experienced, or to conform to societal pressures around weight and appearance. The nature of weight discrimination that encompasses the shaming for not meeting idealised weight ideals, or to conform to societal pressures around weight and appearance, manifests in eating

disorder presentations as a drive for thinness (Gallardo et al., 2020) concerns about weight (Almenara et al., 2017), poor body image (Grilo & Masheb, 2005) and binge eating (Puhl & Himmelstein, 2018). For higher weight individuals, the risk of developing the associated eating disorder pathology is only increased, given their increased risk of experiencing weight stigma.

2.2.1 Rationale

Research indicates that being subjected to weight stigma negatively impacts all aspects of health. As higher weight individuals experience higher levels of weight discrimination, they are at higher risk of experiencing the associated psychological distress which is associated with the development and/or maintenance of their eating disorder pathology (Nagata et al., 2018; Neumark-Sztainer et al., 2006; Darby et al., 2007)**.** Understanding the psychological correlates of weight stigma in higher weight adults with eating disorders is essential given the possible role that weight stigma, and the psychological distress caused by weight stigma, plays in the development and/or maintenance of eating disorder pathology.

Although Levinson et al. (2024) provided a comprehensive review of the relationship between weight stigma and disordered eating behaviours, their review encompassed individuals across the entire weight spectrum, and they did not explicitly consider those who have diagnosed eating disorders. Similarly, Papadopoulos & Brennan (2015), although considering higher weight individuals, they did not specifically focus on those with diagnosed eating disorders and the impact of weight stigma and associated psychological distress. Thus, a more comprehensive understanding of the psychological distress caused by weight stigma in individuals with diagnosed atypical eating disorders is needed. The current review will systematically examine the literature that has investigated both internalised and experienced weight stigma, specifically in higher weight patients with established and diagnosed eating disorders, and its association with psychological distress and eating disorder pathology. The review aims to answer the following research questions:

2.2.2 Review questions

1. What is the associated psychological distress in higher weight individuals with diagnosed eating disorders who have experienced or experience weight stigma?

2. What impact, if any, does the experience of weight stigma and associated psychological distress, have on eating disorder pathology?

In this review, the most current and thorough examination of the quantitative literature on the relationship between weight stigma and psychological distress in those with atypical eating disorders is provided. A systematic review was chosen over a meta-analysis due to the exploratory nature of this research, which aimed to identifying the relationship between weight stigma and psychological distress in those with a typical eating disorders, but also aimed to highlight where further investigation is required regarding the relationship between these areas. It was anticipated that there would be a significant variation in study samples, such as difference between community and clinical populations, as demonstrated in the review by Papadopoulos & Brennan (2015). Moreover, as highlighted by previous reviewers, the instruments used to measure weight stigma and psychological distress are diverse and sometimes lack consistent psychometric validation. This was likely to introduce considerable heterogeneity across studies, making a meta-analysis less appropriate for this particular review. This guided the decision to perform a detailed systematic review, with a narrative synthesis of the data instead.

Due to the scope and time constraints of the project, this review was restricted to focusing on the psychological distress of weight stigma in those with atypical eating disorders. Exploring all potential biological, social and psychological factors, as seen in the review by Papadopoulos & Brennan (2015), would have exceeded the practical limits of this thesis. Furthermore, by focusing solely on psychological correlates, allowed for a more in-depth analysis of the mental health effects of weight stigma, which is a critical area for further research in the area of clinical psychology.

2.3 Method

2.3.1 Search strategy

The current review was carried out and documented in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Electronic database searches, and reference checking of finally selected studies was conducted to ensure a thorough overview of the literature. To identify and retrieve studies relevant for the current review, five different databases were utilised, including PubMed, CINAHL, PsycINFO, Cochrane, and Scopus. They were accessed via the University of Hertfordshire. The chosen databases include a range of peer-reviewed studies from relevant disciplines including psychology, social sciences, nursing and medicine. This would ensure a comprehensive coverage of literature that is related to weight stigma, eating disorders and psychological health. Furthermore, these databases have been successfully used in earlier reviews (Levinson

et al., 2024; Papadopoulos & Brennan, 2015) that similarly investigated the relevant topics of weight stigma, eating disorder pathology and how this presents in higher weight individuals. This ensured the relevant papers would be captured in this review.

2.3.2 Procedure and search terms

To develop appropriate search terms, a range of relevant systematic reviews were examined (Appendix A). Combinations of keywords, title, and abstract words included synonyms of weight stigma, higher weight and eating disorders (see example search in Table 1). Search terms were combined using Boolean operators 'AND/'OR'. MESH terms were used to retrieve articles that might not be captured by simple keyword searches, ensuring a more comprehensive search. Key words were truncated to encompass both UK and US spellings, to ensure all relevant papers were included. The full search strategy that was used for each of the five databases can be found in (Appendix B).

Table 1.

PubMed search strategy example

Step	Search
Step 1	**Keyword search 1:** **Weight stigma:** ("weight prejudice") MH OR ("weight bias" OR weightism OR sizeism OR "anti-fat OR fatphobia*)
Step 2	**Keyword Search 2:** **Weight stigma:** discriminat* OR stigma* OR prejudice* OR stereotype* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi* OR "Social Discrimination" MH OR "Stereotyping" MH
Step 3	**Keyword Search 3:** **Higher weight:** weight OR obesity OR obese OR fat OR size* OR overweight
Step 4	**Keyword Search 4:** **Eating disorders:** eating OR "weight control"
Step 5	**Keyword Search 5:** **Eating disorders:** disorder* OR dysregulat* OR behavio* OR binge OR pathology OR overeating OR anorexia OR bulimia OR "Eating Disorders+"
Step 6	Steps 1, 2, 3, 4, 5 were combined

Step 7	The limits applied included: Year:"1960 - 2024" Language: English Participants: Humans participants/Non-animal participants

2.3.3 Inclusion and exclusion criteria

Automatic limits such as publication date, language restrictions, and the inclusion of only human participants were set across all five databases. Grey literature such as, theses, dissertations, abstracts, chapters, and presentations were excluded from review. This was to ensure the rigor, reliability and relevance of the studies included, as these sources are often not subject to the same peer review process as published studies. Furthermore, it's reported that grey literature may not provide adequate information for a thorough quality assessment limiting their utility in the current systematic review (Mahood et al., 2014).

To ensure the most relevant research was captured, the publication date timeframe for this review was restricted to studies published between 1960 and 2024. This decision was based on the recognition that weight stigma first began to appear in the literature in the 1960s, coinciding with several cultural, social, and medical shifts. These include the growing medical concerns around obesity, the rise of the diet and fitness industry, and early psychological research on prejudice and bias (Puhl & Heuer, 2010). This will also ensure that studies yielded will reflect the past and present understanding of weight stigma.

The review included original quantitative studies that reported at least one psychological distress correlate, including eating disorder symptomatology, along with some form of weight-related stigma in adults or adolescents classified as higher weight (BMI over 25) with a formally diagnosed atypical eating disorder. To be included, the eating disorder diagnosis had to meet the DSM-IV criteria for an atypical eating disorder, including but not limited to, Binge Eating Disorder (BED), Otherwise Specified Feeding and Eating Disorder (OSFED), or Atypical Anorexia Nervosa (AAN) as outlined in the DSM-IV manual (American Psychiatric Association, 2013). This had to be appropriately established either prior to the research or by the study's researchers using validated diagnostic tools, such as the Structured Clinical Interview for DSM-IV Axis I Disorders (First et al., 2015) conducted by a qualified clinician.

Furthermore, to ensure the inclusion of studies capturing all aspects of psychological distress, a broad definition of psychological distress was applied. This encompassed any form

of emotional, or cognitive difficulties, including but not limited to anxiety, depression, stress, self-esteem, and general mental health difficulties. However, to ensure the constructs of psychological distress were accurately represented, only studies that utilised a validated measure for the identification of psychological distress were included. Studies that used qualitative assessment or self-reports without validated measures were excluded. This ensured that the psychological constructs included in the papers were reliability representing genuine measures of psychological distress.

2.3.4 Review Process

The procedure to identify the final collection of studies for the SLR was conducted as follows. The search results yielded from the chosen databases were exported to the literature review software, Covidence (Veritas Health Innovation, 2023). Covidence automatically removed duplicates before the researcher screened titles and abstracts according to the inclusion and exclusion criteria. An inclusion and exclusion grid was used to support screening (Table 2). Studies with abstracts that suggested potential eligibility based on inclusion and exclusion criteria were selected for a full text review. Studies with abstracts failing to meet the inclusion criteria were excluded from the review. Those that met criteria for a full review, full text articles were obtained and evaluated. The studies, following a full text review, that did not meet the criteria were excluded. To ensure no studies were overlooked, a comprehensive search was conducted through the reference lists of each of the finally selected study.

Table 2.

'Include' and 'Exclude' criteria grid for screening

Include	**Exclude**
The study is in English	The study is not available in English
The study is quantitative	The study is a not quantitative
The study is published in a peer-review journal	The study is not published within a peer review journal
The study includes higher weight individuals (BMI over 25) with data that has been studied separately from lower weight individuals.	The study does not include higher weight individuals (BMI over 25) or the data has not been studied separately from lower weight individuals data.
The study includes higher weight individuals who have a sufficiently diagnosed eating disorder.	The study does not include higher weight individuals who have a sufficiently diagnosed eating disorder

The study includes higher weight individuals who have a sufficiently diagnosed eating disorder, that is separate from non-eating disorder samples.	The study does not separate the higher weight individuals with a sufficiently diagnosed eating disorder from the non-eating disorder sample.
The study included some measure of weight bias	The study does not include any measure of weight bias
The study includes some measure of psychological distress that has been measured by a validated measure	The study does not include some measure of psychological distress or psychological distress has been measured quantitively or by non-validated measures

2.3.5 Quality assessment of studies

Quality appraisal is used to systematically assess the reliability and relevance of studies included in a systematic review (Young & Solomon, 2009) All nine studies included in the current review were cross-sectional studies and as such were appraised using the Appraisal tool for Cross-Sectional Studies (AXIS) (Downes et al., 2016). The AXIS is a widely used tool which is designed to support the researcher to identify issues that may be apparent in cross sectional studies, such as methodological issues and response bias (Ma et al., 2020). The 20 questions provided in the AXIS, aimed at providing a comprehensive assessment of the studies quality, cover domains such as introduction, method, sample section and size justification, validity of measures validity, statistical analysis, conclusions, and ethical considerations.

2.4 Results

2.4.1 Studies included

A flow diagram was created via Covidence to summarise the literature search and selection process (Figure 3). The database search and citation search identified 1056 studies in total. The Covidence data management tool automatically removed 277 duplicate articles. Out of the 776 studies remaining, the researcher removed 681 studies that were identified as irrelevant by screening titles and/or abstracts. The researcher removed a further 86 studies, that when screened for eligibility, did not meet the inclusion and exclusion criteria. This left a total of nine studies which were included in the review.

2.4.2 Data extraction

For the purposes of this review, the following data was extracted: study authors, sample characteristics, study setting, eating disorder (ED) diagnosis, weight stigma measure, psychological correlates, and corresponding results (Table 3). The sample description

includes the total number of participants in the study, highlighting the number of individuals in the Binge Eating Disorder (BED) subgroup that were analysed separately. Additionally, it includes information on gender distribution, mean age, mean BMI, the country of origin, and the ethnic backgrounds of the participants. The study setting will outline whether the study was conducted in a community of clinical setting. The psychological correlates were separated into psychological distress correlates and eating disorder pathology correlates for ease of the analysis.

2.4.3 Characteristics of studies

Across the nine studies, participant's ages ranged between 18 and 65 years. Three of the studies had only female participants, with the remaining six consisting of over 65% female samples. All nine of the studies were conducted in the USA and included a USA sample. Eight of the nine studies included a multi-ethnic sample, with six of the eight studies consisting of over 70% of Caucasian/white participants. One study had all Hispanic participants. In three studies, they compared different samples of participants. Two studies were comparing obese participants with BED against obese participants without BED, the other was comparing higher weight participants with BED against non-higher weight participants with Bulimia Nervosa (BN). In line with the inclusion/exclusion criteria of the review, only the participants that were higher weight (BMI more than 25) with an appropriately diagnosed eating disorder were included. This meant the sample for all nine studies was a clinical population and all participants were diagnosed with BED.

Figure 3.

Diagram of literature search summary and final study identification

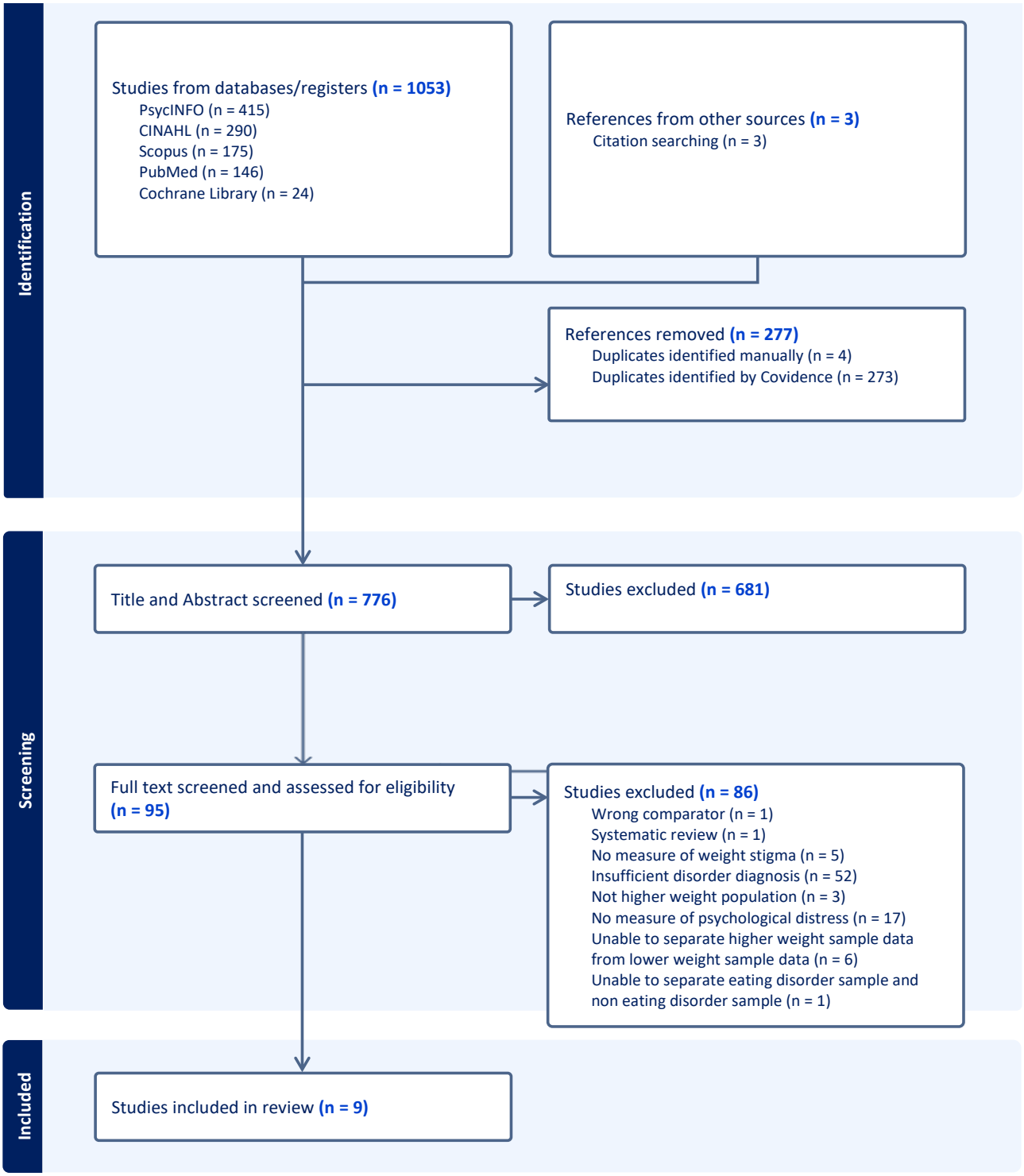

Table 3.

Study extraction summary table

Study Authors	Sample	Setting - Community/ Clinical	ED diagnosis	Weight stigma measure	Psychological Correlate explored	Correlate result
Barnes et al. (2014) (1)	Total sample = 221 BED sample = 168 Female = 126 (75%) Male = 42 (25%) Age = 46.57 (SD 10.61) BMI = 37.85 (SD 5.12) USA population White not Hispanic = 45.2% White Hispanic = 13.7% African American not Hispanic =14% African American not Hispanic = 32.1% African American Hispanic = 1.8% Asian American = 2.4% American Indian = 0.6% Indian Caribbean = 0.6% Multiracial = 1.2% Other = 1.8% Missing = 0.6%	Clinical Population	DSM-IV diagnostic criteria for BED	WBIS	Depression Eating disorder pathology -Global eating disorder psychopathology -Eating Restraint -Eating concern -Weight concern -Shape concern -Objective bulimic episodes	***Psychological Distress:*** Higher depression: $r = -.427$, $P < 0.0005$ ***Eating Disorder Pathology:*** Global eating disorder pathology: $r = -354$, $P < 0.0005$ Eating Restraint: Not significant Eating concern: $r = -.335$, $P < 0.0005$ Weight concern: $r = -.363$, $P < 0.0005$ Shape concern: $r = -.308$, $P < 0.0005$ Objective bulimic episodes: Not significant

Durso et al. (2012) (2)	Total sample = 100 (all BED) Female = 65 (65%) Male = 35 (35%) Age = 47.65 (SD 8.34) BMI = 40.58 (SD 6.63) USA population Caucasian 79% Black/African American =14% Hispanic = 4%	Clinical Population	DSM-IV diagnostic criteria for BED	WBIS	Self-esteem Depression Eating disorder pathology: - Global eating disorder pathology - Eating Restraint - Eating concern - Weight concern - Shape concern - Binge eating frequency	***Psychological Distress:*** Lower self-esteem: $r = -0.68$, $P < 0.01$ Higher depression: $r = 0.65$, $P < 0.01$ ***Eating Disorder Pathology:*** Global eating disorder pathology: $r = 0.43$, $P < 0.01$ Eating restraint: Not significant Eating concern: $r = 0.37$, $P < 0.01$ Shape concern: $r = 0.48$, $P < 0.01$ Weight concern: $r = 0.37$, $P < 0.01$ Over-evaluation of weight and shape: $r = 0.53$, $P < 0.01$ Binge eating frequency: Not significant
Grilo & Masheb (2005) (3)	Total sample = 343 (all BED) Female = 267 (77.9%) Male = 76 (22.1%) Age= 44 (SD 9.1) BMI= 36.4 (SD 8.6) USA population Caucasian 85% (N = 292) African American = 7% (N = 24) American Hispanic = 6% (N = 21) Other ethnicity = 2% (N = 7)	Clinical Population	DSM-IV diagnostic criteria for BED	PARTS - WST	Self-esteem Depression Eating disorder pathology - Body dissatisfaction	**Women:** ***Psychological Distress:*** Body Dissatisfaction: r = 0.19 P < 0.005 Lower self-esteem: $r = -0.17$, $P < 0.01$ Higher depression: $r = -0.17$, $P < 0.05$ ***Association between psychological distress and eating disorder pathology:*** Physiological distress was associated with body dissatisfaction: Depression: $B = .381$, t= 5.43, p =.001 Self-esteem: $B = -.162$, t= -2.30, p = .022 **Men:** ***Psychological Distress:*** Body Dissatisfaction: r = 0.24 P < 0.05 Lower self-esteem: $r = -0.30$, $P < 0.005$

						Higher depression: Not significant ***Association between psychological distress and eating disorder pathology:*** Physiological distress was significantly correlated with body dissatisfaction Depression: *B*= .358, t = 2.89, p = .005 Self-esteem: *B* = -.304, t = -2.52, p = .014
Jackson et al. (2000) (4)	Total Sample = 115 (all BED) Female = 115 (100%) Age = 41.28 (SD = 9.57) BMI = 34.70 (SD = 9.05) USA population Caucasian = 88% (N = 101) African American = 7.8% (N = 9) Hispanic = 2.6% (N = 3) Other ethnicity = 1.7% (N = 2)	Clinical Population	DSM-IV diagnostic criteria for BED	PARTS - WST	Self-esteem Depression Eating disorder pathology -Objective bulimic episodes -Eating Restraint -Eating concern -Weight concern -Shape concern Body dissatisfaction	***Psychological Distress:*** Lower self-esteem: $r = -0.20$, $P < 0.05$ Higher depression: Not significant ***Eating Disorder Pathology:*** Objective bulimic episodes: Not significant Restraint: Not significant Eating concern: Not significant Weight concern: Not significant Shape concern: Not significant Body Dissatisfaction: Not significant ***Association between psychological distress and eating disorder pathology:*** Depression was a significant predictor of EDE-Q weight concern and body dissatisfaction Weight concern: *B*= 0.37, $P < 0.001$ Body Dissatisfaction: *B*= 0.45, $P < 0.001$

Jackson et al. (2002) (5)	Total Sample = 64 BED sample = 32 Female = 32 (100%) Age = 36.31 (SD 9.41) BMI = 25.11 (SD 3.04) USA Population Caucasian = 30 African American = 2	Clinical Population	DSM-IV diagnostic criteria for BED	PARTS - WST	Self-esteem Depression Eating disorder pathology: -Objective binges -Vomiting - Restraint -Eating concerns -Weight concerns -Shape concerns Body dissatisfaction	***Psychological Distress:*** Lower self-esteem: Not significant Higher depression: Not significant ***Eating Disorder Pathology:*** Eating disorder pathology: Objective binges: Not significant Vomiting: Not significant Restraint: Not significant Eating concern: Not significant Weight concern: Not significant Shape concern: Not significant Body Dissatisfaction: Not significant
Pearl et al. (2014) (6)	Total Sample = 245 (all BED) Female = 172 (70.2%) Male = 73 (29.8%) Age = 48.00 (SD 9.89) BMI = 39.49 (SD 5.92), USA Population Caucasian = 80.8%	Clinical Population	DSM-IV diagnostic criteria for BED	WBIS	Self-esteem Eating disorder pathology: -Over-evaluation of shape and weight	***Psychological Distress:*** Self-esteem: r =-0.67, $P < 0.001$ Over-evaluation of shape and weight: r = 0.54, $P < 0.001$ ***Association between psychological distress and eating disorder pathology:*** Self-esteem scores were significantly correlated with overevaluation of shape: r = -.43, $p < .001$

Pearl et al. (2014) (7)	Total Sample = 255 (all BED) Female = 182 (71.4%) Male = 73 (28.6%) Age = 47.94 (9.94) BMI = 39.29 (6.03) USA Population Caucasian = 80.8%	Clinical Population	DSM-IV diagnostic criteria for BED	WBIS	Depression Overall Mental health	***Psychological Distress:*** Mental health component (MCS): $B = -0.53$, $p < .001$ Depression as mediator for MCS variables: mental health: $B = -1.17$, $p < .001$ role-emotional: $B = -2.44$, $p < .001$ Social functioning: $B = -1.68$, $p < .001$ Vitality: $B = -1.38$, $p < .001$
Puhl et al. (2010) (8)	Total Sample = 100 BED sample = 50 Female = 50 (100%) Age= 43.48 (SD 12.02) BMI= 38.75 (SD 6.49) USA population Caucasian 42% Black = 40% Hispanic = 12%	Clinical Population	DSM-IV diagnostic criteria for BED	ATOP	Self Esteem Depression Eating disorder pathology - Eating Restraint - Eating concern - Weight concern - Shape concern - Binge eating frequency	***Psychological Distress:*** More favourable attitudes towards obese persons were associated with Higher self-esteem: $r = 0.40$, $P < 0.01$ Lower depression: $r = -0.36$, $P < 0.05$ ***Eating Disorder Pathology:*** Eating disorder pathology: Eating Restraint: Not significant Eating concern: Not significant Weight concern: Not significant Shape concern: Not significant Binge frequency: Not significant
Puhl et al. (2011) (9)	Total Sample = 79 BED sample = 40 Female = 31 (78%) Male = 9 (22%) Age = 45.73 (SD 8.22) BMI = 38.03 (SD 6.18)	Clinical Population	DSM-IV diagnostic criteria for BED	(S-ATOP)	Depression Eating disorder pathology - Eating Restraint - Eating concern - Weight concern	***Psychological Distress:*** More negative attitudes towards obese persons are associated with Higher depression: $r = -0.40$, $P < 0.01$ ***Eating Disorder Pathology:***

	USA population Hispanic = 100%				- Shape concern - Global eating disorder pathology	Eating Restraint: Not significant Eating concern: Not significant Weight concern: Not significant Shape concern: Not significant Global eating disorder pathology: Not significant ***Association between psychological distress and eating disorder pathology:*** Depression scores were significantly correlated with ***Eating disorder pathology:*** Global eating disorder psychopathology: $r = 0.45$, $P < .001$ Eating concern: $r = 0.54$, $P < .001$ Weight concern: $r = 0.27$, $P < .04$ Shape concern: $r = 0.42$, $P < .01$ Restraint: Not significant

2.4.4 Quality assessment findings

As previously outlined, a quality assessment of the nine studies included in this review was conducted using the AXIS tool for cross-sectional studies (Table 4). The AXIS tool does not offer a specific numerical cut-off score for study eligibility and instead provides the user with the flexibility to make a subjective assessment of the overall quality of the study. However, for the purposes of simplifying and quantifying the quality analysis in this review, a numerical cut-off of 70% was applied, alongside a subjective assessment of the criteria. Researchers have used the 70% numerical cut-off point in other quality assessment tools, including the Newcastle-Ottawa Scale (NOS) (Peterson et al., 2011) and the Joanna Briggs Institute (JBI) critical appraisal tools (Kundu et al., 2024). To achieve 70%, studies had to have met at least 14 criteria on the quality assessment tool. Overall, all nine studies exceeded this threshold, which suggested the quality of the study was of an acceptable level. Limitations were noted for all studies, but they did not significantly undermine the reliability of the findings, supporting their inclusion in the narrative synthesis.

All studies had clear objectives and appropriate design for the analysis that was utilised. In all studies the descriptive analysis and analytic data analysis were reported comprehensively and transparently, ensuring its replicability. A particular strength across all studies was the use of well-validated measures for weight stigma and psychological correlates, including eating disorder pathology. These measures had previously been used in the weight stigma literature and have been subsequently used in eating disorder research. It was identified that two studies used alternative measures to assess weight stigma (Puhl et al., 2010; Puhl et al., 2011), which included assessing stigmatising attitudes towards obese people in higher weight people who had BED. This is different from the remaining studies who used measures that are specifically aimed to measure experienced or internalised weight stigma. However, these measures are still well-validated measures, and the researchers have drawn parallels to negative weight-based attitudes present in obese adults as a result of internalised societal stereotypes. As such, this will be interpreted at an internalised weight stigma measure for the purpose of this review.

A significant limitation across all studies was the lack of justification for the sample size. This raises concerns about the validity of the findings, as it may lead to reduced statistical power and biased estimates (Dattalo, 2008). Furthermore, in some studies the sample included both higher weight participants and lower weight participants, or non-BED participants and BED participants. This means the BED sample or higher weight sample,

when separated from the other non-relevant sample, was even further reduced. This further raised concerns about statistical power and validity of findings, of which will be discussed and reflected on in the narrative analysis and discussion of the review.

Another key limitation across all studies is their reliance on a cross-sectional design, which means causality of the relationships cannot be established. As a result, it remains unclear whether weight stigma contributes to psychological distress and eating disorder pathology, or if the reverse is true. Some studies made recommendations to ensure future research adopts longitudinal designs.

It's worth noting that all nine studies were given a not-stated score for reporting non-responders. However, all studies used purposive or convenience sampling (Etikan et al., 2016) to recruit participants who had a Bing Eating Disorder (BED) in a clinical setting. As such, the absence of non-responder reporting may be justified, as it does not align with the study design. The sampling method highlights a further limitation of the samples being unrepresentative of a broader population. Because participants were all US based individuals with BED, recruited from a clinical setting, the samples lack diversity in terms of demographics, and experiences of other eating disorder presentation. Therefore, the findings may not account for differences among other atypical eating disorders or across community samples.

Although it’s important to consider these limitations when interpreting the findings, these studies still offer valuable insights into the psychological correlates of weight bias in higher weight patients with atypical eating disorders.

Table 4.

AXIS for cross-sectional studies Quality Appraisal tool

	1	2	3	4	5	6	7	8	9
Author/Authors & Year	Barnes et al. (2014)	Durso et al. (2012)	Grilo & Masheb (2005)	Jackson et al. (2000)	Jackson et al. (2002)	Pearl et al. (2014)	Pearl et al. (2014)	Puhl et al. (2010)	Puhl et al. (2011)
1. Were the aims/objectives of the study clear?	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Was the study design appropriate for the stated aims?	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. Was the sample size justified?	N	N	N	N	N	N	N	N	N
4. Was the target/reference population clearly defined?	Y	Y	Y	Y	Y	Y	Y	Y	Y
5. Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?	Y	Y	Y	Y	Y	Y	Y	Y	Y
6. Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?	Y	Y	Y	Y	Y	Y	Y	Y	Y
7. Were measures undertaken to address and categorise non-responders	N	N	N	N	N	N	N	N	N
8. Were the risk factor and outcome variables measured appropriate to the aims of the study?	Y	Y	Y	Y	Y	Y	Y	Y	Y
9. Were the risk factor and outcome variables measured correctly using instruments/measurements that has been trailed,	Y	Y	Y	Y	Y	Y	Y	Y	Y

piloted or published previously?									
10. Is it clear what was used to determine statistical significance and/or precision estimates (e.g. p-values, confidence intervals)	Y	Y	Y	Y	Y	Y	Y	Y	Y
11. Were the methods (including statistical methods) sufficiently described to enable them to be repeated?	Y	Y	Y	Y	Y	Y	Y	Y	Y
12. Were the basic data adequately described?	Y	Y	Y	Y	Y	Y	Y	Y	Y
13. Does the response rate raise concerns about non-response bias?	NS	NS	NS	NS	NS	NS	NS	NS	NS
14. If appropriate, was information about non-responders described?	N	N	N	N	N	N	N	N	N
15. Were the results internally consistent?	Y	Y	Y	Y	Y	Y	Y	Y	Y
16. Were the results presented for all the analyses described in the methods?	Y	Y	Y	Y	Y	Y	Y	Y	Y
17. Were the authors' discussions and conclusions justified by the results?	Y	Y	Y	Y	Y	Y	Y	Y	Y
18. Were the limitations of the study discussed?	Y	Y	Y	Y	Y	Y	Y	Y	Y
19. Were there any funding sources of conflicts of interest that may affect the authors' interpretation of the results?	NS	NS	NS	NS	NS	N	N	N	N
20. Was ethical approval or consent of participants attained?	Y	Y	Y	Y	Y	NS	NS	Y	Y

Y - Yes, N - No, NS – Not stated, NA – Not applicable

2.4.5 Narrative synthesis of findings

Although the review aimed to encompass all atypical eating disorders, including AAN, OSFED, and BED, the studies retrieved focused exclusively on BED populations. Similarly, while the review was open to examining both community and clinical samples, the extracted studies were limited to clinical populations. As such, this synthesis will be

presented with the understanding that the reader is aware that the sample discussed in each study consists of a clinical population, that is higher weight and has a diagnosis of BED. Consequently, the narrative synthesis was divided into three categories: psychological distress, eating disorder pathology and the relationship of psychological distress on eating disorder pathology, with the discussion centred specifically on BED and clinical populations. This will be further examined and reflected upon in the discussion section.

2.4.5.1 Psychological Distress

The following section will present the psychological distress correlates identified from the study data, including depression, self-esteem, and overall mental health.

2.4.5.1.1 Depression

Eight out of the nine cross-sectional studies (1, 2, 3, 4, 5, 7, 8, & 9) investigated the relationship between experienced and internalised weight stigma and depression. Seven studies (1, 2, 3, 4, 5, 7, & 8) used The Beck Depression Inventory (BDI) which is psychometrically established, and widely used inventory of the cognitive, effective, somatic and motivational symptoms of depression (Beck & Steer, 1987). It is considered to have excellent validity and reliability (Beck et al., 1988) One study (9) used the Spanish-Language version of the Beck Inventory (S-BDI) for a Spanish-speaking Hispanic sample, which has well-documented reliability and validity in diverse Spanish-speaking samples (Penley et al., 2003). The α reliability of this measure in the studies sample was .91 (Puhl et al., 2011).

Three of the studies (3,4 & 5) investigated the relationship between depression and experienced weight stigma, as measured by the Weight/Size Teasing (WST) sub-scale of the Physical Appearance-Related Teasing Scale (PARTS) measure. Of the three, one study (3) compared a sample of both men and women with BED and found that experienced weight teasing was significantly correlated with depression in the sample of women. For the sample of men, experienced weight stigma was found not to be significantly correlated with depression. The other study (4) found that depression was significantly correlated with weight teasing but only after controlling for age of onset of obesity and BMI status.

The final study of the three (5) found that weight teasing was not significantly correlated with depression, even when controlling for age of onset of obesity and current BMI status. They reported that the lack of statistical power, having only 32 BED patients, may account for the non-significant findings between history of teasing and psychological and eating disorder symptoms. Its clear further studies are necessary to clarify the

relationship between depression and experienced weight stigma in those with BED, as the current literature is limited and inconsistent, and no clear pattern has yet been identified.

Five studies (1, 2, 7, 8, & 9) investigated the relationship between internalised weight stigma and depression. To measure internalised weight stigma, three studies used the Weight Bais Internalisation Scale (WBIS) (1, 2 & 7), one study used the Attitudes Towards Obese People (ATOP) scale (8) and one study used the Spanish version of the Attitudes towards Obese People (S-ATOP) scale (9). Four studies (1, 2, 7, & 8) found internalised weight stigma to be significantly correlated with higher levels of depression. One study (9) found that more favourable attitudes towards obese persons was associated with lower levels of depression. One study (7) found that that depression mediated the relationship between internalised weight stigma and overall mental health.

2.4.5.1.2 Self-esteem

Six out of the nine cross-sectional studies (2, 3, 4, 5, 6, & 8) investigated the relationship between experienced and internalised weight stigma and self-esteem. All six studies (2, 3, 4, 5, 7, & 8) used The Rosenberg Self-Esteem Questionnaire (RSQ) which is 10-item well validated **(**Griffiths et al., 1999) and widely used inventory of general self-worth and global self-esteem (Rosenburg, 1979).

Three studies (3,4 & 5) investigated the relationship between self-esteem and experienced weight stigma, as measured by WST sub-scale of the PARTS measure. Of the three studies, two studies (3 & 4) found that externalised weight stigma was significantly correlated with self-esteem, and for one study (3) it was found to significantly correlated in both a comparative sample of men and women. The other study (5) found that externalised weight stigma was not significantly correlated with self-esteem even after controlling for age and current BMI status. As reported above for the authors findings for depression (5), the lack of statistical power with a limited sample size may account for the non-significant finding for the relationship between experienced weight stigma self-esteem. Like the findings for experienced weight stigma and depression, further studies with increased statistical power are necessary to clarify the relationship between self-esteem and experienced weight stigma in those with BED, as the current literature for this relationship is limited and inconsistent.

Three of the cross-sectional studies (2, 6, & 8) investigated the relationship between internalised weight stigma and self-esteem, as measured by the WBIS (2 & 6) and the ATOP (8). All three studies found that internalised weight stigma was significantly correlated with

self-esteem. Two studies (2 & 6) found that internalised weight stigma was associated with lower self-esteem, and one study (8) found that more favourable attitudes towards obese persons were associated with higher self-esteem.

2.4.5.1.3 Overall Mental Health

One study (7) investigated the relationship between internalised weight stigma, as measured by the WBIS, and overall mental health using the SF-36 Health Survey, a reliable self-report measure of overall mental and physical health (Ware, 2000). The mental component summary measure (MCS) subscale of the SF-36, encompasses Vitality, Social Functioning, Role-Emotional and Mental Health components. They found that internalised weight stigma was associated with MCS overall, encompassing all variables, suggesting it impacts on overall mental health as described by the measure. Furthermore, depression scores were found to mediate each component (vitality, social functioning, role-emotional and mental health).

2.4.5.2 Eating disorder psychopathology

The following section will present the eating disorder psychopathology correlates identified from the study data, including ED variables; Global eating disorder psychopathology, eating restraint, eating concern, weight concern, shape concern, objective bulimic episodes, overvaluation of weight and shape. It will also include the data that explores the relationship between psychological distress and eating disorder pathology.

Out of the nine cross-sectional studies, eight studies (1, 2, 3, 4, 5, 6, 8, & 9) investigated the relationship between experienced and internalised weight stigma and eating disorder pathology. Four studies (1, 2, 6 & 8) used the Eating Disorder Examination (EDE) (Fairburn & Cooper, 1993). The EDE is well established, well validated (Grilo et al., 2004) investigator-based structured interview that assesses the associated and core psychopathology of eating disorders**.** It assesses binge eating, sometimes described as “objective bulimic episodes” and comprises four subscales: eating restraint, eating concern, shape concern, weight concern, and an overall global score. The eating restraint subscale combines both thoughts and behaviours related to restricting food intake. The remaining three subscales represent maladaptive attitudes toward eating and an excessive emphasis on weight and body shape (Durso et al., 2012). One study (9) used the Spanish language version of the EDE, which has shown good test-retest reliability in Spanish speaking populations (Grilo et al., 2005)

Two studies (4 & 5) used the Eating Disorder Examination-Questionnaire (EDE-Q) (Fairburn and Beglin, 1994) The EDE-Q is the self-report version of the EDE interview and consist of 38 questions based directly on the EDE. Like the EDE interview, the EDE-Q assesses the frequency of objective binge eating episodes and four subscales: dietary restraint, eating concern, weight concern and shape concern. The EDE-Q has been empirically validated for use with individuals diagnosed with BED (Grilo et al., 2001; Wilfley et al., 1997). Two studies (2 & 6) combined two subscales from the EDE items, relative importance of shape and weight in self-evaluation, into a composite measure of shape and weight overvaluation.

Three studies (3, 4, & 5) investigated the relationship between experienced and internalised weight stigma and body dissatisfaction. All studies used the Body Shape Questionnaire BSQ (Cooper et al., 1987) is a measure that measures body dissatisfaction, assess the frequency of preoccupation with and distress about body shape. Higher scores reflect greater dissatisfaction. The BSQ has a good reliability and validity (Rosen et al., 1996).

2.4.5.2.1 Body dissatisfaction

Three studies (3, 4 & 5) investigated the relationship between body dissatisfaction and experienced weight stigma, as measured by WST sub-scale of the PARTS measure. One study (3) found body dissatisfaction to be significantly correlated to weight and size teasing in a comparative sample of men and women. The two other studies (4 & 5) found that weight and size teasing was not significantly correlated with body dissatisfaction even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

2.4.5.2.2 Global eating disorder psychopathology

Out of the seven studies which investigated the relationship between weight stigma and eating disorder psychopathology using the EDE or EDE-Q, only 3 (1, 2 & 9) reported results for the global eating disorder subscale. Two of these studies (1 & 2) found the relationship between internalised weight stigma, as measured by the WBIS, to be significantly correlated with global eating disorder psychopathology. The other study (9) found that internalised weight stigma, as measured by the ATOP, was not significantly correlated with global eating disorder psychopathology.

2.4.5.2.3 Eating restraint

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, six (1, 2, 4, 5, 8 & 9) reported results for the eating restraint subscale. Two studies (4 & 5) that investigated the relationship between experienced weight stigma, as measured by the WST of the PARTS, and eating restraint, found that experienced weight stigma was not significantly correlated with eating restraint, even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

Four studies (1, 2, 8, & 9) investigated the relationship between internalised weight stigma and eating restraint. All four studies found no significant correlation between internalised weight stigma and eating restraint. Two of these studies (1 & 2) measured internalised weight stigma using the WBIS, while the other two (8 & 9) used the ATOP.

2.4.5.2.4 Eating concern

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, six (1, 2, 4, 5, 8 & 9) reported results for the eating concern subscale. Two studies (4 & 5) that investigated the relationship between experienced weight stigma, as measured by the WST of the PARTS measure, and eating concern, found that experienced weight stigma was not significantly correlated with eating concern, even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

Four studies (1, 2, 8, & 9) investigated the relationship between internalised weight stigma and eating concern. Two studies (1 & 2) found internalised weight stigma, as measured by the WBIS, to be significantly correlated with eating concern. However, the two other studies (8 & 9) found that internalised weight stigma, as measured by the ATOP, was not significantly correlated with eating concern.

2.4.5.2.5 Weight concern

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, six (1, 2, 4, 5, 8 & 9) reported results for the weight concern subscale. Two studies (4 & 5) that investigated the relationship between experienced weight stigma, as measured by the WST of the PARTS measure, and weight concern, found that experienced weight stigma was not significantly correlated with

weight concern, even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

Four studies (1, 2, 8, & 9) investigated the relationship between internalised weight stigma and weight concern. Two studies (1 & 2) found internalised weight stigma, as measured by the WBIS, to be significantly correlated with weight concern. However, the two other studies (8 & 9) found that internalised weight stigma, as measured by the ATOP, was not significantly correlated with weight concern.

2.4.5.2.6 Shape concern

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, six (1, 2, 4, 5, 8 & 9) reported results for the shape concern subscale. Two studies (4 & 5) that investigated the relationship between experienced weight stigma, as measured by the WST of the PARTS measure, and shape concern, found that experienced weight stigma was not significantly correlated with shape concern, even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

Four studies (1, 2, 8, & 9) investigated the relationship between internalised weight stigma and shape concern. Two studies (1 & 2) found internalised weight stigma, as measured by the WBIS, to be significantly correlated with shape concern. However, the two other studies (8 & 9) found that internalised weight stigma, as measured by the ATOP, was not significantly correlated with shape concern.

2.4.5.2.7 Objective bulimic episodes/ Binge eating frequency

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, five (1, 2, 4, 5, & 8) reported results for the binge eating frequency/objective bulimic episodes subscale. Two studies (4 & 5) that investigated the relationship between experienced weight stigma, as measured by the WST of the PARTS measure, and binge eating frequency, found that experienced weight stigma was not significantly correlated with binge eating, even after controlling for age of onset of obesity and current BMI status (4) and age and current BMI status (5).

Three studies (1, 2, & 8) investigated the relationship between internalised weight stigma and binge eating. All three studies found no significant correlation between internalised weight stigma and being eating. Two of these studies (1 & 2) measured internalised weight stigma using the WBIS, while the other (8) used the ATOP.

2.4.5.2.8 Over-evaluation of weight and shape

Out of the seven studies which investigated the relationship between weight stigma and eating disorder pathology using the EDE or EDE-Q, only two (2 & 6) reported results for the composite measure of shape and weight overvaluation. Both studies found internalised weight stigma, as measured by the WBIS, to be significantly correlated with over-evaluation of weight and shape. One study (6) showed that internalised weight stigma was positively related to over-evaluation of shape and weight, which also mediated the relationship between self-esteem and internalised weight stigma. This suggests that acceptance of negative weight-based stereotypes is associated with poor body image.

2.4.5.3 The relationship between psychological distress and eating disorder pathology

Of the nine studies included in the review, four studies (3, 4, 6, & 9) reported on the relationship between psychological distress and eating disorder psychopathology in relation to weight stigma.

All four studies (3, 4, 6, & 9) reported a relationship between depression and different variables of eating disorder pathology. One study (3) found that in a comparative sample of men and women, that depression was associated with body image dissatisfaction for both men and women and that depression and self-esteem accounted for 47.4% of the variance in BED for men and 28.4% variance for BID in women. Another study (4) found that that depression was significantly correlated with body dissatisfaction and weight concern. One study (9) found that depression scores were significantly correlated with global eating disorder pathology, eating concern, weight concern and shape concern.

Two studies (3 & 6) reported a relationship between self-esteem and eating disorder pathology. One study (6) found that self-esteem scores were significantly correlated with over-evaluation of shape, and the other (3) found that in a comparative sample of men and women, that self-esteem was associated with body image dissatisfaction for both men and women.

2.5 Discussion

The current review aimed to investigate the psychological impact of weight stigma, both experienced and internalised, in higher weight individuals with diagnosed atypical eating disorders. Given that higher weight individuals are frequently exposed to weight stigma across various aspects of life (Puhl & Heuer, 2009), and that those with atypical eating disorders are particularly susceptible to its harmful effects (Crow et al., 2009; Peebles et al.,

2010; Whitelaw et al., 2014), understanding the psychological impact of weight stigma in this population is critical.

While earlier reviews (Levinson et al., 2024; Papadopoulos & Brennan, 2015) have examined some of the included papers, neither focused specifically on the psychological impact and implications of weight stigma in higher-weight individuals with atypical eating disorders. This review narrowed the focus of prior research by specifically targeting higher-weight individuals diagnosed with atypical eating disorders. Importantly, it identified three new studies (Grilo & Masheb, 2005: Puhl et al., 2010; Puhl et al., 2011), not included in earlier reviews, thus expanding the knowledge base on the relationship between weight stigma and psychological distress. Collecting this data was essential to form a comprehensive understanding of how weight stigma affects the psychological well-being of individuals with atypical eating disorders and how this distress may influence their eating disorder symptoms.

As a first point, the limited number of studies, yielding only nine papers, highlights the clear scarcity of literature on weight stigma in individuals with atypical eating disorders. The included papers focused exclusively on one type of atypical eating disorder, Binge Eating Disorder, and all samples were from clinical populations. Furthermore, results for each facet of weight stigma were mixed, meaning limited inferences can be drawn regarding the relationship with psychological distress and eating disorder pathology. Nevertheless, the findings offer new insights into the psychological effects of weight stigma in adults with atypical eating disorders, particularly Binge Eating Disorder (BED). These insights, along with the limitations of what conclusions can be drawn from this review, will be discussed below, highlighting the need for further research on the impact of weight stigma across other atypical eating disorders and other sample populations.

2.5.1 Psychological distress

Eight studies examined the link between weight stigma and depression. Internalised weight stigma was generally found to be significantly correlated with depression across most studies. This is consistent with associations between internalised weight bias and depression and higher weight persons without BED (Durso & Latner, 2008; Puhl et al., 2007). However, the findings on experienced weight stigma were mixed; some studies showed a relationship between experienced weight stigma and depression (Grilo & Masheb, 2005; Jackson et al., 2000), while others did not (Jackson et al., 2002), even after controlling for variables such as BMI and age. Jackson et al. (2002) referred to their small sample size of only 32 BED

patients, which may have resulted it insufficient statistical power and account for the non-significant findings. Its clear further studies that are sufficiently powered are necessary to clarify the relationship between depression and experienced weight stigma in those with BED, as the current literature is inconsistent, and a clear pattern has yet been identified.

Grilo and Masheb (2005) found that men and women exhibited different responses to weight stigma, with women showing a significant correlation between experienced weight stigma and depression, while men did not demonstrate a significant relationship. This suggests that men and women may experience weight stigma in distinct ways, with differing impacts on their mental health. Research has demonstrated similar gender differences when exploring the physical health impacts of weight stigma. For example, Sattler et al. (2018) found that that males and females respond differently to weight-stigma experiences, with women being less likely to engage in physical activity following these events.

This gender difference, although not a specific focus of this review, was identified as a variable that wasn't explored in the other studies included in the review, indicating a need for further research to better understand this relationship and investigate why such differences may occur. It is possible that women are more likely to internalise and suffer the burden of weight stigma, as they are subjected to more societal pressures and standards around weight and appearance (Grabe et al., 2008).

Six studies investigated the relationship between weight stigma and self-esteem. Across these studies, internalised weight stigma consistently showed a strong correlation with lower self-esteem. For example, Durso et al. (2012) and Pearl et al. (2014) both identified a significant association between internalised weight stigma and reduced self-esteem. Additionally, Puhl et al. (2010) found that individuals with more favourable attitudes towards obese persons reported higher self-esteem, indicating that positive attitudes may serve as a protection against the negative psychological impact of weight stigma.

In contrast, studies investigating the effects of experienced weight stigma yielded mixed results. For instance, Grilo and Masheb (2005) and Jackson et al. (2000) found significant correlations between experienced weight stigma and self-esteem, in both men and women, whereas Jackson et al. (2002) reported a non-significant relationship, even after adjusting for age and BMI. As outlined above, this could be attributed to the studies small sample size and warrants further research with an adequate sample to identify a clear and consistent pattern in the findings.

2.5.2 Eating disorder pathology

The findings for eating disorder pathology variables was mixed. Internalised weight found relatively consistent significant findings, showing that stigma was linked to various symptoms of eating disorders, such as shape and weight concerns, eating concern, and global eating disorder psychopathology (Barnes et al., 2014; Durso et al., 2012). However, two studies (Puhl et al., 2010; Puhl et al., 2011) found all variables not to be significant with internalised weight stigma. Like the reflections by Jackson et al. (2002) on the issues of insufficient power, both studies had relatively small sample sizes, which may have contributed to the lack of significant findings.

Furthermore, the sample in the Puhl et al (2011) study was exclusively Hispanic, which may suggest that the findings reflect cultural difference in how Hispanic individuals respond to weight stigma. Research has shown that higher weight Hispanic women misclassify their body weight as in the 'normal' range when using the BMI (Dorsey et al., 2009), suggesting that Hispanic individuals in higher weight bodies may be protected from weight stigma, as their bodies are deemed more socially acceptable.

In all studies eating restraint was found not be significantly correlated with internalised weight stigma. Experienced weight stigma showed inconsistent results regarding its impact on eating disorder pathology. One study did demonstrate a significant correlation with body dissatisfaction for both men and women in a comparative sample (Grilo & Masheb, 2005). However, in other studies (Jackson et al., 2000, Jackson et al., 2002) that examined the relationship between experienced weight stigma and eating disorder pathology, including variables such as eating restraint, eating concern, weight concern and shape concern, no significant relationship was found, even after controlling for BMI and age.

Of the two studies that examined the over-evaluation of weight and shape (Durso et al., 2012; Pearl et al., 2014), both found a significant correlation between internalised weight stigma and these variables. This highlights the psychological impact of weight stigma on body image, as those who internalised weight stigma are more preoccupied with their weight and shape. Interestingly, no study, that investigated internalised or experienced weight stigma found a significant correlation with binge eating/bulimic episodes, suggesting that weight stigma may not directly influence binge eating behaviours in BED patients. This contrasts with research conducted in non-clinical samples, where significant correlations have been found between higher levels of weight stigma and increased binge eating (Ashmore et al.,

2008; Wellman, et al., 2019) This discrepancy has not been highlighted or understood in the literature and warrants further investigation to understand why this might be.

2.5.3 The impact of psychological distress on eating disorder pathology

Depression and self-esteem were both found to influence eating disorder symptoms. Depression was notably associated with body dissatisfaction (Jackson et al., 2000) and various other eating disorder behaviours, including eating concerns (Jackson et al., 2000), as well as global eating disorder pathology, weight concern, and shape concern (Puhl et al., 2009). Additionally, self-esteem was linked to the over-evaluation of shape (Pearl et al., 2014). Grilo & Masheb (2005) highlighting that psychological distress, both depression and self-esteem, contributed significantly to the variance in body image dissatisfaction among both men and women, indicating its central role in the pathology of eating disorders within this population. This suggests that the psychological distress may increases the likelihood of the eating disorder pathology, including body dissatisfaction, weight and shape concern, and overevaluation of shape, in those who have BED. However, the cross-sectional nature of the research makes it difficult to establish a causal direction of the relationships observed.

2.6 Clinical implications

The overall findings show some consistent associations between internalised weight stigma and psychological distress, including self-esteem and depression for higher weight patients with BED. It also highlights a relationship between psychological distress and eating disorder pathology in relation to experienced and internalised weight stigma. Although there were inconsistent findings among experienced weight stigma, this is most likely explained by the small sample sizes in those studies which investigated this facet of weight stigma. The clinical implications of these findings, in relation to the current research cannot be understated. As already highlighted in the introductory section of the current research, studies suggests that eating disorder professionals themselves are just as likely to perpetuate weight-stigmatising attitudes (Puhl et al., 2014). If eating disorder clients perceive discrimination, as some studies suggest (Amy et al., 2006; Merrill & Grassley, 2008; Russell & Carryer, 2013; Buxton & Snethen, 2013), they are potentially at risk of experiencing the associated distress outlined in this review, and the physical health risks associated with prolonged eating disorder pathology (Crow et al., 2009; Peebles et al., 2010; Whitelaw et al., 2014).

This means that the very individuals responsible for alleviating patients' distress may, in fact, be contributing to their psychology suffering and exacerbating their eating disorder

symptoms. Addressing this issue within ED professionals and the mental health professional community as whole, is essential for reducing both the stigma and the resulting psychological, behavioural and physical consequences in affected higher weight individuals. Actionable interventions and recommendations aimed at reducing the likelihood of eating disorders professionals perpetuating this weight stigma, will be outlined in the discussion of the empirical research.

Despite the clinically significant findings, several limitations that impact the quality and generalisability of the findings need to be addressed.

2.7 Limitations

One significant limitation of this review is the homogeneity of the study samples, given all samples only represented individuals who were from the US, had a diagnosis of BED and were part of a clinical population. The underrepresentation of higher-weight individuals with atypical eating disorders other than Binge Eating Disorder (BED) is particularly concerning. This limits the ability to draw conclusions about how weight stigma impacts the psychological wellbeing of those with other atypical eating disorders, including atypical anorexia or atypical bulimia. This gap in the literature points to a broader neglect of research on atypical eating disorders in populations that do not fit conventional weight-based criteria. During the search process, two studies were identified that examined psychological distress in adolescents with atypical anorexia (Mathews et al., 2022; Matthews et al., 2023). However, these studies were excluded from the review because they did not separate the data for normal-weight and higher-weight participants, making it impossible to analyse the psychological distress specific to higher-weight individuals. This limitation highlights the need for more future research to includes the full spectrum of atypical eating disorders.

As outlined in the introductory chapter of this research, eating disorders are often viewed through a weight-centric lens, reinforcing the misconception that these disorders, especially those involving restrictive eating patterns, are only identifiable through visible signs such as malnutrition or extreme thinness (Zipfel et al., 2015). This perspective overlooks the reality that many individuals with atypical eating disorders do present as extremely thin, leading to their conditions being under-recognised as serious. The limited research on the psychological distress experienced by higher-weight individuals with eating disorders like Atypical Anorexia Nervosa (AAN) or Atypical Bulimia Nervosa (ABN) may suggest a bias among health professionals and researchers, who may assume that higher

weight individuals must only suffer from conditions like Binge Eating Disorder (BED) due to their weight, neglecting the possibility of other eating disorders that might not fit the conventional weight-focused criteria.

Evaluating only participants from a clinical sample population, restricts the ability to generalise the results to a broader range of individuals with atypical eating disorders who might experience similar challenges but remain outside of clinical care settings. Furthermore, although the samples in most studies were multi-ethnic, most of the studies samples consisted of over 70% white participants. This lack of diversity makes it difficult to generalise the findings to other racial groups with atypical eating disorders. As Hebl et al. (2009) has demonstrated, different racial groups internalise weight ideals differently, with white women being more likely to internalise societal pressures related to body weight, and more likely to experience body dissatisfaction and eating disorders, when compared to black women. As the experiences of weight stigma and eating disorders may differ across racial groups, further research with more balanced and diverse samples is needed to ensure that conclusions can be applied more broadly.

Additionally, all the studies were all conducted by the same selection of authors, which may introduce researcher bias and limit the variety of perspectives and methodologies in the research. Moreover, the most recent study was conducted in 2014, highlighting a 10-year gap in research on psychological distress in higher-weight individual with eating disorders. It is hoped that the findings from this review will highlight the important of continued research in this area, to ensure more up to date and diverse studies are conducted.

Due to the practical restraints of this thesis, the review did not address critical social and demographic variables, such as sex, age and ethnicity, and how they affect the experience of weight stigma and psychological distress. However, one study (Grilo & Masheb, 2005) did highlight these differences indicating these variables do play a crucial role in how weight stigma is experienced. It suggests that further exploration into these factors, among a higher weight eating disorder population, is essential. Future reviews would benefit from extracting and analysing this data to provide a more comprehensive understanding of how weight stigma impacts different intersections of the higher weight eating disorder population.

Lastly, it is important to acknowledge that this SLR was not pre-registered on PROSPERO or any other relevant review registry. The lack of pre-registration prevents verification of the alignment between the planned and executed methodology of the review.

2.8 Conclusion

Despite the limitations of both the studies and the review itself, this analysis has highlighted the types of psychological distress, including symptoms of depression and low self-esteem, that is related to the weight stigma experienced and internalised by higher-weight individuals with BED. Furthermore, it has demonstrated how this psychological distress is related to the disordered eating behaviours that are central to their diagnosis. These findings highlight the critical need to address weight stigma, especially among professionals who are at the forefront of eating disorder care.

As such, the study that follows aimed to explore how weight stigma presents in UK based Trainee Clinical Psychologists (TCPs), that will make up the next generation of UK clinical psychologists who will be working with people with eating disorders. Specifically, it will explore how stigmatising attitudes towards weight in TCPs may affect the appropriateness of clinical care for a serious eating disorder (AAN) in higher-weight individuals. The study replicated and extended on a previous US study (Veillette et al., 2018) of weight bias within a US population of trainee mental health professionals. The study aimed to address several limitations identified by the authors of the original study, as well as extend this work by exploring how weight bias impacts on specific treatment decisions for this patient population. This design not only adds to the limited evidence base in this area, but also address some of the criticisms currently levelled at psychology research, with respect to generalisability and replicability (Fletcher, 2021).

3 Method

3.1 Overview

This chapter provides a description of the quantitative methodology used for the study exploring how weight stigma in UK-based Trainee Clinical Psychologists (TCPs) may affect the appropriateness of clinical care for AAN in higher-weight individuals. This chapter will provide an overview of the study design, sample, recruitment process, measures and procedure. Ethical considerations for the study will also be included.

3.2 Design

The study replicated and extended on a previous US study that examined weight bias in trainee mental health professionals working with eating disorder presentations (Veillette et al., 2018). A between subject's design was used with two experimental conditions. Participants would be randomly assigned to either the Anorexia Nervosa (AN) condition represented by a photograph of a lower weight client (representative of a BMI below 18 in the "underweight" range), or the Atypical Anorexia Nervosa (AAN) condition, represented by a photograph of a higher-weight client (representative of a BMI above 30 in the "obese" range). The dependent variables included participants' anti-fat attitudes, specifically measuring attitudes towards treating the client, and weight-based stereotyping. Other dependent variables included measuring participants' clinical judgements; including diagnosis, number of treatment sessions offered, and importance of eating disorder related treatment goals. Anti-fat attitudes were measured using validated measures. Participant's clinical judgments were measured using questions and scales used in prior published research studying weight stigma. Participant's correspondence toward treatment goals were measured using a self-designed measure not used in other studies, but which related to the purpose of the current study.

3.3 Sample size

The Veillette et al. (2018) study included a sample size of 90 participants, but did not report a power analysis, leaving uncertainty about whether this sample size was adequate for detecting a true effect. As such, a power analysis was conducted for the current study and was determined using a priori power analysis in the G*Power software (Faul et al., 2007). Two effect sizes, one smaller and one larger, were compared to determine the appropriate sample sizes required for sufficient statistical power. For the use of a t-test, a total sample of 172

participants (86 per group) was needed to achieve 80% power to detect an effect size of 0.43 at a significance level of $p < .05$. For the Chi Square two tailed test, a sample of 176 participants (88 per group) was required to detect an effect size of 0.43 with 80% power at the same significance level. Additionally, when using a more conservative effect size of 0.35, the power analysis indicated that a sample size of 260 participants (130 per group) would be needed for the t-test, and 264 participants (132 per group) for the Chi Square test. The smaller effect size of 0.35 was selected to ensure sufficient power to detect even modest effects, thereby providing a more robust and reliable analysis.

3.4 Recruitment process

Participants were recruited thought convenience sampling (Etikan et al., 2016) by contacting the current 31 UK-based Clinical Psychology doctorate training programmes. Each doctoral course was contacted via the email address noted on the Leeds Clearing House website. For courses whose information was not readily available via Clearing House, the relevant administrator email address was sought via social media on the Trainee Clinical Psychologist's Facebook group. It was requested that course administrators or course directors circulate the email (Appendix C), which included the research recruitment poster (Appendix D), to their current first, second, and third-year trainee clinical psychologists. Each course was contacted at two different time periods (October 2023 and December 2023) to ensure further opportunity for recruitment. Participants were also recruited by sharing the research recruitment poster (Appendix E) via social media, using platforms LinkedIn and Facebook. The poster was shared in the UK Clinical Psychology Facebook group and the Trainee Clinical Psychologist's Facebook group. The research advert was also shared via Cohort WhatsApp groups.

Participants were compensated for their time, effort and contribution to the research by being offered the opportunity to enter a prize draw following the completion of the survey where they could win one of four £50 Amazon Vouchers. Four participants were randomly chosen using a number generator and each received a £50 Amazon Gift voucher which was sent via email.

3.5 Participants

Inclusion criteria for participants was that the respondent was a TCP currently enrolled on a UK Clinical Psychology Doctorate programme. To be eligible for the doctorate programme, applicants must typically hold an honours degree in psychology or a related

field, along with at least one year of relevant experience. Considering the time required to achieve this academic qualification, the minimum age of current trainees is typically 23 or older, ensuring that all participants were of working age. There is no maximum age limit for training as a clinical psychologist in the UK, so the study imposed no restrictions on maximum age.

Participants who did not complete a sufficient portion of the study questions were excluded from the final analysis. Responses were considered incomplete if participants left more than 50% of questions unanswered, to ensure that participants had completed at least some of all self-report measure included in the study. This minimised the risk of missing data biasing the results. Missing data was left rather than inputting assumed estimates, as these estimates may not have been reflective of participants true responses. Out of the 292 participants who consented to participate, nine participants were excluded from data analysis as they had completed less than 50% of the questionnaire and this was deemed not sufficient for analysis. Of the 283 participants who were included in the final analysis, 279 completed 100% of the self-report measures. two completed over 90% of the self-report measures and two completed just over 50% of the self-report measures. As an ethical standpoint, it was important to respect the time and effort of those who participated, even if they were unable to fully complete the measures.

3.6 Instruments and materials

All information and questionnaires for the project were delivered via the online survey platform, Qualtrics. This allowed for greater reach of participants, participant anonymity, and greater ease of synthesising the data. As this study provides a replication of the study by Veillette et al. (2018), all outcome measures described below, excluding demographic questions and treatment goals, will reflect the measures they described and used for their analysis.

3.6.1 Demographic information

Demographic questions were adapted from Carter's (2018) thesis, and included age, gender, years of study, university of study, clinical experience with eating disorders, experiences of client weight presentation, service in which they experienced client presentation, experience working with 'obese' patients, and amount of training received regarding 'weight stigma (Appendix F).

3.6.2 Case Study Vignette

Participants were randomly assigned to one of two experimental conditions in which the body weight of a hypothetical client was manipulated. Both experimental groups were presented with the same vignette of a case study (Appendix G) where the client is described as having symptoms of either Anorexia Nervosa (AN) or Atypical Anorexia Nervosa (AAN), depending on client weight. The vignette has previously been developed and used in Veillette et al.'s (2018) study and included the diagnostic criteria for AN outlined in the DSM-5 (American Psychiatric Association, 2013). Several adaptations were made for the current study for the vignette to reflect UK culture. Changes made include, changing Miami to Hatfield a city in the UK. The client's name was also changed from Susan to Stacey to reflect the age of the participant used in the photos. Permission was sought from the lead researcher to use and adapt the vignette and was granted via email (Appendix H).

In the vignette, Stacey presents with a restricted diet of no more than 800 calories per day for the previous six months, she weighs herself several times a day, measures her waist, buttocks, arms, and legs weekly, and reports being terrified of weight gain, stating that "she would rather die than get fat and ugly like her mum." Based on the diagnostic criteria defined in the DSM-5 (American Psychiatric Association, 2013), a diagnosis of AN or AAN would be an appropriate diagnosis, depending on the client's weight. Currently, a BMI under 18 is sufficient for a diagnosis of AN and a BMI over 18 is sufficient for a diagnosis of AAN.

Stacey's weight was manipulated by using two different photos of two similar looking woman at different weights (Appendix I). These photos were obtained from Stockphotos online which are free from copyright and free to use for advertising and research. Participants assigned to Condition one would be presented with the vignette accompanied with photo A, representing Stacey at the lower weight (representing a client with AN). Participants assigned to Condition two would be presented with the vignette accompanied with photo B of Stacey at the higher weight (representing a client with AAN). Previous studies have used in-text descriptions of a client's weight (Veillette et al., 2018), which leaves participants to imagine and conceptualise the client. Participants may struggle to establish what a person may look like by description of weight, meaning all imagined images will differ between participants. The use of photos should offer a more standardised procedure of how a client's appearance is conceptualised.

3.6.3 Diagnosis

To ascertain what diagnosis participants would give the client, a previous question presented in Agell and Rothblum (1991) study was used. This measure is comprised of one open-ended question (i.e., What would your diagnosis for Stacey be?).

3.6.4 Number of treatment sessions

To assess how many treatment sessions would be recommended for the client, participants were asked to choose how many sessions they would offer, offering options ranging between 0 to 41+. This is an extension on the 0-24 sessions used in previous research conducted by Agell and Rothblum (1991), as evidence-based practice guidelines for eating disorder treatment recommends effective treatment for Anorexia Nervosa should offer up to 40 sessions (NICE, 2017).

3.6.5 Treatment goals

To establish clinical judgments around treatment goals, participants were given a list of standard treatment steps used in the Cognitive Behavioural Therapy (CBT) protocol for a diagnosis of both AN and AAN. These were established from the current National Institute for Health and Care Excellence guidelines (NICE, 2017) and Fairburn's (2008) CBT manual for treating eating disorders. Participants were asked to rate how important they deem each treatment step (e.g., Psychoeducation on and encouragement of eating regularly). Participants were required to respond to each item on a 7-point Likert scale of (1=not at all important) to (7=extremely important). All treatment steps are highly important for both AN and ANN. Higher scores indicated a more appropriate intervention for the client.

3.6.6 Weight stereotyping

To measure anti-fat attitudes, participants were asked to complete the Fat Phobia Scale (Shortened version) to establish their perceptions of the client in the vignette (Bacon et al., 2001). Instead of being asked to indicate to what extent participants thought a series of adjectives described "fat people", participants were asked to report to what extent each set of adjectives described the client "Stacey" (e.g., willpower – no willpower, active – inactive, dislikes food – likes food). Participants were asked to respond to each item on a semantic

differential scale of 1 to 5. Higher scores indicate more application of weight stereotypes to the client.

Cronbach's alpha was employed to assess the reliability of the Fat Phobia Scale, resulting in an initial reliability coefficient of 0.6. To enhance the internal consistency of the measure, four items with low item-total correlations were systemically removed (Items: Likes-dislikes food, insecure-secure, shapeless-shapely, low self-esteem-higher self-esteem). The removal of these items resulted in a notable increase in internal consistency, with the Cronbach's alpha coefficient now indicating stronger reliability at 0.73.

3.6.7 Attitudes towards treatment

In addition to the Fat Phobia scale, participants were asked to report their attitudes toward treating the client on 13 items modified from Puhl et al. (2013) (e.g., Treating Stacey would be professionally rewarding). Participants responded to each item on a 7-point Likert scale of 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores on this measure indicate more positive attitudes toward treating the client. The reliability of the measure, assessed with Cronbach's alpha, obtained the value 0.75 which suggests good internal consistency.

3.7 Procedure

Once joining the online survey link, participants were presented with the participation information sheet (Appendix J) and online consent form (Appendix K). Only once participants had consented were they then presented with the case study vignette and photo, followed by the study questionnaires (Appendix L). Participants were given the option to answer each question and prompted if an item had not been completed. Participants were not required to answer before moving on to the next question. Following the completion of the questionnaire, participants were provided with a full debrief (adapted from Carter's (2018) thesis) (Appendix M) which disclosed all relevant information about the study and the details of the researchers should they have any concerns or questions about their participation. Participants were also provided with a separate link which allowed them to submit their email address for the prize draw. All emails were stored in a second survey in Qualtrics, which was separate from the participants' questionnaire data.

3.8 Ethical Considerations

As the study involved eliciting true responses that may reflect weight bias, it was important that the participants not be primed to the nature of the study. Had participants gained full knowledge of the study objectives, they may have responded in socially desirable ways and their responses would be a true reflection of potentially stigmatising attitudes. This would have impacted the reliability of the findings. As such, the study advert involved mild deception, explaining that the aim was to explore decision making in clinical practice, meaning participants were not fully informed about all aspects of the research project before consenting to take part. All aspects of deception were outlined when applying for ethical approval. The study was reviewed and granted ethical approval (protocol number: LMS/PGR/UH/05441) on 21st August 2023 from the University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee with Delegated Authority (Appendix N). Participants were fully informed using the debrief form which outlined how and why they were deceived. The debrief also included signposting to relevant services and the researchers contact information should participants require further support. The researcher received no concerns or reports of distress from any participant that took part in the study.

3.9 Data Preparation

Data cleaning was completed to exclude the following data points from analysis: those who did not complete the study, those who showed indication of implausible or inattentive responding (for example, wherein the study was completed in less than 3 minutes and/or low variation in scoring in questionnaires with reverse-scored items).

Some demographic data were recategorized and recoded for ease of analysis. Specifically, participants were able to type their diagnosis for the client into a free-text box, leading to a large range of responses being reported. For the purpose of the analyses, these were recoded as four categories: Anorexia Nervosa, Atypical Anorexia, Eating Disorder and Other. Those categorised as “Anorexia Nervosa” explicitly referred to the AN diagnosis. Those categorised as “Atypical Anorexia” explicitly referred to the AAN diagnosis. Those categorised as “Eating Disorder” made reference to other eating disorder diagnoses or disordered eating behaviour. Those categorised as “Other”, either did not offer any diagnosis, or offered a diagnosis unrelated to eating disorder symptomology.

Participants also provided information about which service they had encountered their experience of either the AN and/or AAN presentation. There were five possible services to

choose from including primary care services, secondary care services, inpatient services, charity and third sector work, and specialist eating disorder services. Participants were also given a free text box to provide details of other services not listed. For the purpose of analysis, service was dichotomised into 0 (*non-specialist eating disorder service*) and 1 (*specialist eating disorder service*).

3.10 Hypotheses

Analyses were carried out using SPSS Version 28 for Windows (Appendix O) to test the following hypotheses.

1. Given the high prevalence of weight stigma in healthcare professionals, it was hypothesized that TCPs would report more weight-based stereotypes for the higher weight client.
2. Consistent with the research reporting the negative perceptions and expectations of Health Care Professionals in working with higher-weight clients, it was hypothesized that TCPs would demonstrate having fewer positive attitudes toward working with the higher weight client.
3. Given the hypotheses that anti-fat attitudes would be present in TCPs, it was hypothesized that participants would be less likely to diagnose the higher weight client with symptoms of AAN.
4. It was hypothesized that TCPs working in non-specialised eating disorder services would be more likely to have worked with adults who would meet the AAN criteria, as higher weight individuals are less likely to meet eating disorder service criteria because of weight-based criteria and trivialisation of symptoms.
5. Based on the literature showing that healthcare providers recommend fewer treatment sessions to clients of a higher-body weight, it was also hypothesized that TCPs would recommend fewer treatment sessions for the higher weight client.
6. Finally, based on the literature that suggests mental health professionals are more likely to collude with restrictive eating behaviours in higher-weight clients, it is hypothesized that TCPs would rate appropriate treatment goals as less important for the higher weight client.

4 Data Analysis

4.1 Overview

This chapter presents the results of the descriptive analyses and statistical tests for each hypothesis.

4.1.1 Descriptive analysis

Descriptive analyses of demographic and clinical variables (age, gender, year of study, university of study, clinical experience with eating disorders, experiences of client weight presentation, service in which they experienced client presentation, experience working with 'obese' patients and amount of training received regarding 'weight stigma') were performed.

4.1.2 Cross-sectional analyses

To test Hypothesis 1, "TCPs would report more weight-based stereotypes for the higher body-weight client" and Hypothesis 2, "TCPs would demonstrate having fewer positive attitudes toward working with the higher body-weight client", Hypothesis 5, "TCPs would recommend fewer treatment sessions for the AAN client compared to the AN client", and Hypothesis 6, "TCPs would rate appropriate treatment goals as less important for the higher-weight client", independent sample t-test were employed for comparisons between numerical data.

To test Hypothesis 3, "TCPs would be less likely to diagnose the higher-weight client with AAN" and Hypothesis 4, "TCPs working in non-specialised eating disorder services are more likely to have worked with adults who would meet the AAN criteria", chi-squared analyses (two-tailed) were used for comparisons between groups of categorical data.

4.2 Results

4.2.1 Descriptive Analysis

Of the 292 participants who provided consent and began to complete the questionnaire, nine participants were excluded from data analysis as they had completed less than 50% of the questionnaire, which was deemed not sufficient for analysis. All relevant measures were completed by 283 participants, who were included in the analysis. 143 participants were allocated to Condition 1 (AN), and 140 participants were allocated to Condition 2 (AAN). Participant characteristics are shown in Table 5.

The mean age of the remaining 283 participants was 29 years (*SD* = 3, *range* = 22–43 years), and the majority of the sample identified as female (90.7 %). The highest number of

respondents were enrolled at the University of Hertfordshire (n=35). The participants were fairly evenly distributed across their years of study, with 35.2% in their first year, 32.4% in their second year, and 32.4% in their third year. Of the participants, 60% reported having no professional experience working with eating disorders. Additionally, 33.9% had 0-2 years of experience, 2.1% had 3-4 years of experience, and 2.8% had 4-5 years of experience.

Regarding experience working with clients classified as 'obese' (BMI 30+), 15.2% of participants reported having no experience, 45% had worked with 1-5 obese clients, 21.9% had worked with 6-10 obese clients, and 15.5% had worked with more than 11 obese clients. Regarding weight stigma training, 51% of participants reported receiving no training, 41.7% reported receiving a little amount, 5.7% reported receiving a moderate amount, and 0.4% reported receiving a lot of training. These findings suggest that a high percentage of participants had received little to no weight stigma training.

Table 5.

Demographics of Participants (Mean Age = 29 years, *SD* = 3, *range* = 22–43years)

Sample Characteristics	Condition 1 (AN) Total (n=143)		Condition 2 (AAN) Total (n=140)		Total Sample	
	n	*%*	*n*	*%*	*n*	*%*
Gender						
Man	13	9.1%	11	7.9%	24	8.5%
Women	129	90.2%	126	90%	255	90.7%
Non-binary	1	0.7%	0	0	1	0.4%
Another gender identity	0	0	0	0	0	0
Prefer not to answer	0	0	1	0.7%	1	0.4%
Year of study						
Year 1	50	35%	49	35%	99	35.2%
Year 2	46	32.2%	45	32.1%	91	32.4%
Year 3	47	32.9%	44	31.4%	91	32.4%
University						
Bangor University	7	4.9%	4	2.9%	11	4.2%
University of Bath	4	2.8%	2	1.4%	6	2.3%
University of Birmingham	4	2.8%	2	1.4%	6	2.3%
Salomons, Canterbury Christ Church University (CCCU)	3	2.1%	0	0	3	1.1%
Cardiff University	5	3.5%	5	3.6%	10	3.8%
University of East Anglia	14	9.8%	17	12.1%	31	11.7%
University of Essex	2	1.4%	1	0.7%	3	1.1%
University of Exeter	2	1.4%	0	0	2	0.8%
University of Hertfordshire	21	14.7%	14	10%	35	13.2%
King's College London	6	4.2%	14	10%	20	7.5%

Lancaster University	8	5.6%	8	5.7%	16	6.0%
University of Leeds	2	1.4%	2	1.4%	4	1.5%
University of Leicester	3	2.1%	4	2.9%	7	2.6%
Trent - Lincoln & Nottingham	6	4.2%	5	3.6%	11	4.2%
University of Liverpool	6	4.2%	5	3.6%	11	4.2%
University of Manchester	7	4.9%	9	6.4%	16	6.0%
North Thames – University College London (UCL)	14	9.8%	13	9.3%	27	10.2%
Oxford	0	0	2	1.4%	2	0.8%
University of Plymouth	3	2.1%	5	3.6%	8	3.0%
University of Sheffield	8	5.6%	7	5%	15	5.7%
University of Southampton	1	0.7%	2	1.4%	1	0.4%
Staffordshire University	0	0	2	1.4%	2	0.8%
University of Surrey	6	4.2%	5	3.6%	11	4.2%
Teesside University	2	1.4%	5	3.6%	7	2.6%
Professional experience working with eating disorders						
Not at all	90	62.9%	81	57.9%	171	60%
0-2 years	45	31.5%	51	36.4	96	33.9%
3-4 years	4	2.8%	2	1.4%	6	2.1%
4-5 years	4	2.8%	4	2.9%	8	2.8%
Number of clients worked with who you might suggest are 'obese' (BMI 30+)						
0	26	18.2%	17	12.1%	43	15.2%
1-5	55	38.5%	75	53.6%	130	45%
6-10	35	24.5%	27	19.3%	62	21.9%
11+	25	17.5%	19	13.6%	44	15.5%
Amount of training you have received regarding 'weight stigma'						
None	69	48.3%	77	55%	146	51%
A little	66	46.2%	52	37.1%	118	41.7%
A moderate amount	8	5.6%	8	5.7%	16	5.7%
A lot	0	0	1	0.7%	1	0.4%

Universities that were invited but did not participate: Coventry and Warwick, University of East London, University of Edinburgh, University of Glasgow, Newcastle University, Royal Holloway, and University of Hull

4.2.2 Inferential statistics

4.2.2.1 Anti-fat Attitudes

Hypothesis 1: It was hypothesised that TCPs would report more weight-based stereotypes for the AAN client. An independent-sample t-test was conducted to compare groups. Levene's test indicated that the assumption of homogeneity of variance was not met, $F = 4.65$, $p = 0.032$. As can be seen by the results in Table 6, there was a significant

difference for weight based stereotypes between the AN (M = 2.10, SD = .385) and the AAN (M = 2.22, SD = 0.457) conditions, $t(278) = -2.407$, $p = 0.017$. The findings suggest there was a significant difference between the AN and AAN group, with a higher number of negative weight-based stereotypes being attributed to the AAN client; however, the effect size was small, $d = -0.288$. Therefore, Hypothesis 1 was supported.

Hypothesis 2: It was hypothesised that TCPs would demonstrate having fewer positive attitudes toward working with the AAN client. An independent-sample t-test was conducted to compare groups. Levene's test indicated that the assumption of homogeneity of variance was met, $F = .264$, $p = 0.608$. As can be seen by the results in Table 6, there was a significant difference for attitudes towards treatment between the AN (M = 5.38, SD = 0.680) and the AAN (M = 5.61, SD = 0.659) conditions, $t(281) = -2.943$, $p = 0.004$. The findings suggest there was a significant difference between the AN and AAN group, with fewer positive attitudes being attributed to the AN client, compared to the AAN client. The effect size was moderate, $d = -0.350$. Therefore, Hypothesis 2 was unsupported.

Table 6.

T-tests for hypothesis 1 and 2

Hypothesis 1 and 2	AN (n =143)		AAN (n =140)		t(df)	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*			
Weight-based stereotypes	2.10	0.385	2.22	0.457	278	0.017*	-0.288
Attitudes towards client	5.38	0.680	5.61	0.659	281	0.004*	-0.350

**** p value of 0.05 or less is considered statistically significant***

4.2.2.2 Clinical judgments

Hypothesis 3: It was hypothesized that TCPs would be less likely to diagnose the higher-weight client with AAN. A chi-square test was employed to evaluate the relationship between these variables. The results showed a significant association between categorical variables ($X^2 = 10.085$, df = 1, $p = 0.001$). The findings suggest that there was a significant difference in appropriate diagnosis given, with 55.2% of the participants appropriately

diagnosing the AN client, compared to 36.4% of the participants who appropriately diagnosed the AAN client (see table 7). Therefore, Hypothesis 3 was supported.

Hypothesis 4: It was hypothesized that TCPs who have worked in non-specialised eating disorder services were more likely to have worked with adults who meet the AAN criteria. A chi-square test was employed to evaluate the relationship between these variables. The results showed a non-significant association between categorical variables (X^2 = 044, df = 1, p = 0.834). Contrary to the hypothesis, the findings suggest that there were no significant difference in exposure to possible AN/ANN body type and eating disorder presentation by service experience. 38.1% of those who had previously seen a similar low-weight patient with this presentation worked in specialist ED services, versus 61.8% in non-specialist services (see Table 8). The figures for high-weight clients with similar presentation were almost identical: 36.2% in specialist services versus 63.8% in non-specialist services (X^2 = 0.44, p = 0.834). Therefore, Hypothesis 4 is unsupported.

Table 7.

Chi Squared test for hypothesis 3

Hypothesis 3	*AN*		*AAN*		X^2	*df*	*p*
	n	*%*	*n*	*%*			
Appropriate diagnosis	79	52%	51	36.4%	10.085	1	0.001*
Other diagnosis	64	44.8%	89	63.6%			

**** p value of 0.05 or less is considered statistically significant***

Table 8.

Chi Squared test for hypothesis 4

Hypothesis 4	*Non-specialist service*		*Eating disorder service*		X^2	*df*	*p*
	n	*%*	*n*	*%*			
AN	34	61.8%	21	38.2%	0.44	1	0.834
AAN	30	63.8%	17	36.2%	0.44	1	0.834

**** p value of 0.05 or less is considered statistically significant***

Hypothesis 5: It was hypothesised that TCPs would recommend fewer treatment sessions for the AAN client compared to the AN client. An independent-sample t-test was conducted to compare groups. An alpha level of 0.05 was utilised. Levene's test indicated that the assumption of homogeneity of variance was met, $F = .093$, $p = 0.760$. As can be seen by the results in Table 9, there was a significant difference for number of treatment sessions between the AN ($M = 2.96$, $SD = 0.934$) and the AAN ($M = 2.51$, $SD = 9.17$) conditions, $t(281) = 4.033$, $p < 0.001$. The findings suggest there was a significant difference between the AN and AAN group, with a higher number of treatment sessions offered to the AN client compared to the AAN client. The effect size was moderate, $d = 0.479$. Therefore, Hypothesis 5 was supported.

Hypothesis 6: It was hypothesised that TCPs would rate appropriate treatment goals as less important for the higher-weight client. An independent-sample t-test was conducted to compare groups on each of the twelve treatment goals. An alpha level of 0.05 was utilised.

For treatment goal 1, "Psychoeducation on risks of malnutrition and being underweight", a Levene's test indicated that the assumption of homogeneity of variance was met, $F = 0.204$, $p = 0.652$. As can be seen by the results in Table 10, there was a significant difference for importance of treatment goal 1 between the AN ($M = 3.99$, $SD = 0.860$) and the AAN ($M = 4.26$, $SD = 0.808$) conditions, $t(282) = -2.72$, $p = 0.007$. The findings suggest there was a significant difference between the AN and AAN group, with TCPs less likely to rate treatment goal 1 as important for the AN client. The effect size was moderate, $d = -0.323$.

For treatment goal 2, "Psychoeducation on excessive exercise and potential dangers" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = 0.221$, $p = 0.639$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 2 between the AN ($M = 3.34$, $SD = 1.02$) and the AAN ($M = 3.22$, $SD = 1.07$) conditions, $t(282) = .986$, $p = 0.325$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 2.

For treatment goal 3, "Improving emotional regulation" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = 2.05$, $p = 0.153$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 3 between the AN ($M = 4.06$, $SD = 0.798$) and the AAN ($M = 4.16$, $SD = 0.825$) conditions, $t(282) = 1.04$, $p = 0.299$. Contrary to the hypothesis, the findings suggest that there were no

significant difference between the AN and AAN group when rating the importance of treatment goal 3.

For treatment goal 4, “Improving self-esteem” a Levene’s test indicated that the assumption of homogeneity of variance was met, $F = 0.20$, $p = 0.655$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 4 between the AN ($M = 4.70$, $SD = 0.504$) and the AAN ($M = 4.69$, $SD = 0.523$) conditions, $t(282) = 0.186$, $p = 0.852$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 4.

For treatment goal 5, “Improving body image” a Levene’s test indicated that the assumption of homogeneity of variance was met, $F = 0.503$, $p = 0.479$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 5 between the AN ($M = 4.31$, $SD = 0.791$) and the AAN ($M = 4.49$, $SD = 0.743$) conditions, $t(282) = -1.91$, $p = 0.056$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 5.

For treatment goal 6, “Facilitating self-acceptance” a Levene’s test indicated that the assumption of homogeneity of variance was met, $F = 1.224$, $p = 0.270$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 6 between the AN ($M = 4.58$, $SD = 0.586$) and the AAN ($M = 4.57$, $SD = 0.690$) conditions, $t(282) = .172$, $p = 0.864$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 6.

For treatment goal 7, “Encouraging restoration of body weight” a Levene’s test indicated that the assumption of homogeneity of variance was met, $F = 0.594$, $p = 0.442$. As can be seen by the results in Table 10, there was a significant difference for importance of treatment goal 7 between the AN ($M = 3.79$, $SD = 0.970$) and the AAN ($M = 3.04$, $SD = 1.045$) conditions, $t(281) = 6.237$, $p < 0.001$. The findings suggest there was a significant difference between the AN and AAN group, with TCPs less likely to rate treatment goal 7 as important for the AAN client. The effect size was strong, $d = 0.742$.

For treatment goal 8, “Enhance self-efficacy” a Levene’s test indicated that the assumption of homogeneity of variance was met, $F = 2.154$, $p = 0.143$. As can be seen by the

results in Table 10, there was no significant difference for importance of treatment goal 8 between the AN (M = 4.00, SD = 0.822) and the AAN (M = 4.06, SD = 0.896) conditions, $t(282) = -0.626$, $p = 0.532$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 8.

For treatment goal 9, "Cognitive restructuring" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = 0.018$, $p = 0.893$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 9 between the AN (M = 4.14, SD = 0.853) and the AAN (M = 4.14, SD = 0.867) conditions, $t(282) = -0.19$, $p = 0.984$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 9.

For treatment goal 10, "Self-monitoring of dietary intake and associated thoughts and feelings" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = .2.044$, $p = 0.154$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 10 between the AN (M = 3.55, SD = 0.947) and the AAN (M =3.52, SD =1.039) conditions, $t(282) = 0.235$, $p = 0.814$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 10.

For treatment goal 11, "Include homework to help the person practice in their daily life what they have learned" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = 0.571$, $p = 0.451$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 11 between the AN (M = 4.19, SD = 0.822) and the AAN (M = 4.28, SD = 0.750) conditions, $t(282) = -1.016$, $p = 0.310$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the importance of treatment goal 11.

For treatment goal 12, "Work on a relapse prevention plan" a Levene's test indicated that the assumption of homogeneity of variance was met, $F = .002$, $p = 0.962$. As can be seen by the results in Table 10, there was no significant difference for importance of treatment goal 12 between the AN (M = 4.42, SD = 0.736) and the AAN (M = 4.42, SD = 0.719) conditions, $t(282) = 0.013$, $p = 0.989$. Contrary to the hypothesis, the findings suggest that there were no significant difference between the AN and AAN group when rating the

importance of treatment goal 12. As a significant difference was found between the AN and AAN client conditions for treatment goal 7, Hypothesis 6 was partially supported.

Table 9.

T-tests for Hypothesis 5

Hypothesis 5	AN (n =143)		AAN (n =140)		t(df)	*p*	Cohen's *d*
	M	*SD*	*M*	*SD*			
Number of treatment sessions	2.96	0.934	2.51	0.917	281	<0.001*	0.479

**** p value of 0.05 or less is considered statistically significant***

Table 10.

T-test for Hypothesis 6- treatment goals

Treatment goals (TG)	AN (n=143)		AAN (n=140)		*t(df)*	*p*	*Cohen's d*
	M	*SD*	*M*	*SD*			
TG1 -Psychoeducation on risks of malnutrition and being underweight	3.99	0.860	4.26	0.808	-2.721(282)	0.007*	-0.323
TG2 – Psychoeducation on excessive exercise and potential dangers	3.34	1.022	3.22	1.076	0.986(282)	0.325	0.117
TG3 – Improving emotional regulation	4.06	0.798	4.16	0.825	-1.040(282)	0.299	-0.356
TG4 – Improving self-esteem	4.70	0.504	4.69	0.523	0.186(282)	0.852	0.022
TG5 – Improving body image	4.31	0.791	4.49	0.743	-1.918	0.056	-0.228
TG6 – Facilitating self-acceptance	4.58	0.586	4.57	0.690	0.172(282)	0.864	0.020
TG7 – Encouraging restoration of body weight	3.79	0.970	3.04	1.045	6.237(282)	<0.001*	0.742

TG8 – Enhance self-efficacy	4.00	0.822	4.06	0.896	-0.626(282)	0.532	-0.074
TG9 – Cognitive restructuring	4.14	0.853	4.14	0.867	-0.019	0.984	-0.002
TG10 – Self monitoring of dietary intake and associated thoughts and feelings	3.55	0.947	3.52	1.039	0.235	0.814	0.028
TG11 – Include homework to help the person practice in their daily life what they have learned	4.19	0.822	4.28	0.750	-1.016	0.310	-0.121
TG12 – Work on a relapse prevention plan	4.42	0.736	4.42	0.719	0.013	0.989	0.002

**** p value of 0.05 or less is considered statistically significant***

5 Discussion

5.1 Overview

This chapter will present the research findings by outlining each hypothesis and consider them in relation to the existing literature.

The aims of the research were to: 1) explore anti-fat attitudes in TCPs when working with people with atypical eating disorders utilising the fatphobia scale and the attitudes towards patient's questionnaire; 2) assess if anti-fat attitudes impact on TCPs clinical judgements including making an appropriate diagnoses, offering the appropriate treatment sessions, prevalence of presentation in relevant services, and endorsing appropriate treatment goals; 3) draw conclusions about anti-fat attitudes in TCPs and make appropriate recommendations for weight bias training to improve clinical practice for those working with atypical eating disorders.

5.2 Summary of findings

5.2.1 Anti-fat attitudes in TCPs

Hypothesis 1: TCPs would report more weight-based stereotypes for the higher body-weight client. The current study found a significant difference between weight-based stereotypes, with TCPs being more likely to stereotype the higher-weight client. Therefore, Hypothesis 1 was supported. This finding is consistent with earlier research that found

psychologists endorsing common negative stereotypes about higher weight clients, such as them being more unattractive, more embarrassed, and kinder than thin clients (Agell & Rothblum, 1991). Furthermore, it reflects the findings from Veillette et al. (2018) which utilised the fatphobia scale and found US mental health professionals were more likely to attribute negative stereotypes to the “overweight” AAN client.

Given that UK and US cultural values regarding weight and thinness closely align, it’s unsurprising that these attitudes would also be mirrored in UK TCPs. The pervasive influence of media, societal norms, and cultural narratives about weight in both countries shapes public perception (Brewis et al., 2018) and CPs are not exempt from this. Considering the items measured on the fatphobia scale, it suggests TCPs were more likely to rate the AAN client as less attractive, lazier, having less self-control and having less willpower. These perceptions are best explained by Attribution Theory which suggests that people often interpret higher body weight as a result of personal shortcomings or failures, such as a lack of discipline, and these attributions reinforce negative stereotypes that larger individuals are responsible for their condition (Weiner at al., 1998).

It’s important to highlight that the effect sizes between the current study and Veillette et al. (2018) differed considerably with the current study reporting a relatively small effect size ($d = -0.288$) for the significant different between the AN and AAN clients, in contrast with Veillette et al. (2018) who reported medium to large effect sizes ($d = 0.63$) for the significant comparisons between the "overweight" and "normal weight" clients. As the current study achieved an adequate sample size, and that international comparisons of weight stigma, including that seen in the UK and US, seem remarkably consistent (Puhl et al., 2021), this difference in effect sizes could potentially be explained by a more homogenous sample in Veillette et al. (2018) study. It’s unclear whether their study employed deception to obscure the study aims, which may have unintentionally attracted participants which were particularly interested in eating disorders or specific beliefs about how these disorder should be perceived and treated. Whereas the current study mitigated this issue by using deception and as a result is likely to have yielded a more diverse sample. This would reduce bias and contribute to more moderate effect sizes.

A further explanation could be the result of more stringent data management in the current study. It was noted in the method section of the thesis that, to improve the internal consistency and reliability of the Fat Phobia Scale (Bacon et al., 2001), four items were

removed. This items included: likes-dislikes food, insecure-secure, shapeless-shapely, low self-esteem-higher self-esteem. The lack of variation in these items was unsurprising given how they corresponded to the information provided in the case study vignette. For example, Stacey was described as feeling insecure, having low self-esteem and disliking and restricting food. As such, the lack of variations in the items across conditions was likely due to the participants understanding and recognition of the information presented in the vignette, rather than a true reflection of participants' fat phobic attitudes.

The finding that TCPs were more likely to endorse stereotypical views of a higher body-weight client carries significant implications for individuals with atypical eating disorders. As evidenced in the literature, such attitudes can influence clinical judgments and ultimately affect the overall treatment outcomes for these clients ((Brochu et al., 2018; Lebow et al., 2015; Sim et al., 2013). Furthermore, clients are often aware of clinicians' anti-fat attitudes (Amy et al., 2006; Merrill & Grassley, 2008; Russell & Carryer, 2013; Buxton & Snethen, 2013), and if these attitudes contribute to feelings of shame or internalised weight stigma, higher weight individuals may be less likely to engage with services or seek mental health treatment.

Hypothesis 2: TCPs would demonstrate having fewer positive attitudes toward working with the higher body-weight client. The current study found a significant difference between attitudes, with TCPs reporting moderately fewer positive attitudes for working with the lower-weight client when compared with the higher-weight client. Therefore, Hypothesis 2 was unsupported. These results contrast with earlier findings by Davis-Coelho et al. (2000), where mental health professionals were found to be less inclined to work with higher-weight clients and tended to predict worse treatment outcomes for them compared to thinner clients. Furthermore, professionals treating people with eating disorders who had stronger weight bias, were found to perceive poorer treatment outcomes for higher weight patients (Puhl et al., 2014).

However, the findings align with those of Veillette et al. (2018), which demonstrated that clinicians exhibited more positive attitudes towards higher-weight AAN clients. While the Viellette study did not explain the conflicting findings, it is possible that the findings for both the current study and Veillette et al. (2018) may reflect anti-fat attitudes that may only emerge specifically in the context of atypical eating disorder presentations. For instance, as demonstrated in the literature (Cunning & Rancourt, 2023), participants may perceive higher

weight Atypical Anorexia clients as ‘less risky’ or easier to treat, which could foster more favourable attitudes. This interpretation is further supported by the specific items on the positive attitudes measure, which includes items such as “Stacey would be difficult to deal with” and “I feel professionally prepared to effectively treat Stacey”. If clinicians view Stacey through the lens of being a higher weight client, and, therefore, perceive her to be a less risk of harm from eating disorder pathology, they may anticipate an easier treatment process. This perception could in turn, boost their confidence and result in more positive attitudes towards treating higher weight clients in this context.

5.2.2 TCPs clinical judgements

Hypothesis 3: TCPs would be less likely to diagnose the higher-weight client with a diagnosis of AAN. The current study found a significant difference between appropriate diagnoses given for AN client and the AAN client, with clinicians less likely to appropriately diagnoses the AAN client. Therefore, Hypothesis 3 was supported. These findings support Veillette et al. (2018) study which found that clinicians were less likely to give a diagnosis of AAN to a higher-weight client presenting with symptoms of AN than a lower-weight client. Furthermore, Lebow et al. (2015) found healthcare providers were dismissing and misdiagnosing physical symptoms of starvation and weight loss in higher weight eating disorder clients, causing significant delays in the identification of their eating disorder.

This finding may highlight that clinicians are not able to easily recognise atypical clinical presentations, which potentially highlighting them placing a strong emphasis weight for identifying eating disorder diagnoses. This assumption that weight is relevant for diagnosis, can lead to a misunderstanding or overlooking of symptoms in individuals who are not classified as having a significantly low weight. The failure to recognise an important clinical diagnosis such as AAN may be a significant barrier to clients accessing appropriate services.

Despite a significant difference between groups, it’s important to note the wide range of responses given during data collection and the low rate of diagnosis given for both AN and AAN diagnoses. For ease of analysis, each participant’s response for client diagnosis was categorised into one of four categories (Anorexia Nervosa, Atypical Anorexia, Eating Disorder and Other). Several participant responses that were categorised as “other”, were statements that did not include a diagnosis, but alluded to psychologists not being in an appropriate position to diagnose, and that they would develop a clinical formulation instead.

For example, one participant wrote "*I'm not sure I would give a diagnosis based on this. I would like to explore Stacey's perspective more and understand her difficulties using a formulation model*". This suggests that, even though the AAN diagnosis was not explicitly stated in their response, the clinician may have recognised the impact of the symptoms and used this understanding to inform a psychological formulation and develop an appropriate treatment plan.

These responses are reflective of the current psychological guidelines which encourage psychologists to evaluate what has happened to a person, rather than what's wrong with the person (Johnstone, 2018). Psychologists are not trained nor qualified to offer a diagnosis to a client, but often work with a diagnosis to support an appropriate treatment plan. In our current medical system, where access to treatment is often contingent on assessment and diagnosis, and treatment is based on NICE clinical guidelines informed by diagnostic criteria, it is crucial for psychologists to at least be aware of relevant diagnoses even if they do not specialise in that area. Recognising the relevant eating disorder diagnosis will enable psychologists to refer patients to relevant ED services or consult with specialists to ensure the patient receives the most appropriate care. A refusal to acknowledge a diagnosis may result in those with atypical eating disorders having longer wait times for specialist care (Lebow et al., 2015) or not receiving access to the appropriate specialist services (Kennedy et al., 2017).

Hypothesis 4: TCPs who have worked in non-specialised eating disorder services are more likely to have worked with adults who would meet the AAN criteria. The current study found that TCPs working in non-specialised services were not more likely to have worked with clients who meet the criteria of AAN. This conflicts with research that suggests individuals with atypical presentations are less likely to access eating disorder services (Kennedy et al. 2017) due to stringent weight-based criteria for accessing care. Therefore, Hypothesis 4 was not supported in this study.

One explanation for this finding could be the difference in criteria between UK and US health provisions for eating disorders. In 2019, NHS England and NICE and the National Collaborating Centre for Mental Health provided guidance for commissioners and adult eating disorder providers, which stated one of the functions of care as: "accept all presentations – from people who present for the first time to those with long-term problems, regardless of weight or BMI (body mass index)" (National Collaborating Centre for Mental

Health, 2019). This may indicate that UK criteria for accessing eating disorder care, is more weight inclusive than that the criteria outlined in the US, and that higher weight individuals who present with eating disorders are being appropriately assessed and accepted into services.

However, despite there being no significant difference found for AAN presentation between those who worked in specialist and non-specialist eating disorders, both presentations of AN and of AAN were more than twice as likely to have been seen in non-specialist services than in specialist services. This potentially highlights that both individuals with AN and AAN are being overlooked or trivialised resulting in access to inappropriate services. It's true that not only are those with atypical eating disorders susceptible to stigma, but those with typical presentations are also stigmatised. The most common negative perceptions being that they are attentions seekers, who due to vanity, have brought this upon themselves (Crisp et al., 2000; Holliday et al., 2005; Mond et al., 2006).

de la Rie et al. (2006) explored the experiences of both typical and atypical ED patients and found both groups had reported a delay in referrals to specialised ED services due to trivialisation of ED symptoms. They also revealed that 80% of the sample reported their interactions with non-specialist professionals as 'unhelpful' or 'traumatic' due to lack of knowledge or punitive treatment. For those presenting with AAN, the research suggests that stringent weight-based criteria (Mitrofan et al., 2019), and the perception of being 'not sick enough' (Escobar-Koch et al., 2010), are preventing them from seeking out appropriate treatment. However, to date there is no current research exploring the experiences of higher weight individuals in the UK who have sought help for a restrictive eating disorder and the perceived impact of barriers to treatment.

Additionally, given the pervasive societal idealisation of thinness and the normalisation of "dieting" and restrictive eating (Striegel-Moore et al., 1986), it may be the case that not only are health professionals overlooking eating disorder symptomology, but clients themselves are also unable to recognise their disordered eating behaviours. Particularly if they receive encouragement for their weight loss efforts from friends, family, and healthcare professionals. Consequently, higher-weight individuals might seek support, not for their eating disorder, but for related issues such as low self-esteem, depression, anxiety, or weight loss assistance.

Given the reports that weight loss continues to be promoted as a treatment goal in therapy (Akoury et al., 2019), there is a risk that psychologists may inadvertently reinforce clients' beliefs in alternative diagnoses, by themselves not recognising the seriousness of the eating disorder symptomology. This risk being particularly pronounced for higher-weight clients who do not appear visibly malnourished. This is supported by the findings from previous research (Lebow et al., 2015: Viellette et al., 2018) and the current study, which found clinicians are less likely to diagnose higher weight clients with an appropriate diagnosis.

Furthermore, given the increased pressure on UK eating disorder services, particularly with increased wait times following the Covid 19 pandemic (Ayton et al., 2022), it's unsure whether the NHS England commitment to "accept all presentations" is being upheld. It remains uncertain whether services are resorting to 'weight restrictions' as a way to manage overwhelming demand. This could disproportionately affect higher weight individuals, who are often perceived as less risky (Cunning & Rancourt, 2023), and as a result may be referred out or encouraged to engage with primary or secondary services instead.

Hypothesis 5: TCPs would recommend fewer treatment sessions for the higher body-weight client. The current study found a significant difference between the amount of treatment sessions recommended between the AN and AAN client, with moderately fewer sessions recommended to the AAN client. Therefore, Hypothesis 5 was supported. This supports Veillette et al. (2018) who found that mental health professionals recommended fewer therapy sessions for the higher weight AAN client. The findings from the current study and those of Veillette et al. (2018) differ in their reported effect sizes, with the current study reporting a moderate effect size of d =.479, while Veillette et al. (2018) demonstrated a larger effect size of d =.69. This suggests that UK clinicians are likely, but not as likely as US clinicians, to recommend fewer sessions to higher weight clients, despite NICE guidelines recommending 40+ sessions for a presentation or AN or AAN.

This finding is unsurprising given the that trainees were less likely to diagnose the AAN client appropriately. If trainee's have the lack of desire or ability to recognise an atypical eating disorder diagnosis, it's unlikely they will consult the appropriate NICE guidelines for the recommended treatment sessions. This is particularly relevant for the higher weight client where diagnosis is less likely and expectations regarding treatment outcomes are lower (Puhl et al., 2014). As highlighted in Hypothesis 3, recognising the

relevant eating disorder diagnosis will enable psychologists to refer patients to relevant ED services or consult the appropriate guidelines for eating disorder treatment. A refusal to acknowledge a diagnosis, or an inability to recognise a diagnosis, may result in those with atypical eating disorders having longer wait times for specialist care (Lebow et al., 2015) or being in receipt of inappropriate treatment (Harrop, 2019).

Hypothesis 6: TCPs would rate appropriate treatment goals as less important for the higher-weight client. The current study found no significant difference between the AN and AAN client for ten out of the twelve treatment. There was a significant difference between the AN and AAN clients when rating the treatment goal 7 - "Encouraging restoration of body weight", with TCPs rating this treatment as less important for the AAN client. A further significant difference was found between the AN and AAN clients when rating the treatment goal 1 - "Psychoeducation on risks of malnutrition and being underweight", with TCPs rating this treatment goal as less important for the AN client. Therefore, Hypothesis 6 is partially supported.

To our knowledge, this is the first study to assess participants' responses to appropriate treatment goals in the context of eating disorder treatment. However, previous research has shown that decision-making around treatment goals can be influenced by a client's weight, often leading to inappropriate care. For instance, psychologists were more likely to set treatment goals focused on weight and body image for higher-weight clients, even when these issues were unrelated to the client's clinical presentation or goals (Brochu et al., 2018).

It is promising that TCPs rated most treatment goals important for both AN and AAN presentations suggesting trainees have a level of awareness of what is the appropriate evidence-based treatment approach for eating disorders. However, TCPs still rated restoration of body weight as less important for the AAN client. This is consistent with the literature that shows eating disorder professionals being more likely to collude with restrictive symptoms and expect an AAN client to restore less weight that AN client (Harrop, 2019).

This suggests that UK TCPs are potentially overemphasising the importance of physical metrics to assess illness severity, which perpetuates the misconception that presentations such as AAN, are less severe (Cunning & Rancourt, 2023). This misconception overlooks the fact that malnutrition is not solely determined by body size but by the adequacy of nutrient intake, which can be insufficient even in individuals who are not underweight. In

fact, those with AAN experience medical complications that are linked to underlying malnutrition, just like those with AN (Moskowitz & Weiselberg, 2017).

The decision to encourage weight restoration in individuals with atypical anorexia nervosa (AAN) has been described in the literature as a "clinical conundrum", suggesting the need to balance the health risks of malnutrition against those associated with increased weight. A case study of a 15-year-old girl with AAN illustrated this dilemma: while her orthostatic heart rate, which was affected by malnutrition, improved with weight restoration, she subsequently developed polycystic ovary syndrome (PCOS) (Nagata et al., 2018). However, the researchers noted that her PCOS manifested when her BMI reached the 77th percentile, a range considered normal by the Centre for Disease Control (CDC, 2023). This undermines the assertion that an "unhealthy weight" was the cause of her medical condition and suggests that PCOS can develop even when a client is considered to be at a "healthy weight". The researchers did, however, support the reduction of health-related problems through weight restoration, a conclusion reinforced by studies examining weight restoration in women who has lost their menstrual cycles. For example, Seetharaman et al. (2017) found that higher weight participants, who qualified for a diagnosis of AAN under the DSM-V criteria, regained their periods after weight restoration. However, the study also reported a large standard deviation in the recovery weight among these participants. These findings suggest that weight gain is essential for recovery in higher weight patients and highlights the significant variability across individuals in the amount of weight needed for recovery.

The other significant finding suggested that there was a difference between the AN and AAN clients when rating the treatment goal 1 - “Psychoeducation on risks of malnutrition and being underweight”, with TCPs rating this treatment goal as less important for the AN client. This finding may reflect participants assumption that it’s more crucial to emphasise the risks of malnourishment to AAN clients, serving as a warning of the potential consequences if they reach this stage. For clients presenting with AN, TCPs may assume that these individuals are already aware of the effects of malnourishment and thus deem it unimportant. This again, as noted above, could further highlight the belief that those in higher weight bodies cannot experience malnourishment, as their outward appearance does not conform to tradition notions of malnourishment (Zipfel et al., 2015).

5.3 Clinical Implications

It is crucial that psychologists working within the healthcare system have respect for the dignity of individuals who seek psychological care. The British Psychological Society's values and code of ethics statement suggest that:

"Members value the dignity and worth of all persons" and that *"Respect for dignity recognises the inherent worth of all human beings, regardless of perceived or real differences in social status, ethnic origin, gender, capacities, or any other such group-based characteristics. This inherent worth means that all human beings are worthy of equal moral consideration."*

As demonstrated by the current study, TCPs are not immune from weight bias. This call into question whether clinicians are upholding these core values when it comes to treating higher weight individuals. These findings may have considerable implications for higher weight individuals receiving psychological support for their eating disorder. Weight bias was shown as attributing negative stereotypes and manifested as inappropriate clinical judgements and treatment decisions, where TCPs were less likely to diagnose the higher weight client with AAN, would recommend fewer treatment sessions and were less likely to endorse some important treatment goals.

The clinical significance of these findings is profound, as the consequences of this weight stigma has been shown to manifest in numerous harmful ways. If higher weight clients with eating disorders perceive this weight-based discrimination, as some studies claim (Amy et al., 2006; Merrill & Grassley, 2008; Russell & Carryer, 2013; Buxton & Snethen, 2013), they are at risk of experiencing the associated distress and may see an increase in internalised weight stigma. Experienced and internalised weight stigma has been linked to range of psychological and physical health problems for higher weight individuals, such as depression, anxiety, low self-esteem (Papadopoulos & Brennan, 2015) and physical health problems such as and is linked to elevated cortisol levels (Himmelstein et al., 2015; Schvey et al., 2014), and increased blood pressure (Major et al., 2012).

Furthermore, it's been linked to the onset of disordered eating behaviours (Levinson et al., 2024) and associated risk factors for disordered eating, such as a drive for thinness (Gallardo et al., 2020) concerns about weight (Almenara et al., 2017), and poor body image (Grilo & Masheb, 2005). As outlined in the SLR in this thesis, internalised and experienced weight stigma for higher weight patients with BED, is linked with higher levels of depression

(Barnes et al., 2014; Durso et al., 2012, Grilo & Masheb, 2005; Puhl et al., 2010; Puhl et al., 2011) lower self-esteem (Durso et al., 2012; Grilo & Masheb, 2005; Jackson et al., 2000; Pearl et al., 2014; Puhl et al., 2010) and impacts on overall variables of mental health (Pearl et al., 2014). Furthermore, this psychological distress is associated with eating disorder pathology, including eating concern, weight concern (Barnes et al., 2014; Durso et al., 2012), and lower body image dissatisfaction (Grilo & Masheb, 2005).

Of most concern, the current research supports that these anti-fat attitudes could potentially lead to inappropriate clinical judgments in eating disorder care. Evidence from the current study, consistent with previous research, indicated that the client with AAN was less likely to receive an appropriate diagnosis (Lebow et al., 2015; Viellette et al., 2018) was underrepresented in appropriate services (Kennedy et al., 2017), received fewer treatment sessions (Viellette et al., 2018) and was less likely to be recommended some appropriate treatment goals (Harrop, 2019; Kimber et al., 2019). This suggests that clinicians, whose responsibility it is to help clients manage their disordered eating, may inadvertently contribute to the development and continuation of these behaviours.

They may also deliver inappropriate care that results in prolonged symptoms, leading to a range of poor physical health outcomes (Crow et al., 2009; Peebles et al., 2010; Whitelaw et al., 2014). This is particularly concerning given that, identifying the problem early and being provided with the appropriate intervention, has been shown to be essential in making a full recovery (Treasure & Russell, 2011; Von Holle et al., 2008). Addressing this issue within professionals who will make up the workforce treating eating disorders, is essential for reducing the stigma that drives inappropriate treatment decisions, in hopes of reducing the likelihood of the resulting psychological and physical consequences in those with atypical eating disorders. Actionable interventions and recommendations are outlined below.

5.3.1 Weight stigma interventions and eating disorder care

One key strategy in tackling weight stigma among health professionals involves implementing evidence-based interventions that have shown to be effective in reducing anti-fat attitudes. The literature on the effectiveness of weigh bias interventions is mixed. For instance, studies exploring empathy-evoking interventions have shown their effectiveness in reducing negative attitudes toward weight when measuring attitudes immediately after the intervention (Kushner et al., 2014; Molloy et al., 2016). However, these negative attitudes

were shown to often return or even increase at follow up (Kushner et al., 2014; Molloy et al., 2016).

As weight bias is influenced by beliefs about the controllability of weight, as outlined by attribution theory (Weiner et al., 1988), interventions aimed at reducing weight stigma by challenging these beliefs are crucial. Research shows that interventions aimed at educating individuals on the complex, multifaceted nature of weight, emphasising the roles of biology and environment, have proven to be more effective in reducing stigma, and have longer lasting effects (Diedrichs & Barlow, 2011). Of most relevance to the current study, is the research that has demonstrated this to be effective in trainee clinical psychologists. Brochu (2020) investigated the impact of a 3-hour lecture aimed at addressing weight controllability beliefs and encouraged size acceptance through a social justice lens. They found that the intervention supported in the reduction of negative attitudes around weight after a one week follow up.

However, despite its observed effectiveness, educating mental health professionals about weight stigma, in aid of its reduction, remains unimplemented (Brochu, 2019; Rothblum & Gartrell, 2019). The current study highlighted this by demonstrating, 92.7% of trainees had received "little" or "no" training regarding weight stigma. Only 6.1% of trainees had received a "moderate" or "a lot" of weight stigma training, and it's unclear whether this was provided by the University or in private spaces. To prevent this on-going omission of weight stigma education, it's recommended that UK DClinPsy courses incorporate weight bias education into the curriculum by replicating weight bias interventions that have shown effective in trainee clinical psychologists (Brochu, 2020). This supports the recommendations outlined in Arnold's (2023) thesis that suggests a mandatory one-off 3-hour teaching session, delivered to trainees early on in training, could be helpful in introducing and challenging the current cultural beliefs about weight.

For changing negative attitudes that are harmful to those with atypical eating disorders, education regarding the impact of weight stigma and how this manifests in clinical practice, should be embedded into the eating disorder training delivered on the DClinPsy course. The current study highlights how trainees are struggling to diagnose atypical disorders appropriately and are reluctant to recommend appropriate treatment options that align with the current NICE guidelines (NICE, 2017). This may reflect a lack of knowledge, or disbelief in the evidence that shows people with atypical eating disorders are at increased

risk of developing eating disorders (Neumark-Sztainer et al., 2006; Darby et al., 2007), and suffer with the associated health problems, just like those seen in typical presentations (Crow et al., 2009). Based on these findings, eating disorder teaching should include information emphasising the similarities between the AN and AAN presentation, particularly regarding incorrect assumptions of malnutrition being inherently linked to extreme thinness (Zipfel et al., 2015), and the importance of weight regain. This could include busting myths about the "clinical conundrum" of weight regain in higher weight people with eating disorders and address potential concerns that this will result in worse health outcomes.

Furthermore, these beliefs and attitudes that align with the weight bias reduction research, need to be reflected in ED services and among ED professionals, ensuring ethical and inclusive practice for all individuals with eating disorders regardless of weight and size. ED services have continued to use weight-centric care that focuses on weight management and uses size and weight as an indicator of severity (Harrop, 2019). This can intensify weight stigma among patients and providers, leading to increased internalisation, shame, and poorer health outcomes (McEntee et al., 2023). McEntee et al. (2023) outlines a clear guide for providers to ensure the inclusive and appropriate treatment for those with atypical eating disorders. These include, acknowledging the influence of weight stigma on current ED treatment, shifting from weight centric to weight inclusive care practices and philosophy, and increasing provider education and competency. ED providers need to uphold weight inclusive principles in practice, by decentring the focus on weight and reliance on the BMI as an indicator of eating disorder severity and start focusing on specific behaviours central to the ED diagnosis (Lee & Pausé, 2016). These adaptations to clinical practice within ED services will ensure trainees on placement become embedded into a culture that serves eating disorder clients of all shapes and sizes.

5.4 Study Strengths

A significant strength of the study is its sufficient statistical power, which enhances the reliability of the findings. By ensuring an adequate sample size this reduced the risk of bias and increased the likelihood of detecting a true effect, allowing for more accurate and generalisable conclusions (Cohen, 1988, p.7).

Additionally, by replicating Veillette et al.'s (2018) study, the current research contributes to the validation of their findings and strengthens the reliability and generalisability of their results by demonstrating similar outcomes within a UK sample of

trainee mental health professionals. This replication supports efforts to address the replicability crisis highlighted in the psychological research community (Fletcher, 2021), where validity of prior findings have been called into question.

To further improve the validity of these findings, this study addressed the limitations identified by Veillette et al. (2018). Specifically, the research expanded the number of recommended sessions, aligning with NICE guidelines, which suggest 40+ sessions for the treatment of eating disorders. The study also implemented the use of a standardised client representation by providing participants with a photo of a higher weight client and a lower weight client, rather than in-text descriptions. This was thought to help improve how the AN client and AAN is conceptualised. This study also extended their work by introducing a measure for client treatment goals. This was to explore how weight stigma might influence specific client treatment goals that are important for the treatment of AAN.

5.5 Study Limitations

A notable limitation of the study is the overrepresentation of women (90.7%) among the participants, which introduces potential bias into the data and makes the study less generalisation to TCPs as a whole population. Research has shown that men and women's expression of prejudice towards higher weight people differs, with men holding more stigmatising attitudes (Aruguete et al., 2006; Magallares & Morales, 2013). Consequently, the insight and conclusions drawn from the data might disproportionately reflect the experiences and behaviours of women, potentially overlooking or underrepresenting those of men or other genders. Future research should aim to include a more balanced gender distribution to ensure more comprehensive and generalisable findings.

A further limitation of the study is the potential influence of social desirability bias. Although the study used mild deception to mitigate the risk of influencing participants attitudes, TCPs may still have chosen responses that portray them as having less weight stigma than they actually do, to avoid being perceived negatively. Although weight stigma was identified within the sample, this could have been an underestimation of the true extent of weight stigma among TCPs, impacting the effect sizes of the significant findings, and ultimately the accuracy of the study's findings. Future studies may benefit from incorporating social desirability scales to help mitigate this risk. Additionally, social desirability is only enhanced with the use of self-report measures, as utilised in this study. To mitigate this, future research could consider adopting tools such the implicit Attitudes Test (IAT)

(Greenwald et al., 1998) to measure anti-fat attitudes. The IAT is designed to capture implicit attitudes, that is, evaluations and perceptions, that individuals are less likely to report due lack of awareness or concerns about social judgement (Schwartz et al., 2006).

It's also important to acknowledge how the modification of the Fatphobia scale (Bacon et al., 2001), by removing four items may have influenced the psychometric properties of this measure. Specifically, while this adjustment improved the internal consistency of the measure, which was consistent with removing items that reflected the clinical vignette, this may have inadvertently reduced the construct validity and altered its ability to fully capture the multifaceted nature of fatphobia. Consequently, the results from the revised measure may not be directly comparable to the results found in the Veillette et al. (2018) study, which retained all items.

5.6 Future Research

Future research should aim to address the limitations outlined in the current study, including an appropriate measure that is designed to captured how trainee clinical psychologists conceptualise an atypical eating disorder in relation to a clinical diagnosis. The question 'What would your diagnosis for Stacey be?' seemed to elicit trainees to respond in an appropriate psychologically minded way, which would reject a medicalised conceptualisation in favour of a more individualised formulation, as suggested by Johnstone (2018). While this approach is in line with current psychological standards, it may have unintended consequences, such as misdiagnosis (Lebow et al., 2015), within a mental health system that relies on diagnostic labels for access to specialised services. Future research may benefit from asking trainees to include their preliminary hypothesis, or 5ps formulation model, of a client's presentation based on the information provided and in support of a diagnostic label. Furthermore, changing the question to 'What diagnosis might Stacey have?' or 'What diagnosis would support your formulation?' may support trainees to choose a diagnosis that will support their formulation, without having to 'diagnose' the client themselves.

An important consideration, highlighted in Veillette et al. (2018), and now relevant for the current study, is the use of 30-year-old, heterosexual, female client. Research has demonstrated the differences in the recognition and treatment of eating disorders, particularly with presentations of AN, among men and ethnic minority groups (Austin et al., 2011). Previous research has highlighted how AN has been under recognised in these groups,

contributing to disparities in treatment access and the quality of treatment they receive (Cachelin, 2001). These disparities are likely even more pronounced for higher weight clients of different intersections, given they are often already perceived as less at risk despite exhibiting symptoms of severe eating disorders (Cunning & Rancourt, 2023). Furthermore, given that services are often tailored towards women (Robinson et al., 2013) it is crucial to explore whether weight bias extend different across different participants intersections, including gender and race.

5.7 Conclusion

The current study aimed to explore how TCPs would judge and treat clients who present with atypical eating disorder presentations, specifically AAN. The study revealed that TCPs, who represent the future UK clinical psychology workforce, are not immune to negative attitudes towards weight. These negative attitudes about weight may have an impact on clinical practice for higher weight clients who have eating disorders, which could include lack of appropriate treatment opportunities, inefficient treatment protocols, and overall poor treatment from providers and clinicians. Trainees are in a unique professional position, where clinical practice skills, such as supervision and reflective practice, allow for a complex understanding of the professional self in the context of others. Trainees, using these skills, can recognise and challenge their prejudice, which will shape their clinical practice to serve all clients, including those who are higher weight. However, to gain awareness of weight bias and its manifestation in clinical practice, requires knowledge and training about how weight stigma is perpetuated throughout society and specifically eating disorder management. The Clinical Doctorate training programmes and associated placement providers throughout the UK, have a duty to provide trainees with adequate and effective training to support them to recognise and challenge their weight bias in relation to atypical eating disorders.

References

Agell, G., & Rothblum, E. D. (1991). Effects of clients' obesity and gender on the therapy judgments of psychologists. *Professional Psychology: Research & Practice*, *22*(3), 223. https://psycnet.apa.org/doi/10.1037/0735-7028.22.3.223

Akoury, L. M., Schafer, K. J., & Warren, C. S. (2019). Fat women's experiences in therapy:"You can't see beyond… unless I share it with you". *Women & Therapy*, *42*(1-2), 93-115.

Alberga, A. S., Edache, I. Y., Forhan, M., & Russell-Mayhew, S. (2019). Weight bias and health care utilization: a scoping review. *Primary Health Care Research & Development*, *20*, e116. doi:10.1017/S1463423619000227

Alegria Drury, C. A., & Louis, M. (2002). Exploring the association between body weight, stigma of obesity, and health care avoidance. *Journal of the American Academy of Nurse Practitioners*, *14*(12), 554-561.

Alimoradi, Z., Golboni, F., Griffiths, M. D., Broström, A., Lin, C. Y., & Pakpour, A. H. (2020). Weight-related stigma and psychological distress: A systematic review and meta-analysis. *Clinical Nutrition*, *39*(7), 2001-2013.

Almenara, C. A., Aimé, A., Maïano, C., Ejova, A., Guèvremont, G., Bournival, C., & Ricard, M. M. (2017). Weight stigmatization and disordered eating in obese women: The mediating effects of self-esteem and fear of negative appearance evaluation. *European Review of Applied Psychology*, *67*(3), 155-162.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (Vol. 5, No. 5). Washington, DC: American psychiatric association.

Amy, N. K., Aalborg, A., Lyons, P., & Keranen, L. (2006). Barriers to routine gynecological cancer screening for White and African-American obese women. *International Journal of Obesity*, *30*(1), 147-155.

Andres, R., Muller, D. C., & Sorkin, J. D. (1993). Long-term effects of change in body weight on all-cause mortality. A review. *Annals of Internal Medicine*, *119*(7 Pt 2), 737–743. https://doi.org/10.7326/0003-4819-119-7_part_2-199310011-00022

Arnold, K. (2023). *Weight Stigma in Clinical Psychology: A Critical Discursive Psychology Analysis with Trainees* (Doctoral dissertation, University of Hertfordshire).

Aruguete, M. S., Yates, A., & Edman, J. (2006). Gender differences in attitudes about fat. *North American Journal of Psychology*, *8*(1), 183-183.

Ashmore, J. A., Friedman, K. E., Reichmann, S. K., & Musante, G. J. (2008). Weight-based stigmatization, psychological distress, & binge eating behavior among obese treatment-seeking adults. *Eating behaviors*, *9*(2), 203–209. https://doi.org/10.1016/j.eatbeh.2007.09.006

Ata, R. N., & Thompson, J. K. (2010). Weight bias in the media: a review of recent research. *Obesity Facts*, *3*(1), 41–46. https://doi.org/10.1159/000276547

Austin, S. B., Spadano-Gasbarro, J., Greaney, M. L., Richmond, T. K., Feldman, H. A., Osganian, S. K., ... & Peterson, K. E. (2011). Disordered weight control behaviors in early adolescent boys and girls of color: An under-recognized factor in the epidemic of childhood overweight. *Journal of Adolescent Health, 48*(1), 109-112.

Ayton, A., Viljoen, D., Ryan, S., Ibrahim, A., & Ford, D. (2022). Risk, demand, capacity and outcomes in adult specialist eating disorder services in South-East of England before and since COVID-19. *BJPsych bulletin*, *46*(2), 89–95. https://doi.org/10.1192/bjb.2021.73

Bacon, L., & Aphramor, L. (2011). Weight science: evaluating the evidence for a paradigm shift. *Nutrition journal*, *10*, 1-13.

Bacon, J. G., Scheltema, K. E., & Robinson, B. E. (2001). Fat phobia scale revisited: the short form. *International journal of obesity and related metabolic disorders: journal of the International Association for the Study of Obesity*, *25*(2), 252–257. https://doi.org/10.1038/sj.ijo.0801537

Barnes, R. D., Ivezaj, V., & Grilo, C. M. (2014). An examination of weight bias among treatment-seeking obese patients with and without binge eating disorder. *General Hospital Psychiatry*, *36*(2), 177-180.

Beck A. T., & Steer, R. (1987). *Manual for the Beck Depression Inventory.* San Antonio, Tex: Psychological Corporation.

Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric Properties of the Beck Depression Inventory: Twenty-Five Years of Evaluation. *Clinical Psychology Review, 8,* 77-100. http://dx.doi.org/10.1016/0272-7358(88)90050-5

Bell, B. T., & Dittmar, H. (2011). Does media type matter? The role of identification in adolescent girls' media consumption and the impact of different thin-ideal media on body image. *Sex roles*, *65*, 478-490.

Berkman, N. D., Lohr, K. N., & Bulik, C. M. (2007). Outcomes of eating disorders: a systematic review of the literature. *international Journal of Eating disorders*, *40*(4), 293-309.

Blencowe, A. (2017). *Implicit attitudes among trainee and qualified clinical psychologists in the UK* (Doctoral dissertation, University of East London).

Bonfiglioli, C. M., Smith, B. J., King, L. A., Chapman, S. F., & Holding, S. J. (2007). Choice and voice: obesity debates in television news. *Medical Journal of Australia*, *187*(8), 442-445.

Brewis, A., SturtzSreetharan, C., & Wutich, A. (2018). Obesity stigma as a globalizing health challenge. *Globalization and health*, *14*, 1-6.

British Psychological Society. (2021, September). *Trainee clinical psychologists and qualified clinical psychologists working with people with eating disorders.* Retrieved from The British Psychological Society Good Practice Guidelines: https://cms.bps.org.uk/sites/default/files/2022-06/Guidance%20for%20trainee%20and%20qualified%20clinical%20psychologists%20working%20with%20people%20with%20eating%20disorders.pdf

British Psychological Society. (2021, December). *Code of Ethics and Conduct*. Retrieved from The British Psychological Society Explore: https://explore.bps.org.uk/binary/bpsworks/bf9d9fead1dfec7c/3acfadeebe810a324dde720ea7b34b6e87a80cad1de5471be0810935dac0415b/inf94_2021.pdf

Brochu, P. M. (2020). Testing the effectiveness of a weight bias educational intervention among clinical psychology trainees. *Journal of Applied Social Psychology*, *53*(3), 231-241.

Brochu, P. M. (2019). Teaching clinical psychology trainees about weight bias. *Women & Therapy,* 42(1), 191–199. doi:10.1080/02703149.2018.1524066

Brochu, P. M. & Esses, V. M. (2011). What's in a name? The effects of the labels 'Fat' versus 'Overweight' on weight bias. *Journal of Applied Social Psychology, 41,* 1981–2008. https://doi.org/10.1111/j.1559-1816.2011.00786.x

Brochu, P. M., Pearl, R. L., & Simontacchi, L. A. (2018). Weight stigma and related social factors in psychological care. *Psychological care in severe obesity: A practical and integrated approach*, 42-60.

Bromfield, P. V. (2009). Childhood obesity: psychosocial outcomes and the role of weight bias and stigma. *Educational Psychology in Practice*, *25*(3), 193-209. https://doi.org/10.1080/02667360903151759.

Brown, A., & Flint, S. W. (2021). Preferences and emotional response to weight-related terminology used by healthcare professionals to describe body weight in people living with overweight and obesity. *Clinical obesity*, *11*(5), e12470. https://doi.org/10.1111/cob.12470

Brown, A., Flint, S. W., & Batterham, R. L. (2022). Pervasiveness, impact and implications of weight stigma. *EClinicalMedicine*, *47*.

Brown, I., Thompson, J., Tod, A., & Jones, G. (2006). Primary care support for tackling obesity: a qualitative study of the perceptions of obese patients. *British Journal of General Practice*, *56*(530), 666-672.

Brownell, K. D., Puhl, R. M., Schwartz, M. B., & Rudd, L. E. (2005). *Weight bias: Nature, consequences, and remedies*. Guilford Publications.

Burmeister, J. M., Kiefner, A. E., Carels, R. A., & Musher-Eizenman, D. R. (2013). Weight bias in graduate school admissions. *Obesity*, *21*(5), 918–920. https://doi.org/10.1002/oby.20171

Buxton, B. K., & Snethen, J. (2013). Obese women's perceptions and experiences of healthcare and primary care providers: a phenomenological study. *Nursing research*, *62*(4), 252-259.

Cachelin, F. M., Rebeck, R., Veisel, C., & Striegel-Moore, R. H. (2001). Barriers to treatment for eating disorders among ethnically diverse women. *International Journal of Eating Disorders*, *30*(3), 269-278.

Callaghan, S., Losch, M., Pione, A., & Teichner, W. (2021, April 8). *Feeling good: The future of the $1.5 trillion wellness market.* Retrieved from McKinsey & Company: https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/feeling-good-the-future-of-the-1-5-trillion-wellness-market

Carter, C. (2018). *The effects of client obesity on clinical judgments made by trainee clinical psychologists* (Doctoral dissertation, Cardiff University).

Centers for Disease Control. (2023, October 23). *Growth charts.* Retrieved from http://www.cdc.gov/growthcharts/

Chou, W. Y., Prestin, A., & Kunath, S. (2014). Obesity in social media: a mixed methods analysis. *Translational behavioral medicine*, *4*(3), 314–323. https://doi.org/10.1007/s13142-014-0256-1

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. (2nd ed.) New York: Lawrence Elbraum Associates.

Cohen, S. S., Palmieri, R. T., Nyante, S. J., Koralek, D. O., Kim, S., Bradshaw, P., & Olshan, A. F. (2008). A review: Obesity and screening for breast, cervical, and colorectal cancer in women. *Cancer*, *112*(9), 1892-1904.

Cooper, P. J., Taylor, M. J., Cooper, Z., & Fairbum, C. G. (1987). The development and validation of the Body Shape Questionnaire. *International Journal of eating disorders*, *6*(4), 485-494.

Corrigan, P. W., Watson, A. C., Gracia, G., Slopen, N., Rasinski, K., & Hall, L. L. (2005). Newspaper stories as measures of structural stigma. *Psychiatric services*, *56*(5), 551-556.

Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology, 66,* 882–894. doi:10.1037/0022-3514.66.5.882

Crandall, C. S., & Martinez, R. (1996). Culture, ideology, and antifat attitudes. *Personality and Social Psychology Bulletin*, *22*(11), 1165-1176.

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *u. Chi. Legal f.*, 139.

Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *The British journal of psychiatry*, *177*(1), 4-7.

Crow, S. J., Peterson, C. B., Swanson, S. A., Raymond, N. C., Specker, S., Eckert, E. D., & Mitchell, J. E. (2009). Increased mortality in bulimia nervosa and other eating disorders. *American Journal of Psychiatry*, *166*(12), 1342-1346.

Cunning, A., & Rancourt, D. (2023). Stigmatization of anorexia nervosa versus atypical anorexia nervosa: An experimental study. *Stigma and Health*. *9*(3), 249–257. https://doi.org/10.1037/sah0000432

Darby, A., Hay, P., Mond, J., Rodgers, B., & Owen, C. (2007). Disordered eating behaviours and cognitions in young women with obesity: relationship with psychological status. *International journal of obesity*, *31*(5), 876-882.

Dattalo, P. (2008). *Determining sample size: Balancing power, precision, and practicality*. New York: Oxford University Press.

Davis-Coelho, K., Waltz, J., & Davis-Coelho, B. (2000). Awareness and prevention of bias against fat clients in psychotherapy. Professional Psychology: *Research and Practice, 31*(6), 682-684.

de la Rie, S., Noordenbos, G., Donker, M., & van Furth, E. (2006). Evaluating the treatment of eating disorders from the patient's perspective. *International Journal of Eating Disorders*, *39*(8), 667-676.

Dian, M., & Triventi, M. (2021). The weight of school grades: Evidence of biased teachers' evaluations against overweight students in Germany. *PloS one*, *16*(2), e0245972. https://doi.org/10.1371/journal.pone.0245972

Diedrichs, P. C., & Barlow, F. K. (2011). How to lose weight bias fast! Evaluating a brief anti-weight bias intervention. *British journal of health psychology*, *16*(4), 846-861.

Dinh, J. (2012). From Voluptuous Woman to Porky Butterball: The Rise and Fall of the Voluptuous Woman Ideal. *Constellations*, *3*(2), 187-193.

Dixon, B. N., Ugwoaba, U. A., Brockmann, A. N., & Ross, K. M. (2021). Associations between the built environment and dietary intake, physical activity, and obesity: A scoping review of reviews. *Obesity reviews: an official journal of the International Association for the Study of Obesity*, *22*(4), e13171. https://doi.org/10.1111/obr.13171

Dorsey, R. R., Eberhardt, M. S., & Ogden, C. L. (2009). Racial/ethnic differences in weight perception. *Obesity*, *17*(4), 790-795.

Douglas, V. J., Kwan, M. Y., & Gordon, K. H. (2019). Factors associated with weight stigma and suicide risk. *Body Image* (38), 162-170.

Douglas, V. J., Kwan, M. Y., Minnich, A. M., Converse, J. N., Wonderlich, J. A., & Gordon, K. H. (2022). An examination of the link between empathy and weight-based victimization. *Social Sciences & Humanities Open*, *5*(1), 100247.

Downes, M. J., Brennan, M. L., Williams, H. C., & Dean, R. S. (2016). Appraisal tool for Cross-Sectional Studies (AXIS). *BMJ Open, 6*(12), 1–7.

Durso, L. E., & Latner, J. D. (2008). Understanding self-directed stigma: development of the weight bias internalization scale. *Obesity*, *16*(2), 80-86.

Durso, L. E., Latner, J. D., White, M. A., Masheb, R. M., Blomquist, K. K., Morgan, P. T., & Grilo, C. M. (2012). Internalized weight bias in obese patients with binge eating disorder: associations with eating disturbances and psychological functioning. *International Journal of Eating Disorders*, *45*(3), 423-427.

Eknoyan G. (2006). A history of obesity, or how what was good became ugly and then bad. *Advances in chronic kidney disease*, *13*(4), 421–427. https://doi.org/10.1053/j.ackd.2006.07.002

Eknoyan, G. (2008). Adolphe Quetelet (1796–1874)—the average man and indices of obesity. *Nephrology Dialysis Transplantation, 23*(1), 47-51.

Escobar-Koch, T., Banker, J. D., Crow, S., Cullis, J., Ringwood, S., Smith, G., van Furth., E., Westin, K., & Schmidt, U. (2010). Service users' views of eating disorder services: an international comparison. *International Journal of Eating Disorders*, *43*(6), 549-559.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Fairburn, C. G. (2008). *Cognitive behavior therapy and eating disorders*. Guilford Press.

Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire?. *International journal of eating disorders*, *16*(4), 363-370.

Fairburn, C.G. and Cooper, Z. (1993). The eating disorder examination. In: Fairburn, C.G. and Wilson, G.T., Eds., *Binge eating: Nature, assessment, and treatment* (12th ed.), Guilford Press, New York, 317-356.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Ferrante, J. M., Seaman, K., Bator, A., Ohman-Strickland, P., Gundersen, D., Clemow, L., & Puhl, R. (2016). Impact of perceived weight stigma among underserved women on doctor–patient relationships. *Obesity science & practice*, *2*(2), 128-135.

Ferrucci, L., Studenski, S. A., Alley, D. E., Barbagallo, M., & Harris, T. B. (2010). Obesity in aging and art. *The journals of gerontology. Series A: Biological sciences and medical sciences*, *65*(1), 53–56. https://doi.org/10.1093/gerona/glp166

First, M. B., Williams, J. B., Karg, R. S., & Spitzer, R. L. (2015). Structured clinical interview for DSM-5 disorders. *Clinician Version (SCID-5-CV)*.

Fitzsimmons, E. E., & Bardone-Cone, A. M. (2011). Coping and social support as potential moderators of the relation between anxiety and eating disorder symptomatology. *Eating behaviors*, *12*(1), 21-28.

Fletcher, S. C. (2021). The role of replication in psychological science. *European Journal for Philosophy of Science*, *11*(1), 23.

Forney, K. J., Brown, T. A., Holland-Carter, L. A., Kennedy, G. A., & Keel, P. K. (2017). Defining “significant weight loss” in atypical anorexia nervosa. *International Journal of Eating Disorders*, *50*(8), 952-962.

Foster, G. D., Kendall, P. C., Wadden, T. A., Stunkard, A. J., & Vogt, R. A. (1996). Psychological effects of weight loss and regain—A prospective evaluation. *Journal of Consulting and Clinical Psychology, 64,* 752–757.

Fouts, G., & Burggraf, K. (2000). Television situation comedies: Female weight, male negative comments, and audience reactions. *Sex roles*, *42*, 925-932.

Fox, C. L., & Farrow, C. V. (2009). Global and physical self-esteem and body dissatisfaction as mediators of the relationship between weight status and being a victim of bullying. *Journal of adolescence*, *32*(5), 1287–1301. https://doi.org/10.1016/j.adolescence.2008.12.006

Gallardo, L. O., Plumed-Domingo, J. J., & Rojo-Moreno, L. (2022). Weight-teasing and eating disorders—A comparative study in adolescent and adult samples. *Children*, *9*(11), 1655.

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New York: Simon and Schuster.

Gordon, A. (2020). *What We Don't Talk about when We Talk about Fat*. Boston: Beacon Press.

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

Greenberg, B. S., Eastin, M., Hofschire, L., Lachlan, K., & Brownell, K. D. (2003). Portrayals of overweight and obese individuals on commercial television. *American journal of public health*, *93*(8), 1342-1348.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: the implicit association test. *Journal of personality and social psychology*, *74*(6), 1464.

Gregg, J., & O'Hara, L. (2007). The Red Lotus Health Promotion Model: a new model for holistic, ecological, salutogenic health promotion practice. *Health Promotion Journal of Australia*, *18*(1), 12-19.

Griffiths, R. A., Beumont, P. J., Giannakopoulos, E., Russell, J., Schotte, D., Thornton, C., Touyz, S.W., & Varano, P. (1999). Measuring self-esteem in dieting disordered patients: The validity of the Rosenberg and Coopersmith contrasted. *International Journal of Eating Disorders*, *25*(2), 227-231.

Grilo, C. M., & Masheb, R. M. (2005). Correlates of body image dissatisfaction in treatment-seeking men and women with binge eating disorder. *International Journal of Eating Disorders*, *38*(2), 162-166.

Grilo, C. M., Lozano, C., & Elder, K. A. (2005). Inter-rater and test-retest reliability of the Spanish language version of the eating disorder examination interview: clinical and research implications. *Journal of Psychiatric Practice*, *11*(4), 231-240.

Grilo, C. M., Masheb, R. M., Lozano-Blanco, C., & Barry, D. T. (2004). Reliability of the Eating Disorder Examination in patients with binge eating disorder. *International journal of eating disorders*, *35*(1), 80-85.

Grilo, C. M., Masheb, R. M., & Wilson, G. T. (2001). A comparison of different methods for assessing the features of eating disorders in patients with binge eating disorder. *Journal of consulting and clinical psychology*, *69*(2), 317.

Hammond, K. L. (2013). Practical issues in the surgical care of the obese patient. *Ochsner Journal*, *13*(2), 224-227.

Harrington, M., Gibson, S., & Cottrell, R. C. (2009). A review and meta-analysis of the effect of weight loss on all-cause mortality risk. *Nutrition research reviews*, *22*(1), 93–108. https://doi.org/10.1017/S0954422409990035

Harrop, E. N. (2019). Typical-atypical interactions: One patient's experience of weight bias in an inpatient eating disorder treatment setting. *Women & Therapy*, *42*(1-2), 45-58.

Hassel, T. D., Amici, C. J., Thurston, N. S., & Gorsuch, R. L. (2001). Client weight as a barrier to non-biased clinical judgment. J*ournal of Psychology and Christianity, 20*(2), 145–161.

Hebl, M. R., King, E. B., & Perkins, A. (2009). Ethnic differences in the stigma of obesity: Identification and engagement with a thin ideal. *Journal of Experimental Social Psychology*, *45*(6), 1165-1172.

Hebl, M. R., & Xu, J. (2001). Weighing the care: physicians' reactions to the size of a patient. *International journal of obesity*, *25*(8), 1246-1252.

Himes, S. M., & Thompson, J. K. (2007). Fat stigmatization in television shows and movies: a content analysis. *Obesity (Silver Spring, Md.)*, *15*(3), 712–718. https://doi.org/10.1038/oby.2007.635

Himmelstein, M. S., Incollingo Belsky, A. C., & Tomiyama, A. J. (2015). The weight of stigma: cortisol reactivity to manipulated weight stigma. *Obesity*, *23*(2), 368-374.

Himmelstein, M. S., Puhl, R. M., & Quinn, D. M. (2018). Weight stigma and health: The mediating role of coping responses. *Health Psychology*, *37*(2), 139.

Holliday, J., Wall, E., Treasure, J., & Weinman, J. (2005). Perceptions of illness in individuals with anorexia nervosa: A comparison with lay men and women. *International Journal of Eating Disorders*, *37*(1), 50-56.

Hutson, D. J. (2017). Plump or Corpulent? Lean or Gaunt? Historical Categories of Bodily Health in Nineteenth-Century Thought. *Social Science History*, *41*(2), 283–303. doi:10.1017/ssh.2017.4

Ipsos. (2024, August 7). *More than 4 in 10 Britons are trying to lose weight, focusing on dieting and exercise.* Retrieved from https://www.ipsos.com/en-uk/more-4-10-britons-are-trying-lose-weight-focusing-dieting-and-exercise

Jeon, Y. A., Hale, B., Knackmuhs, E., & Mackert, M. (2018). Weight Stigma Goes Viral on the Internet: Systematic Assessment of YouTube Comments Attacking Overweight Men and Women. *Interactive journal of medical research*, *7*(1), e6. https://doi.org/10.2196/ijmr.9182

Jackson, T. D., Grilo, C. M., & Masheb, R. M. (2000). Teasing history, onset of obesity, current eating disorder psychopathology, body dissatisfaction, and psychological functioning in binge eating disorder. *Obesity Research*, *8*(6), 451-458.

Jackson, T. D., Grilo, C. M., & Masheb, R. M. (2002). Teasing history and eating disorder features: An age-and body mass index matched comparison of bulimia nervosa and binge-eating disorder. *Comprehensive Psychiatry*, *43*(2), 108-113.

Johnstone, L. (2018). Psychological formulation as an alternative to psychiatric diagnosis. *Journal of Humanistic Psychology*, *58*(1), 30-46.

Kennedy, G. A., Forman, S. F., Woods, E. R., Hergenroeder, A. C., Mammel, K. A., Fisher, M. M., ... & Richmond, T. K. (2017). History of overweight/obesity as predictor of care received at 1-year follow-up in adolescents with anorexia nervosa or atypical anorexia nervosa. *Journal of Adolescent Health*, *60*(6), 674-679.

Keys, A. (1980). *Seven countries: a multivariate analysis of death and coronary heart disease.* Boston: Harvard University Press.

Keys, A., Fidanza, F., Karvonen, M. J., Kimura, N., & Taylor, H. L. (1972) Indices of relative weight and obesity. *Journal of chronic diseases, 25*(6-7), 329-342.

Kim, S. H., & Anne Willis, L. (2007). Talking about obesity: News framing of who is responsible for causing and fixing the problem. *Journal of health communication*, *12*(4), 359-376.

Kimber, M., Dimitropoulos, G., Williams, E. P., Singh, M., Loeb, K. L., Hughes, E. K., ... & Le Grange, D. (2019). Tackling mixed messages: Practitioner reflections on working with adolescents with atypical anorexia and their families. *Eating disorders*, *27*(5), 436-452.

Klein, D., Najman, J., Kohrman, A. F., & Munro, C. (1982). Patient characteristics that elicit negative responses from family physicians. *J Fam Pract*, *14*(5), 881-888.

Koning, A., Mol, B. W., & Dondorp, W. (2017). It is not justified to reject fertility treatment based on obesity. *Human reproduction open*, *2017*(2), hox009. https://doi.org/10.1093/hropen/hox009.

Krieger, N. (1994). Epidemiology and the web of causation: has anyone seen the spider?. *Social science & medicine*, *39*(7), 887-903.

Kundu, A., Sultana, N., Felsky, D., Moraes, T. J., Selby, P., & Chaiton, M. (2024). An overview of systematic reviews on predictors of smoking cessation among young people. *Plos one*, *19*(3), e0299728.

Kushner, R. F., Zeiss, D. M., Feinglass, J. M., & Yelen, M. (2014). An obesity educational intervention for medical students addressing weight bias and communication skills using standardized patients. *BMC medical education*, *14*, 1-8.

Latner, J. D., Rosewall, J. K., & Simmonds, M. B. (2007). Childhood obesity stigma: association with television, videogame, and magazine exposure. *Body image*, *4*(2), 147-155.

Lawrence, B. J., Kerr, D., Pollard, C. M., Theophilus, M., Alexander, E., Haywood, D., & O'Connor, M. (2021). Weight bias among health care professionals: a systematic review and meta-analysis. *Obesity*, *29*(11), 1802-1812.

Lebow, J., Sim, L. A., & Kransdorf, L. N. (2015). Prevalence of a history of overweight and obesity in adolescents with restrictive eating disorders. *Journal of Adolescent Health*, *56*(1), 19-24.

Lee, K. M., Hunger, J. M., & Tomiyama, A. J. (2021). Weight stigma and health behaviors: evidence from the Eating in America Study. *International Journal of Obesity*, *45*(7), 1499-1509.

Lee, J. A., & Pausé, C. J. (2016). Stigma in practice: barriers to health for fat women. *Frontiers in psychology*, *7*, 2063.

Leonidas, C., & dos Santos, M. A. (2017). Emotional meanings assigned to eating disorders: Narratives of women with anorexia and bulimia nervosa. *Universitas Psychologica*, *16*(4), 189-201.

Levinson, J. A., Kinkel-Ram, S., Myers, B., & Hunger, J. M. (2024). A systematic review of weight stigma and disordered eating cognitions and behaviors. *Body Image*, *48*, 101678.

Lydecker, J. A., Cotter, E. W., Palmberg, A. A., Simpson, C., Melissa, K., White, K., & Mazzeo, S. E. (2016). Does this tweet make me look fat? A content analysis of weight stigma on twitter. *Eating and Weight Disorders, 21*(2), 229-235. https://doi.org/10.1007/s40519-016-0272-x

Ma, L. L., Wang, Y. Y., Yang, Z. H., Huang, D., Weng, H., & Zeng, X. T. (2020). Methodological quality (risk of bias) assessment tools for primary and secondary medical studies: what are they and which is better?. *Military Medical Research*, *7*, 1-11.

Magallares, A. & Morales, J.F. (2013). Gender differences in antifat attitudes. *Revista de Psicologia Social, 28,* 113-119. https://doi.org/10.1174/021347413804756014

Mahood, Q., Van Eerd, D., & Irvin, E. (2014). Searching for grey literature for systematic reviews: challenges and benefits. *Research synthesis methods*, *5*(3), 221-234.

Major, B., Eliezer, D., & Rieck, H. (2012). The psychological weight of weight stigma. *Social Psychological and Personality Science*, *3*(6), 651-658.

Major, B., Tomiyama, A. J., & Hunger, J. M. (2018). The negative and bidirectional effects of weight stigma on health. In B. Major, J. F. Dovidio, & B. G. Link (Eds.), *The*

Oxford handbook of stigma, discrimination, and health (pp. 499–519). Oxford University Press.

Mann, T., Tomiyama, A. J., Westling, E., Lew, A. M., Samuels, B., & Chatman, J. (2007). Medicare's search for effective obesity treatments: diets are not the answer. *American Psychologist*, *62*(3), 220.

Matthews, A., Gordon, K., Kramer, R., Lin, J., & Ziv, A. (2023). Clinical characteristics of medically hospitalized youth with anorexia nervosa/atypical anorexia nervosa and premorbid overweight/obesity. *Eating disorders*, *31*(3), 201–211. https://doi.org/10.1080/10640266.2022.2097361

Matthews, A., Kramer, R. A., & Mitan, L. (2022). Eating disorder severity and psychological morbidity in adolescents with anorexia nervosa or atypical anorexia nervosa and premorbid overweight/obesity. *Eating and weight disorders: EWD*, *27*(1), 233–242. https://doi.org/10.1007/s40519-021-01168-7

McClure, K. J., Puhl, R. M., & Heuer, C. A. (2011). Obesity in the news: do photographic images of obese persons influence antifat attitudes?. *Journal of health communication*, *16*(4), 359-371.

McEntee, M. L., Philip, S. R., & Phelan, S. M. (2023). Dismantling weight stigma in eating disorder treatment: Next steps for the field. *Frontiers in psychiatry*, *14*, 1157594. https://doi.org/10.3389/fpsyt.2023.1157594

Merrill, E., & Grassley, J. (2008). Women's stories of their experiences as overweight patients. *Journal of advanced nursing*, *64*(2), 139-146.

Miller, W. C. (1999). How effective are traditional dietary and exercise interventions for weight loss?. *Medicine and science in sports and exercise*, *31*, 1129-1134.

Mitrofan, O., Petkova, H., Janssens, A., Kelly, J., Edwards, E., Nicholls, D., McNicholas, F., Simic, M., Eisler, I., Ford, T., & Byford, S. (2019). Care experiences of young people with eating disorders and their parents: qualitative study. *BJPsych open*, *5*(1), e6.

Molloy, M. A., Sabol, V. K., Silva, S. G., & Guimond, M. E. (2016). Using trigger films as a bariatric sensitivity intervention: improving nursing students' attitudes and beliefs about caring for obese patients. *Nurse educator*, *41*(1), 19-24.

Mond, J. M., Robertson-Smith, G., & Vetere, A. (2006). Stigma and eating disorders: is there evidence of negative attitudes towards anorexia nervosa among women in the community?. *Journal of Mental Health*, *15*(5), 519-532.

Montgomery, A. (2021, October 28). *Public Health Needs to Decouple Weight and Health.*. Retrieved from University of Illinois at Chicago: https://indigo.uic.edu/articles/educational_resource/Public_Health_Needs_to_Decouple_Weight_and_Health/16823341?file=31107955

Moskowitz, L., & Weiselberg, E. (2017). Anorexia nervosa/atypical anorexia nervosa. *Current problems in pediatric and adolescent health care*, *47*(4), 70-84.

Musher-Eizenman, D. R., Holub, S. C., Miller, A. B., Goldstein, S. E., & Edwards-Leeper, L. (2004). Body size stigmatization in preschool children: the role of control attributions. *Journal of pediatric psychology*, *29*(8), 613–620. https://doi.org/10.1093/jpepsy/jsh063

Nagata, J. M., Garber, A. K., & Buckelew, S. M. (2018). Weight restoration in atypical anorexia nervosa: A clinical conundrum. *The International journal of eating disorders*, *51*(11), 1290–1293. https://doi.org/10.1002/eat.22953

Nagata, J. M., Garber, A. K., Tabler, J. L., Murray, S. B., & Bibbins-Domingo, K. (2018). Differential risk factors for unhealthy weight control behaviors by sex and weight status among US adolescents. *Journal of Adolescent Health*, *63*(3), 335-341.

National Collaborating Centre for Mental Health. (2019). *Adult Eating Disorders: Community, Inpatient and Intensive Day Patient Care.* Retrieved from Guidance for commissions and providers: https://www.england.nhs.uk/wp-content/uploads/2019/08/aed-guidance.pdf

National Institute for Health and Care Excellence. (2017). *Eating disorders: recognition and treatment* [NICE Guideline No. 69]. https://www.nice.org.uk/guidance/ng69

Neumark-Sztainer, D., Wall, M., Guo, J., Story, M., Haines, J., & Eisenberg, M. (2006). Obesity, disordered eating, and eating disorders in a longitudinal study of adolescents: how do dieters fare 5 years later?. *Journal of the American Dietetic Association*, *106*(4), 559-568.

Norrgard, K. (2008). Human testing, the eugenics movement, and IRBs. *Nature Education, 1*(1),170.

Nutter, S., Ireland, A., Alberga, A. S., Brun, I., Lefebvre, D., Hayden, K. A., & Russell-Mayhew, S. (2019). Weight bias in educational settings: A systematic review. *Current obesity reports, 8,* 185-200.

Offer, S., Alexander, E., Barbara, K., Hemmingsson, E., Flint, S. W., & Lawrence, B. J. (2022). The association between childhood trauma and overweight and obesity in young adults: the mediating role of food addiction. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *27*(8), 3257-3266. https://doi.org/10.1007/s40519-022-01454-y

Olson, C. L., Schumaker, H. D., & Yawn, B. P. (1994). Overweight women delay medical care. *Archives of family medicine*, *3*(10), 888.

Ostbye, T., Taylor Jr, D. H., Yancy Jr, W. S., & Krause, K. M. (2005). Associations between obesity and receipt of screening mammography, Papanicolaou tests, and influenza vaccination: results from the Health and Retirement Study (HRS) and the Asset and Health Dynamics Among the Oldest Old (AHEAD) Study. *American journal of public health*, *95*(9), 1623-1630.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. BMJ, 372, n71.https://doi.org/10.1136/bmj.n71

Page, M. J., Moher, D., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … McKenzie, J. E. (2021). PRISMA 2020 explanation and elaboration: Updated guidance and exemplars for reporting systematic reviews. BMJ, 372, n160. https://doi.org/10.1136/bmj.n160

Papadopoulos, S., & Brennan, L. (2015). Correlates of weight stigma in adults with overweight and obesity: A systematic literature review. *Obesity (Silver Spring, Md.)*, *23*(9), 1743–1760. https://doi.org/10.1002/oby.21187

Park, Y. S., Konge, L., & Artino Jr, A. R. (2020). The positivism paradigm of research. *Academic medicine*, *95*(5), 690-694.

Pearl, R. L., Wadden, T. A., Groshon, L. C., Fitterman-Harris, H. F., Bach, C., & LaFata, E. M. (2023). Refining the conceptualization and assessment of internalized weight stigma: A mixed methods approach. *Body image*, *44*, 93-102.

Pearl, R. L., White, M. A., & Grilo, C. M. (2014). Overvaluation of shape and weight as a mediator between self-esteem and weight bias internalization among patients with binge eating disorder. *Eating behaviors*, *15*(2), 259-261.

Pearl, R. L., White, M. A., & Grilo, C. M. (2014). Weight bias internalization, depression, and self-reported health among overweight binge eating disorder patients. *Obesity*, *22*(5), 142-148.

Peebles, E. (2014). Cyberbullying: Hiding behind the screen. *Paediatrics & child health*, *19*(10), 527-528.

Peebles, R., Hardy, K. K., Wilson, J. L., & Lock, J. D. (2010). Are diagnostic criteria for eating disorders markers of medical severity?. *Pediatrics*, *125*(5), e1193-e1201.

Penley, J. A., Wiebe, J. S., & Nwosu, A. (2003). Psychometric properties of the Spanish Beck Depression Inventory-II in a medical sample. *Psychological assessment*, *15*(4), 569.

Persky, S., & Eccleston, C. P. (2011). Medical student bias and care recommendations for an obese versus non-obese virtual patient. *International Journal of Obesity*, *35*(5), 728-735.

Peterson, J., Welch, V., Losos, M., & Tugwell, P. (2011). The Newcastle-Ottawa scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses. *Ottawa: Ottawa Hospital Research Institute*, *2*(1), 1-12.

Phelan, S. M., Burgess, D. J., Yeazel, M. W., Hellerstedt, W. L., Griffin, J. M., & van Ryn, M. (2015). Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *obesity reviews*, *16*(4), 319-326.

Pilgrim, D. (2020). *Critical Realism for Psychologists*. New York: Routledge

Prunty, A., Clark, M. K., Hahn, A., Edmonds, S., & O'Shea, A. (2020). Enacted weight stigma and weight self stigma prevalence among 3821 adults. *Obesity Research & Clinical Practice*, *14*(5), 421-427.

Pryor, W. (2002). The health care disadvantages of being obese. *New South Wales public health bulletin*, *13*(7), 163-165.

Puhl, R. M., Andreyeva, T., & Brownell, K. D. (2008). Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America. *International journal of obesity*, *32*(6), 992-1000.

Puhl, R. M., & Brownell, K. D. (2006). Confronting and coping with weight stigma: an investigation of overweight and obese adults. Obesity (Silver. Spring). 14, 1802–1815. doi: 10.1038/oby.2006.208

Puhl, R. M., & Brownell, K. D. (2003). Psychosocial origins of obesity stigma: toward changing a powerful and pervasive bias. *Obesity reviews*, *4*(4), 213-227.

Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: a review and update. *Obesity*, *17*(5), 941.

Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: important considerations for public health. *American journal of public health*, *100*(6), 1019–1028. https://doi.org/10.2105/AJPH.2009.159491

Puhl, R. M., & Himmelstein, M. S. (2018). Weight bias internalization among adolescents seeking weight loss: Implications for eating behaviors and parental communication. *Frontiers in psychology*, *9*, 2271.

Puhl, R. M., Latner, J. D., King, K. M., & Luedicke, J. (2014). Weight bias among professionals eating disorders: attitudes about treatment and perceived patient outcomes. *International Journal of Eating Disorders*, *47*(1), 65-75.

Puhl, R. M., Latner, J. D., O'Brien, K., Luedicke, J., Danielsdóttir, S., & Forhan, M. (2015). A multinational examination of weight bias: predictors of anti-fat attitudes across four countries. *International Journal of Obesity*, *39*(7), 1166-1173.

Puhl, R. M., Latner, J. D., O'Brien, K., Luedicke, J., Forhan, M., & Danielsdottir, S. (2016). Cross-national perspectives about weight-based bullying in youth: nature, extent and remedies. *Pediatric obesity*, *11*(4), 241-250.

Puhl, R. M., Lessard, L. M., Pearl, R. L., Himmelstein, M. S., & Foster, G. D. (2021). International comparisons of weight stigma: addressing a void in the field. *International Journal of Obesity*, *45*(9), 1976-1985.

Puhl, R. M., & Luedicke, J. (2012). Weight-based victimization among adolescents in the school setting: Emotional reactions and coping behaviors. *Journal of youth and adolescence*, *41*, 27-40. https://doi.org/10.1007/ s10964-011-9713-z.

Puhl, R. M., Luedicke, J., & Grilo, C. M. (2014). Obesity bias in training: attitudes, beliefs, and observations among advanced trainees in professional health disciplines. *Obesity*, *22*(4), 1008-1015.

Puhl, R. M., Luedicke, J., & Heuer, C. (2011). Weight-based victimization toward overweight adolescents: observations and reactions of peers. *Journal of School Health*, *81*(11), 696-703. https://doi.org/10.1111/j.1746-1561. 2011.00646.x.

Puhl, R. M., Luedicke, J., & Heuer, C. A. (2013). The Stigmatizing Effect of Visual Media Portrayals of Obese Persons on Public Attitudes: Does Race or Gender Matter? *Journal of Health Communication*, *18*(7), 805–826. https://doi.org/10.1080/10810730.2012.757393

Puhl, R. M., Masheb, R. M., White, M. A., & Grilo, C. M. (2010). Attitudes toward obesity in obese persons: a matched comparison of obese women with and without binge eating. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *15*, 173-179.

Puhl, R. M., Moss-Racusin, C. A., & Schwartz, M. B. (2007). Internalization of weight bias: Implications for binge eating and emotional well-being. *Obesity*, *15*(1), 19-23.

Puhl, R. M., Moss-Racusin, C. A., Schwartz, M. B., & Brownell, K. D. (2008). Weight stigmatization and bias reduction: perspectives of overweight and obese adults. *Health education research*, *23*(2), 347-358.

Puhl, R., Wharton, C., & Heuer, C. (2009). Weight bias among dietetics students: implications for treatment practices. *Journal of the American Dietetic Association*, *109*(3), 438-444.

Puhl, R. M., White, M. A., Paris, M., Anez, L. M., Silva, M. A., & Grilo, C. M. (2011). Negative weight-based attitudes in treatment-seeking obese monolingual Hispanic patients with and without binge eating disorder. *Comprehensive psychiatry*, *52*(6), 737-743.

Rasmussen, N. (2019). Downsizing obesity: On Ancel Keys, the origins of BMI, and the neglect of excess weight as a health hazard in the United States from the 1950s to 1970s. *Journal of the History of the Behavioral Sciences*, *55*(4), 299-318.

Rice, C. (2015). Rethinking fat: From bio-to body-becoming pedagogies. *Cultural Studies? Critical Methodologies*, *15*(5), 387-397.

Robinson, K. J., Mountford, V. A., & Sperlinger, D. J. (2013). Being men with eating disorders: perspectives of male eating disorder service-users. *Journal of health psychology*, *18*(2), 176-186.

Roehling, M. V. (1999). Weight-based discrimination in employment: Psychological and legal aspects. *Personnel Psychology*, *52*(4), 969-1016.

Roehling, M. V., Roehling, P. V., & Pichler, S. (2007). The relationship between body weight and perceived weight-related employment discrimination: The role of sex and race. *Journal of Vocational Behavior*, *71*(2), 300-318.

Rosen, J.C., Jones, A., Ramirez, E., & Waxman, S. (1996). Body Shape Questionnaire: Studies of validity and reliability. *International Journal of Eating Disorders, 20,* 315–319.

Rosenberg M. (1979). *Conceiving the Self.* New York: Basic Books.

Rothblum, E. D., & Gartrell, N. K. (2019). Sizeism in mental health training and supervision. Women & Therapy, 42(1-2), 147-155.

Russell, N., & Carryer, J. (2013). Living large: the experiences of large-bodied women when accessing general practice services. *Journal of primary health care*, *5*(3), 199-205.

Sapolsky, R. M. (2017). *Behave: The biology of humans at our best and worst*. Penguin Books.

Sattler, K. M., Deane, F. P., Tapsell, L., & Kelly, P. J. (2018). Gender differences in the relationship of weight-based stigmatisation with motivation to exercise and physical activity in overweight individuals. *Health psychology open*, *5*(1), 2055102918759691. https://doi.org/10.1177/2055102918759691.

Sawyer, S. M., Whitelaw, M., Le Grange, D., Yeo, M., & Hughes, E. K. (2016). Physical and psychological morbidity in adolescents with atypical anorexia nervosa. *Pediatrics, 137*(4).

Schvey, N. A., Puhl, R. M., & Brownell, K. D. (2014). The stress of stigma: exploring the effect of weight stigma on cortisol reactivity. *Psychosomatic medicine*, *76*(2), 156-162.

Scruton, R. (2010). Hiding behind the screen. *The New Atlantis*, (28), 48-60.

Seetharaman, S., Golden, N. H., Halpern-Felsher, B., Peebles, R., Payne, A., & Carlson, J. L. (2017). Effect of a prior history of overweight on return of menses in adolescents with eating disorders. *Journal of Adolescent Health*, *60*(4), 469-471.

Selensky, J. C., & Carels, R. A. (2021). Weight stigma and media: An examination of the effect of advertising campaigns on weight bias, internalized weight bias, self-esteem, body image, and affect. *Body Image*, *36*, 95-106.

Shetgiri, R. (2013). Bullying and victimization among children. *Advances in pediatrics*, *60*(1), 33-51. https://doi.org/10.1016/j.yapd.2013.04. 004

Siahpush, M., Tibbits, M., Shaikh, R. A., Singh, G. K., Sikora Kessler, A., & Huang, T. T. K. (2015). Dieting increases the likelihood of subsequent obesity and BMI gain: results from a prospective study of an Australian national sample. *International Journal of Behavioral Medicine*, *22*, 662-671. https://doi.org/10.1007/s12529-015-9463-5

Sikorski, C., Luppa, M., Brahler, E., Konig, H.H., & Reidel-Heller, S.G. (2012). Obese children, adults and senior citizens in the eyes of the general public: Results of a representative study on stigma and causation of obesity. *PLoS one, 7*, e46924. https://doi.org/10.1371/journal.pone.0046924

Sim, L.A., Lebow, J. & Billings, M. (2013). Eating disorders in adolescents with a history of obesity. *Pediatrics, 132*(4). 1026–1030.

Strawson, G. (1994). The impossibility of moral responsibility. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, *75*(1/2), 5-24.

Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1986). Toward an understanding of risk factors for bulimia. *American psychologist*, *41*(3), 246.

Strings, S. (2019). *Fearing the black body: The racial origins of fat phobia.* New York: New York University Press.

Strings, S. (2023). How the use of BMI fetishizes white embodiment and racializes fat phobia. *AMA Journal of Ethics*, *25*(7), 535-539. https://doi.org/10.1001/amajethics.2023.535

Stunkard, A. J., Sørensen, T. I., Hanis, C., Teasdale, T. W., Chakraborty, R., Schull, W. J., & Schulsinger, F. (1986). An adoption study of human obesity. *The New England journal of medicine*, *314*(4), 193–198. https://doi.org/10.1056/NEJM198601233140401

Sutin, A. R., Stephan, Y., & Terracciano, A. (2015). Weight discrimination and risk of mortality. *Psychological Science, 26*(11), 1803-1811.

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 (Silver Spring, Md.)*, *14*(3), 440–447. https://doi.org/10.1038/oby.2006.58

Teixeira, F. V., Pais-Ribeiro, J. L., & da Costa Maia, Â. R. P. (2012). Beliefs and practices of healthcare providers regarding obesity: a systematic review. *Revista da Associação Médica Brasileira (English Edition)*, *58*(2), 254-262.

Tiggemann, M., & Anesbury, T. (2000). Negative stereotyping of obesity in children: The role of controllability beliefs. *Journal of Applied Social Psychology, 30,* 1977–1993. https://doi.org/10.1111/j.1559-1816.2000.tb02477.x

Tomiyama, A. J., Finch, L. E., Belsky, A. C. I., Buss, J., Finley, C., Schwartz, M. B., & Daubenmier, J. (2015). Weight bias in 2001 versus 2013: contradictory attitudes among obesity researchers and health professionals. *Obesity*, *23*(1), 46-53. https://doi.org/10.1002/oby.20910

Treasure, J., & Russell, G. (2011). The case for early intervention in anorexia nervosa: theoretical exploration of maintaining factors. *The British Journal of Psychiatry*, *199*(1), 5-7.

University of Hertfordshire (2024). *Professional Doctorate in Clinical Psychology*. Retrieved from https://www.herts.ac.uk/courses/research/clinical-psychology

Van Alsten, S. C., & Duncan, A. E. (2020). Lifetime patterns of comorbidity in eating disorders: an approach using sequence analysis. *European Eating Disorders Review*, *28*(6), 709-723.

VanLeeuwen, J. A., Waltner-Toews, D., Abernathy, T., & Smit, B. (1999). Evolving models of human health toward an ecosystem context. *Ecosystem Health*, *5*(3), 204-219.7

Veillette, L. A., Serrano, J. M., & Brochu, P. M. (2018). What's weight got to do with it? Mental health trainees' perceptions of a client with anorexia nervosa symptoms. *Frontiers in Psychology*, *9*, 2574.

Veritas Health Innovation. (2023). Covidence systematic review software. Retrieved from www.covidence.org.

Von Holle, A., Poyastro Pinheiro, A., Thornton, L. M., Klump, K. L., Berrettini, W. H., Brandt, H., Crawford, S., Crow, S., Fitcher, M.M., Halmi, K.A., Johnson, C., Kaplan, A.S., Keel., La Vie, M., Mitchell, J., Strober, M., Woodside, D.B., Kaye, W., & Bulik, C. M. (2008). Temporal patterns of recovery across eating disorder subtypes. *Australian & New Zealand Journal of Psychiatry*, *42*(2), 108-117.

Ware J. E., Jr (2000). SF-36 health survey update. *Spine*, *25*(24), 3130–3139. https://doi.org/10.1097/00007632-200012150-00008

Wee, C. C., McCarthy, E. P., Davis, R. B., & Phillips, R. S. (2000). Screening for cervical and breast cancer: is obesity an unrecognized barrier to preventive care?. *Annals of internal medicine*, *132*(9), 697-704.

Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of personality and social psychology*, *55*(5), 738–748. https://doi.org/10.1037//0022-3514.55.5.738

Wellman, J. D., Araiza, A. M., Solano, C., & Berru, E. (2019). Sex differences in the relationships among weight stigma, depression, and binge eating. *Appetite*, *133*, 166-173.

Wilfley, D. E., Schwartz, M. B., Spurrell, E. B., & Fairburn, C. G. (1997). Assessing the specific psychopathology of binge eating disorder patients: interview or self-report?. *Behaviour research and therapy*, *35*(12), 1151-1159.

Whitelaw, M., Gilbertson, H., Lee, K. J., & Sawyer, S. M. (2014). Restrictive eating disorders among adolescent inpatients. *Pediatrics*, *134*(3), 758-764.

Wu, Y. K., & Berry, D. C. (2018). Impact of weight stigma on physiological and psychological health outcomes for overweight and obese adults: A systematic review. *Journal of advanced nursing*, *74*(5), 1030-1042.

Young, L. M., & Powell, B. (1985). The Effects of Obesity on the Clinical Judgments of Mental Health Professionals. *Journal of Health and Social Behavior, 26*(3), 233-246.

Young, J. M., & Solomon, M. J. (2009). How to critically appraise an article. *Nature Clinical Practice Gastroenterology & Hepatology*, *6*(2), 82-91.

Zipfel, S., Giel, K. E., Bulik, C. M., Hay, P., & Schmidt, U. (2015). Anorexia nervosa: aetiology, assessment, and treatment. *The lancet psychiatry*, *2*(12), 1099-1111.

Appendices

Appendix A: List of key papers used for search terms

Appendix B: Full search terms and search strategies

Appendix C: Email to course administrators

Appendix D: Recruitment poster

Appendix E: Social media advert

Appendix F: Participant Demographic questions

Appendix G: Vignette of client

Appendix H: Email permission for use and change of vignette

Appendix I: Photos of AN and AAN client

Appendix J: Participant information sheet

Appendix K: Participant consent form

Appendix L: Questionnaires (Diagnosis, treatment sessions, treatment goals, fatphobia scale, attitudes towards clients)

Appendix M: Debrief form

Appendix N: University of Hertfordshire Ethical Approval

Appendix O: SPSS output

Appendix A: List of key papers used for search terms

Alimoradi, Z., Golboni, F., Griffiths, M. D., Broström, A., Lin, C. Y., & Pakpour, A. H. (2020). Weight-related stigma and psychological distress: A systematic review and meta-analysis. *Clinical Nutrition*, *39*(7), 2001-2013.

Foran, A. M., O'Donnell, A. T., & Muldoon, O. T. (2020). Stigma of eating disorders and recovery-related outcomes: A systematic review. *European Eating Disorders Review*, *28*(4), 385-397.

Hunger, J. M., Dodd, D. R., & Smith, A. R. (2020). Weight discrimination, anticipated weight stigma, and disordered eating. *Eating Behaviors*, *37*, 101383.

Levinson, J. A., Kinkel-Ram, S., Myers, B., & Hunger, J. M. (2024). A systematic review of weight stigma and disordered eating cognitions and behaviors. *Body image*, *48*, 101678.

Mason, T. B., Mozdzierz, P., Wang, S., & Smith, K. E. (2021). Discrimination and eating disorder psychopathology: A meta-analysis. *Behavior Therapy*, *52*(2), 406-417.

Papadopoulos, S., & Brennan, L. (2015). Correlates of weight stigma in adults with overweight and obesity: A systematic literature review. *Obesity*, *23*(9), 1743-1760.

Pearl, R. L., & Puhl, R. M. (2018). Weight bias internalization and health: a systematic review. *Obesity reviews*, *19*(8), 1141-1163.

Vartanian, L. R., & Porter, A. M. (2016). Weight stigma and eating behavior: A review of the literature. *Appetite*, *102*, 3-14.

Appendix B: Full search terms and search strategies

Key words

("weight prejudice") MH OR ("weight bias" OR weightism OR sizeism OR "anti-fat OR fatphobia*)

AND
weight OR obesity OR obese OR fat OR size* OR overweight

AND

discriminat* OR stigma* OR prejudice* OR stereotype* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi* OR "Social Discrimination" MH OR "Stereotyping" MH

AND
eating OR "weight control"

AND

disorder* OR dysregulat* OR behavio* OR binge OR pathology OR overeating OR anorexia OR bulimia OR "Eating Disorders+"

PubMed

(((((("Weight Prejudice"[Mesh] OR "weight bias" OR weightism OR sizeism OR "anti-fat" OR fatphobi*)) AND ((weight OR obesity OR obese OR fat OR size* OR Overweight[Mesh]))) AND ((discriminat* OR stigma* OR prejudice* OR stereotyp* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi* OR "Social Stigma"[Mesh] OR "Bullying"[Mesh] OR "Social Discrimination"[Mesh] OR "Social Marginalization"[Mesh] OR Stereotyping[Mesh]))) AND ((eating[Title/Abstract] OR "weight control"[Title/Abstract]))) AND ((disorder* OR dysregulat* OR behavio* OR binge or patholog* OR overeating OR anorexia OR bulimia OR "Feeding and Eating Disorders"[Mesh]))

CINHAL

MH "weight prejudice" OR AB ("weight bias" OR weightism OR sizeism OR "anti-fat OR fatphobia*) AND AB (weight OR obesity OR obese OR fat OR size* OR overweight) AND AB (discriminat* OR stigma* OR prejudice* OR stereotype* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi*) OR MH "Social Discrimination" OR MH "Stereotyping" AND AB (eating OR "weight control") AND AB (disorder* OR dysregulat* OR behavio* OR binge OR pathology OR overeating OR anorexia OR bulimia) OR "Eating Disorders+"

PsychINFO (APA PsycArticles, APA PsycBooks, APA PsycExtra)

MeSH: "weight prejudice" OR Abstract: "weight bias" OR weightism OR sizeism OR "anti-fat OR fatphobia* OR overweight AND Abstract: discriminat* OR Abstract: stigma* OR Abstract: prejudice* OR Abstract: stereotype* OR Abstract: shame* OR Abstract: shaming OR Abstract: tease* OR Abstract: teasing OR Abstract: bully* OR Abstract: rejection OR Abstract: phobi* OR Abstract: "Social Discrimination" OR Abstract: "Stereotyping" AND Abstract: eating OR Abstract: "weight control" AND Any Field: disorder* OR Any Field: dysregulat* OR Any Field: behavio* OR Any Field: binge OR Any Field: pathology OR Any Field: overeating OR Any Field: anorexia OR Any Field: bulimia OR Any Field: "Eating Disorders"

SCOPUS

(TITLE-ABS-KEY ("weight prejudice" OR "weight bias" OR weightism OR sizeism OR "anti-fat" OR fatphobi*) AND TITLE-ABS-KEY (weight OR obesity OR obese OR fat OR size* OR overweight) AND TITLE-ABS-KEY (discriminat* OR stigma* OR prejudice* OR stereotyp* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi* OR "social stigma") AND TITLE-ABS-KEY (eating OR "weight control") AND TITLE-ABS-KEY (disorder* OR dysregulat* OR behavio* OR binge OR patholog* OR overeating OR anorexia OR bulimia OR "feeding and eating disorders" OR "eating disorders")) AND (LIMIT-TO (EXACTKEYWORD , "human")) AND (LIMIT-TO (LANGUAGE , "english"))

Cochrane Library

("weight prejudice" OR "weight bias" OR weightism OR sizeism OR "anti-fat" OR fatphobia*):ti,ab,kw AND (weight OR obesity OR obese OR fat OR size* OR overweight):ti,ab,kw AND (discriminat* OR stigma* OR prejudice* OR stereotype* OR shame* OR shaming OR tease* OR teasing OR bully* OR rejection OR phobi* OR "Social Discrimination" OR "Stereotyping"):ti,ab,kw AND (eating OR "weight control"):ti,ab,kw AND (disorder* OR dysregulat* OR behavio* OR binge OR pathology OR overeating OR anorexia OR bulimia OR "Eating Disorders"):ti,ab,kw

Appendix C: Email to course administrators

07/07/2024, 16:50 Research recruitment - All DClinPsy trainees can participate! - Jennifer McNicholas [Student-LMS] - Outlook

Research recruitment - All DClinPsy trainees can participate!

Jennifer McNicholas [Student-LMS] <j.mcnicholas@herts.ac.uk>
Mon 09/10/2023 15:14
To:DClinPsy <dclinpsy@herts.ac.uk>

2 attachments (1 MB)
Ethics LMS PGR UH 05441 McNicholas J 20067149 Notification no title (2).pdf; Thesis Advert JcM1.png;

Good afternoon,

I'm Jen, a trainee in the 3rd year cohort at Herts. I'm hoping you can circulate my thesis project via email to the 1st , 2nd and 3rd year DClinPsy cohorts to support with participation for my project? The project has received ethical approval which I've attached to this email. The title of the study has been removed as not to influence or bias student responses.

- All trainees completing the DClinPsy course are welcome to participate.
- Participation involves completing an anonymous survey which takes approximately 10-15 minutes
- Participants will have the opportunity to enter a prize draw to win one of four £50 Amazon vouchers

To take part click the link:
https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_6ApfxlPKxakFngi

Please see the research advert below:

Jennifer McNicholas
Trainee Clinical Psychologist

Appendix D: Recruitment poster

Appendix E: Social media advert

Appendix F: Participant Demographic questions

1. **Your sex/gender:**

Male Female Transgender

2. **Your age …….**
3. **Please indicate which year of study you are at currently:**

Year 1 Year 2 Year 3

4. **University of study…….**

5. **How much experience do you have working with eating disorders?**

None 0-2 years 3-4years 4-5years 6+ years

6. **Have you experienced a client with this presentation and body type in your practice?**

Yes/No

7. **If yes, in which service did you experience this client presentation?**
   - Improving Access to Psychological Therapies (IAPT)
   - Adult Community Mental Health Team
   - Inpatient Adult Mental Health
   - Third sector/Charity work …… explain what service.
   - Specialist Eating disorder services.
   - Other …….. Explain what service.
   - N/A

8. **Number of clients you have worked with in training or previous to training that you might suggest are 'obese' (BMI 30+)?**

   0 1-5 6-10 11+

9. **The amount of training you have received regarding 'weight stigma' (prejudicial attitudes/ beliefs/ stereotypes or discriminatory behaviours targeted at individuals because of their weight).**

   None
   A Little
   A moderate amount
   A lot

Appendix G: Vignette of client

Stacey Marie Greenfield is a 35-year-old, divorced mother of one. She was referred for treatment by her primary care physician after reporting a loss of appetite and a fear of weight gain. After it was determined that her loss of appetite was not related to a medical condition, Stacey was referred for psychological assessment and subsequent treatment. Stacey currently lives in her home in Hatfield, with her youngest daughter, Tilly, a 13-year-old comprehensive school student.

Stacey presented to her initial appointment on time, dressed in business casual attire that was notably too large for her frame. Stacey stated that she had come from work at a bank in London. When asked what brought her in to the appointment, Stacey shared that she had struggled with her weight and body image since she was a teenager. Stacey has reported that lately she has become extremely distressed by her body and it's affecting her wellbeing. Stacey reported that over the last six months she had increasingly restricted her diet, keeping a food journal to monitor caloric intake. She reported daily "weigh-ins" and weekly measurements, during which Susan measures her waist, buttocks, arms, and legs. These are also logged in her journal. Stacey reported that she was "terrified" of gaining weight, stating that she did not want to develop the body shape and weight of her mother, whom Stacey described as "fat" and "ugly". Stacey stated that she would "rather die than get like my mum".

Stacey was asked to describe her typical day. In the morning, Stacey reported that she will immediately weigh herself and journal it. She typically has a cup of coffee and half of a grapefruit for breakfast. If she requires a snack, she may consume one fat-free, plain yogurt cup. For lunch, Stacey reported that she will eat half a cup of chopped cucumber, a pear, and a cup of baby carrots. In the evening, Stacey will usually eat half of a baked chicken breast with a cup of steamed broccoli. Before bed, Stacey will weigh herself again and journal her findings. Stacey strives to maintain a caloric intake of no more than 800 calories. If she surpasses her goal, Stacey shared that she will become angry with herself and may further restrict her caloric intake the following day to compensate.

When asked about her work life, Stacey stated that her work life has not suffered as a result of her weight concerns and behaviors. She enjoys her position at the bank and has many positive relationships with colleagues. She stated that she enjoys baking cupcakes or cookies for the other employees at the bank, proudly boasting that she has earned a reputation for her peanut butter cookie recipe.

In her social and family life, Stacey stated that her friends and family have begun making comments about her eating habits and that their concern is growing. Stacey's daughter does not like that her mother will prepare different meals for her and complains when her mother takes too long in the morning weighing and measuring herself.

When asked about her functioning before these symptoms began, Stacey shared that she had always enjoyed food, often baking and cooking for friends and family, but struggled with her weight. She reported that she had been bullied in high school, describing a rather humiliating experience in a girls' changing rooms in comprehensive school. Stacey revealed that a girl in the year above made several disparaging comments about Stacey's "rolls" and "cellulite." Stacey began journaling her caloric intake and weight shortly after this incident.

When asked about her relationship history, Stacey revealed that she divorced her husband seven months ago, after a series of infidelities on his part. She shared that they have a "hostile" relationship and that they communicate solely through email. Stacey has sole custody of their daughter, Tilly, who spends summers with her father.

Stacey disclosed that in secondary school, she "thought about death maybe once or twice" but never made a plan or had any serious intent. Stacey denied present suicidal and homicidal ideations. She denied any history of hallucinations or delusions. Her mental status examination revealed that Stacey is oriented to place and time, her memory, judgment, and concentration are within normal ranges, and her overall affect and speech are within normal ranges. She does not evidence any symptoms of mania and denied experiencing manic symptoms in the past.

Appendix H: Email permission for use and change of vignette

Re: Doctoral Thesis Enquiry

Jennifer McNicholas [Student-LMS] <j.mcnicholas@herts.ac.uk>
Mon 17/04/2023 09:33
To:Paula Brochu <pbrochu@nova.edu>

Hi Paula,

Thank you for your response and thank you for allowing us to adapt the vignette.

It's very much appreciated!

Best wishes,

Jen

Jennifer McNicholas
Trainee Clinical Psychologist
University of Hertfordshire Doctoral College
Health Research Building, College Lane Campus, Hatfield AL10 9AB
Email: j.mcnicholas@herts.ac.uk
Working days: Monday-Wednesday
University days: Thursday-Friday

From: Paula Brochu <pbrochu@nova.edu>
Sent: 03 April 2023 15:08
To: Jennifer McNicholas [Student-LMS] <j.mcnicholas@herts.ac.uk>
Subject: RE: Doctoral Thesis Enquiry

Hi Jen,
Of course, please feel free to use and adapt the vignette for your research. Best of luck!

****
Paula M. Brochu, Ph.D. (hear name)
Associate Professor
College of Psychology
Nova Southeastern University
Pronouns: she, her, hers
scplab.wordpress.com
****

From: Jennifer McNicholas [Student-LMS] <j.mcnicholas@herts.ac.uk>
Sent: Saturday, April 1, 2023 10:10 AM
To: Paula Brochu <pbrochu@nova.edu>
Subject: Doctoral Thesis Enquiry

Hi Paula,

My name is Jennifer and I'm a 2nd year Trainee Clinical Psychologist studying at the University of Hertfordshire in the UK. I'm currently in the planning stages of my doctoral thesis and I'm interested in expanding on your 2018 research exploring attitudes towards weight in mental health professionals working with eating disorder clients. My aim is to explore the impact of weight and gender on attitudes and treatment behaviour in UK based therapists working with eating disorders. Could I ask permission to use your 'Susan' vignette in my own project, making a few slight changes to make it more applicable to UK culture?

I look forward to your response.

Warm wishes,

Jen

Jennifer McNicholas
Trainee Clinical Psychologist
University of Hertfordshire Doctoral College
Health Research Building, College Lane Campus, Hatfield AL10 9AB
Email: j.mcnicholas@herts.ac.uk
Working days: Monday-Wednesday
University days: Thursday-Friday

Appendix I: Photos of AN and AAN client

Photo A

Photo B

Appendix J: Participant information sheet

PARTICIPANT INFORMATION SHEET

PLEASE TAKE A SCREENSHOT OF THIS INFORMATION SHEET IF YOU WOULD LIKE A COPY FOR YOUR RECORDS

1. Introduction

You are being invited to take part in a study. Before you decide whether to do so, it is important that you understand the study that is being undertaken and what your involvement will include. Please take the time to read the following information carefully and discuss it with others if you wish. Do not hesitate to ask us anything that is not clear or for any further information you would like to help you make your decision. Please do take your time to decide whether or not you wish to take part.

The University's regulation, UPR RE01, 'Studies Involving the Use of Human Participants' can be accessed via this link: https://www.herts.ac.uk/about-us/governance/university-policies-and-regulations-uprs/uprs (after accessing this website, scroll down to Letter S where you will find the regulation)
Thank you for reading this.

2. What is the purpose of this study?

This study forms part of the researcher's Clinical Psychology Doctorate (PsychD) course at the University of Hertfordshire. Previous research has identified that trainee clinical psychologists use a range of information when making treatment decisions. The aim of this study is to explore Trainee Clinical Psychologist's clinical decision making when utilising various types of information in clinical work, such as assessment information, case material and photographs. Whilst there is no direct benefit to taking part in this study, it is hoped that the findings will provide evidence to aid Clinical Psychology clinicians in their treatment planning.

3. Do I have to take part?

It is completely up to you whether or not you decide to take part in this study. If you do decide to take part you will be asked to sign an electronic consent form. Agreeing to join the study does not mean that you have to complete it. You are free to withdraw at any time before the final submission of the completed questionnaire by simply closing your browser window. Incomplete questionnaires will be deleted. **Please note, as data is anonymous, it will not be possible to identify and withdraw your data after it has been submitted in Qualtrics**. A decision to withdraw before completing the questionnaire, or a decision not to take part at all, will not disadvantage you in any way.

4. Are there any age or other restrictions that may prevent me from participating?

Please note, you will not be able to participate if you meet any of the following exclusion criteria:
- You are currently enrolled on the clinical psychology doctorate outside of the UK.
- You are not enrolled or practicing clinical psychology.
- You are under the age of 18.

5. What will happen to me if I take part?

Participation will involve completing a secure online survey via the survey platform Qualtrics. You will first be asked to confirm below that you consent to participate in the study, and you meet the study criteria. Participation will involve you reading a vignette of a client presentation and then answering several questions regarding the information you have been given. All responses to the survey will be anonymous and no identifying data will be collected. The survey should take approximately 10-15 minutes to complete.

6. What are the possible disadvantages, risks, or side effects of taking part?

The research has been reviewed and approved by The University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee. The risk of harm from distress in this study are low. However, if any questions are found to be distressing, you are encouraged to seek support from your personal tutor, university counselling service, or your GP. This online survey will require you to use a computer for approximately 10-15 minutes. If you predict it might take you longer, we advise you take regular breaks to avoid eye, back or neck strain.

7. What are the possible benefits of taking part?

Following participation, you will have the opportunity to enter a prize draw to win one of four £50 amazon vouchers. Please note: you will need a valid UK academic email address to enter the draw.

8. How will my taking part in this study be kept confidential?

All information collected about you will be kept strictly confidential and will only be viewed by the researcher/research team. All data collected will be via the survey platform Qualtrics which will be accessed by University account. All data taken from Qualtrics will be stored in a password-protected secure environment accessed only from a secure University One Drive account. Survey responses via the Qualtrics system automatically generates a numerical code for each participant. This means all data will be anonymous and not be able to be linked back to you in any way. Please note, as data are anonymous, it will not be possible to identify and withdraw your data after it has been submitted in Qualtrics.

9. What will happen to the data collected within this study?

All research data will be processed in accordance with the General Data Protection Regulation 2018 (GDPR) and stored in accordance with national policy and legislation (The Data Protection Act, 1998) and BPS ethics guidelines for Internet mediated research (BPS, 2013). Any email addresses provided by participants will be stored in a separate password protected file that is not attached to their survey data. Research data will be stored for 5 years after completion of the study for academic purposes in accordance with University of Hertfordshire policy and destroyed thereafter.

10. Will the data be required for use in further studies?

The data collected may be re-used or subjected to further analysis as part of a future ethically-approved study; the data to be re-used will be anonymised.

11. Who has reviewed this study?

This study has been reviewed by: The University of Hertfordshire Social Sciences, Arts and Humanities Ethics Committee with Delegated Authority. The UH protocol number is LMS/PGR/UH/05441

12. Factors that might put others at risk

Please note that if, during the study, any medical conditions or non-medical circumstances such as unlawful activity become apparent that might or had put others at risk, the University may refer the matter to the appropriate authorities and, under such circumstances, you will be withdrawn from the study.

13. Who can I contact if I have any questions?

If you would like further information or would like to discuss any details personally, please get in touch with me or my project supervisor, by phone or by email:

Jennifer McNicholas
Department of Psychology
University of Hertfordshire Doctoral College
Jm21act@herts.ac.uk

Dr John Done
Life and Medical Sciences
University of Hertfordshire
d.j.done@herts.ac.uk

Although we hope it is not the case, if you have any complaints or concerns about any aspect of the way you have been approached or treated during the course of this study, please write to the University's Secretary and Registrar at the following address: Secretary and Registrar University of Hertfordshire, College Lane, Hatfield, Herts, AL10 9AB

Thank you very much for reading this information and giving consideration to taking part in this study.

Appendix K: Participant consent form

Informed Consent form

To provide consent please read and tick the following:

1. I confirm that I have been given a Participant Information Sheet (I was able to screenshot this for my records) giving particulars of the study, including its aim(s), methods and design, the names and contact details of key people and, as appropriate, the risks and potential benefits, how the information collected will be stored and for how long, and any plans for follow-up studies that might involve further approaches to participants. I have also been informed of how my personal information on this form will be stored. I have been given details of my involvement in the study.

2. I understand that participation is voluntary and that I am free to withdraw from the study at any time before the final submission of the questionnaire by simply closing the browser, for any reason and without prejudice. Incomplete questionnaires will be deleted.

3. I am aware that as the data is anonymous, that it will not be possible to identify and withdraw my data after it has been submitted in Qualtrics.

4. I have been given information about the potential risk of harm and have been advised that risk of harm from distress is low. I have been advised that should I find any questions to be distressing, I am encouraged to seek support from me personal tutor, university counselling service, or my GP.

5. I am aware that this survey will require me to use a computer for approximately 10-15 minutes. If I predict it should take any longer, I have been advised to take regular breaks to avoid eye, back or neck strain.

6. I have been told how information relating to me (data obtained in the course of the study), will be handled: how it will be kept secure, who will see it and how it will or may be used.

7. I understand that if there is any revelation of unlawful activity or any indication of non-medical circumstances that would or has put others at risk, the University may refer the matter to the appropriate authorities.

Appendix L: Questionnaires (Diagnosis, treatment sessions, treatment goals, fatphobia scale, attitudes towards clients)

Diagnostic behaviour

1. What might your diagnosis for Stacey be?

[open text box]

Treatment Goals

2. What would you estimate to be the number of sessions necessary for a successful intervention outcome for Stacey? (Please select)

<10 11-20 21-30 31-40 41+

3. How important would you rate the following treatment goals for Stacey (1=Not at all important, 7=Extremely important)

- Psychoeducation on risks of malnutrition and being underweight ….
- Psychoeducation on and encouragement of eating regularly ….
- Psychoeducation on excessive exercise and its potential dangers ….
- Improving emotional regulation ….
- Improving self-esteem ….
- Improving body image ….
- Facilitating self-acceptance ….
- Encourage healthy eating and restoring healthy body weight ….
- Enhance self-efficacy ….
- Cognitive restructuring for weight and body concerns ….
- Self-monitoring of dietary intake and associated thoughts and feelings ....
- Include homework, to help the person practice in their daily life what they have learned ….
- Work on a relapse prevention plan ….
- Other (please state) …….

Treatment Attitudes

(modified from Puhl, Latner, King, & Luedicke, 2013; Puhl, Luedicke, & Grilo, 2013)

Please rate your expectations of Stacey's treatment on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

1. Stacey would be frustrating to work with. R

2. Stacey would be difficult to deal with. R

3. I would treat Stacey with compassion and respect.

4. I would dislike treating Stacey. R

5. I feel confident that I would provide quality care to Stacey.

6. I feel professionally prepared to effectively treat Stacey.

7. Stacey would be non-compliant with my treatment recommendations. R

8. I feel that Stacey would lack motivation to make lifestyle changes. R

9. Treating Stacey would be professionally rewarding.

Note. R indicates a reverse-scored item.

Fat Phobia Scale

Listed below are 14 pairs of adjectives. Please circle a number closest to the adjective that you feel best describes Stacey.

lazy	5	4	3	2	1	industrious
no will power	5	4	3	2	1	has will power
attractive	5	4	3	2	1	unattractive
good self-control	5	4	3	2	1	poor self-control
fast	5	4	3	2	1	slow
having endurance	5	4	3	2	1	no endurance
active	5	4	3	2	1	inactive
weak	5	4	3	2	1	strong
self-indulgent	5	4	3	2	1	self-sacrificing
dislikes food	5	4	3	2	1	likes food
shapeless	5	4	3	2	1	shapely
under eats	5	4	3	2	1	overeats
insecure	5	4	3	2	1	secure
low self-esteem	5	4	3	2	1	high self-esteem

Appendix M: Debrief form

Thank you for taking part in our research. Your response has now been recorded.

If you would like to enter the prize draw to win one of four £50 Amazon vouchers, please click this link. Note this will open in a new window.

Debrief form

Now that we've finished, let us explain the rationale behind this work.

It is on occasion, due to the nature of the study, necessary in research to withhold certain information from participants. Information is withheld so not to influence responses and help promote validity of the study.

The intended purpose of this study is to understand how client weight influences attitudes and clinical judgments when presented with eating disorder presentations, specifically Anorexia Nervosa. This information was withheld so not to influence your responses on the task, and to gain unbiased data about attitudes and behaviour in order to promote validity of the study.

The literature demonstrates that health professionals, including psychologists (Puhl et al., 2009), hold negative attitudes toward people who are overweight and obese, and these can have a negative impact on clients in receipt of psychological services. In eating disorder care, the research shows that mental health professionals overlook, misdiagnose, and collude with restrictive eating symptoms in higher-weight clients with eating disorders (Kimber at al., 2019; Lebow et al., 2015; Sim et al., 2013). Research has yet to look at whether trainee clinical psychologists in the UK hold these negative views of higher-weight clients and how these views may influence clinical judgements when working with eating disorder presentations. Information from the study may help to increase our knowledge and understanding in this area. With hope to increase awareness and reduce potential stigma and discrimination in our work.

As previously explained, all responses are anonymised and kept confidential. All results will be published anonymously as a group data. **We would appreciate that you do not share this information with other people who may participate as this may impact on potential participant responses.**

If you have experienced any distress from participating in the study, please contact us so that we can explore how you can gain extra support. You may also be able to access student counselling services at your university.

If you have any further questions about this or anything else about the study, please do not hesitate to contact myself or my supervisor. In addition, if you would like to learn more about weight bias, prevention and education you may wish to access the following website: https://www.apa.org/monitor/2022/03/news-weight-stigma

Thank you again for your participation!

Jennifer McNicholas
Department of Psychology
University of Hertfordshire
Doctoral College
jm21act@herts.ac.uk

Dr John Done
Life and Medical Sciences
University of Hertfordshire
d.j.done@herts.ac.uk

Appendix N: University of Hertfordshire Ethical Approval

University of Hertfordshire UH

HEALTH, SCIENCE, ENGINEERING AND TECHNOLOGY ECDA

ETHICS APPROVAL NOTIFICATION

TO	**Jennifer McNicholas**
CC	**John Done**
FROM	**Dr Simon Trainis, Health, Science, Engineering and Technology ECDA Chair**
DATE	**21/08/2023**

Protocol number: LMS/PGR/UH/05441

Title of study: How client weight in eating disorder presentations impacts on Trainee Clinical Psychologist's attitudes and clinical judgments.

Your application for ethics approval has been accepted and approved with the following conditions by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

Jennifer McNicholas – 20067149
Dr John Done – Principle internal supervisor – 700274
Dr Angela Meadows – External supervisor

General conditions of approval:

Ethics approval has been granted subject to the standard conditions below:

Permissions: Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

External communications: Ensure you quote the UH protocol number and the name of the approving Committee on all paperwork, including recruitment advertisements/online requests, for this study.

Invasive procedures: If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and copies of your completed consent paperwork to this ECDA once your study is complete.

Submission: Students must include this Approval Notification with their submission.

Validity:

This approval is valid:

From: 21/08/2023

To: 01/04/2023

Please note:

Failure to comply with the conditions of approval will be considered a breach of protocol and may result in disciplinary action which could include academic penalties.
Additional documentation requested as a condition of this approval protocol may be submitted via your supervisor to the Ethics Clerks as it becomes available. All documentation relating to this study, including the information/documents noted in the conditions above, must be available for your supervisor at the time of submitting your work so that they are able to confirm that you have complied with this protocol.

Should you amend any aspect of your research or wish to apply for an extension to your study you will need your supervisor's approval (if you are a student) and must complete and submit form EC2.
Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1A may need to be completed prior to the study being undertaken.

Failure to report adverse circumstance/s may be considered misconduct.
Should adverse circumstances arise during this study such as physical reaction/harm, mental/emotional harm, intrusion of privacy or breach of confidentiality this must be reported to the approving Committee immediately.

Appendix O: SPSS output

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
ED_Service * Experiemental Condition	102	36.0%	181	64.0%	283	100.0%

ED_Service * Experiemental Condition Crosstabulation

			Experiemental Condition		
			AN	AAN	Total
ED_Service	Non-specialist service	Count	34[a]	30[a]	64
		% within ED_Service	53.1%	46.9%	100.0%
		% within Experiemental Condition	61.8%	63.8%	62.7%
		% of Total	33.3%	29.4%	62.7%
	Eating Disoder Service	Count	21[a]	17[a]	38
		% within ED_Service	55.3%	44.7%	100.0%
		% within Experiemental Condition	38.2%	36.2%	37.3%
		% of Total	20.6%	16.7%	37.3%
Total		Count	55	47	102
		% within ED_Service	53.9%	46.1%	100.0%

	% within Experiemental Condition	100.0%	100.0%	100.0%
	% of Total	53.9%	46.1%	100.0%

Each subscript letter denotes a subset of Experiemental Condition categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.044[a]	1	.834		
Continuity Correction[b]	.000	1	.997		
Likelihood Ratio	.044	1	.834		
Fisher's Exact Test				1.000	.499
Linear-by-Linear Association	.043	1	.835		
N of Valid Cases	102				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.51.

b. Computed only for a 2x2 table

Numeric_Diag

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Anorexia Nervosa	121	42.8	42.8	42.8
	Atypical Anorexia	9	3.2	3.2	45.9
	Eating Disorder	116	41.0	41.0	86.9

	Other	37	13.1	13.1	100.0
	Total	283	100.0	100.0	

Diag_Dich

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other	153	54.1	54.1	54.1
	Anorexia/Atypical	130	45.9	45.9	100.0
	Total	283	100.0	100.0	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Diag_Dich * Experiemental Condition	283	100.0%	0	0.0%	283	100.0%

Diag_Dich * Experiemental Condition Crosstabulation

			Experiemental Condition		
			AN	AAN	Total
Diag_Dich	Other	Count	64[a]	89[b]	153
		% within Diag_Dich	41.8%	58.2%	100.0%
		% within Experiemental Condition	44.8%	63.6%	54.1%

		% of Total	22.6%	31.4%	54.1%
	Anorexia/Atypical	Count	79[a]	51[b]	130
		% within Diag_Dich	60.8%	39.2%	100.0%
		% within Experiemental Condition	55.2%	36.4%	45.9%
		% of Total	27.9%	18.0%	45.9%
Total		Count	143	140	283
		% within Diag_Dich	50.5%	49.5%	100.0%
		% within Experiemental Condition	100.0%	100.0%	100.0%
		% of Total	50.5%	49.5%	100.0%

Each subscript letter denotes a subset of Experiemental Condition categories whose column proportions do not differ significantly from each other at the .05 level.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10.085[a]	1	.001		
Continuity Correction[b]	9.342	1	.002		
Likelihood Ratio	10.150	1	.001		
Fisher's Exact Test				.002	.001
Linear-by-Linear Association	10.049	1	.002		
N of Valid Cases	283				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 64.31.

b. Computed only for a 2x2 table

Group Statistics

	Experiemental Condition	N	Mean	Std. Deviation	Std. Error Mean
Number of sessions	AN	143	2.96	.934	.078
	AAN	140	2.51	.917	.078

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Number of sessions	Equal variances assumed	.093	.760	4.033	281	.000	.444	.110	.227	.660
	Equal variances not assumed			4.033	280.996	.000	.444	.110	.227	.660

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Number of sessions	Cohen's d	.926	.479	.243	.715
	Hedges' correction	.928	.478	.242	.713
	Glass's delta	.917	.484	.243	.723

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Group Statistics

	Experiemental Condition	N	Mean	Std. Deviation	Std. Error Mean
Psychoeducation on risks of malnutrition and being underweight.	AN	143	3.99	.860	.072
	AAN	141	4.26	.808	.068
Psychoeducation on excessive exercise and its potential dangers	AN	143	3.34	1.022	.085
	AAN	141	3.22	1.076	.091
Improving emotional regulation	AN	143	4.06	.798	.067
	AAN	141	4.16	.825	.069
Improving self-esteem	AN	143	4.70	.504	.042
	AAN	141	4.69	.523	.044
Improving body image	AN	143	4.31	.791	.066
	AAN	141	4.49	.743	.063
Facilitating self-acceptance	AN	143	4.58	.586	.049
	AAN	141	4.57	.690	.058
Encourage restoration of body weight	AN	143	3.79	.970	.081
	AAN	140	3.04	1.045	.088
Enhance self-efficacy	AN	143	4.00	.822	.069
	AAN	141	4.06	.896	.075
Cognitive restructuring	AN	143	4.14	.853	.071

	AAN	141	4.14	.867	.073
Self-monitoring of dietary intake and associated thoughts and feelings	AN	143	3.55	.947	.079
	AAN	141	3.52	1.039	.088
Include homework, to help the person practice in their daily life what they have learned	AN	143	4.19	.822	.069
	AAN	141	4.28	.750	.063
Work on a relapse prevention plan	AN	143	4.42	.736	.062
	AAN	141	4.42	.719	.061

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Psychoeducation on risks of malnutrition and being underweight.	Equal variances assumed	.204	.652	-2.721	282	.007	-.269	.099	-.464	-.075
	Equal variances not assumed			-2.722	281.334	.007	-.269	.099	-.464	-.075
Psychoeducation on excessive exercise and its potential dangers	Equal variances assumed	.221	.639	.986	282	.325	.123	.125	-.122	.368
	Equal variances not assumed			.986	280.769	.325	.123	.125	-.122	.368

Improving emotional regulation	Equal variances assumed	2.050	.153	-1.040	282	.299	-.100	.096	-.290	.089
	Equal variances not assumed			-1.040	281.375	.299	-.100	.096	-.290	.089
Improving self-esteem	Equal variances assumed	.200	.655	.186	282	.852	.011	.061	-.109	.131
	Equal variances not assumed			.186	281.274	.852	.011	.061	-.109	.131
Improving body image	Equal variances assumed	.503	.479	-1.918	282	.056	-.175	.091	-.354	.005
	Equal variances not assumed			-1.919	281.332	.056	-.175	.091	-.354	.005
Facilitating self-acceptance	Equal variances assumed	1.224	.270	.172	282	.864	.013	.076	-.136	.163
	Equal variances not assumed			.172	273.627	.864	.013	.076	-.137	.163
Encourage restoration of body weight	Equal variances assumed	.594	.442	6.237	281	.000	.747	.120	.511	.983
	Equal variances not assumed			6.232	278.485	.000	.747	.120	.511	.983
Enhance self-efficacy	Equal variances assumed	2.154	.143	-.626	282	.532	-.064	.102	-.265	.137
	Equal variances not assumed			-.625	279.212	.532	-.064	.102	-.265	.137
Cognitive restructuring	Equal variances assumed	.018	.893	-.019	282	.984	-.002	.102	-.203	.199

	Equal variances not assumed			-.019	281.736	.985	-.002	.102	-.203	.199
Self-monitoring of dietary intake and associated thoughts and feelings	Equal variances assumed	2.044	.154	.235	282	.814	.028	.118	-.205	.260
	Equal variances not assumed			.235	278.847	.815	.028	.118	-.205	.260
Include homework, to help the person practice in their daily life what they have learned	Equal variances assumed	.571	.451	-1.016	282	.310	-.095	.093	-.279	.089
	Equal variances not assumed			-1.017	280.307	.310	-.095	.093	-.279	.089
Work on a relapse prevention plan	Equal variances assumed	.002	.962	.013	282	.989	.001	.086	-.169	.171
	Equal variances not assumed			.013	281.977	.989	.001	.086	-.169	.171

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
Psychoeducation on risks of malnutrition and being underweight.	Cohen's d	.834	-.323	-.557	-.089
	Hedges' correction	.837	-.322	-.555	-.088
	Glass's delta	.808	-.334	-.569	-.097
Psychoeducation on excessive exercise and its potential dangers	Cohen's d	1.049	.117	-.116	.350
	Hedges' correction	1.052	.117	-.116	.349
	Glass's delta	1.076	.114	-.119	.347
Improving emotional regulation	Cohen's d	.811	-.123	-.356	.109
	Hedges' correction	.814	-.123	-.355	.109

	Glass's delta	.825	-.121	-.354	.112
Improving self-esteem	Cohen's d	.513	.022	-.211	.255
	Hedges' correction	.515	.022	-.210	.254
	Glass's delta	.523	.022	-.211	.254
Improving body image	Cohen's d	.767	-.228	-.461	.006
	Hedges' correction	.769	-.227	-.460	.006
	Glass's delta	.743	-.235	-.469	-.001
Facilitating self-acceptance	Cohen's d	.640	.020	-.212	.253
	Hedges' correction	.642	.020	-.212	.252
	Glass's delta	.690	.019	-.214	.251
Encourage restoration of body weight	Cohen's d	1.008	.742	.500	.982
	Hedges' correction	1.011	.740	.499	.979
	Glass's delta	1.045	.715	.466	.962
Enhance self-efficacy	Cohen's d	.860	-.074	-.307	.159
	Hedges' correction	.862	-.074	-.306	.158
	Glass's delta	.896	-.071	-.304	.162
Cognitive restructuring	Cohen's d	.860	-.002	-.235	.230
	Hedges' correction	.862	-.002	-.234	.230
	Glass's delta	.867	-.002	-.235	.230
Self-monitoring of dietary intake and associated thoughts and feelings	Cohen's d	.994	.028	-.205	.260
	Hedges' correction	.997	.028	-.204	.260
	Glass's delta	1.039	.027	-.206	.259
Include homework, to help the person practice in their daily life what they have learned	Cohen's d	.787	-.121	-.353	.112
	Hedges' correction	.789	-.120	-.352	.112
	Glass's delta	.750	-.127	-.359	.107

Work on a relapse prevention plan	Cohen's d	.727	.002	-.231	.234
	Hedges' correction	.729	.002	-.230	.234
	Glass's delta	.719	.002	-.231	.234

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Group Statistics

	Experiemental Condition	N	Mean	Std. Deviation	Std. Error Mean
FPS_Mean_10items	AN	141	2.1014	.38563	.03248
	AAN	139	2.2230	.45720	.03878

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FPS_Mean_10items	Equal variances assumed	4.654	.032	-2.407	278	.017	-.12160	.05052	-.22105	-.02215
	Equal variances not assumed			-2.404	269.016	.017	-.12160	.05058	-.22119	-.02202

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval Lower	95% Confidence Interval Upper
FPS_Mean_10items	Cohen's d	.42268	-.288	-.523	-.052
	Hedges' correction	.42382	-.287	-.522	-.052
	Glass's delta	.45720	-.266	-.502	-.029

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

Group Statistics

	Experiemental Condition	N	Mean	Std. Deviation	Std. Error Mean
TreatmentAt_Mean	AN	143	5.38	.680	.057
	AAN	140	5.61	.659	.056

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TreatmentAt_Mean	Equal variances assumed	.264	.608	-2.943	281	.004	-.234	.080	-.391	-.078

	Equal variances not assumed			-2.944	280.977	.004	-.234	.080	-.391	-.078

Independent Samples Effect Sizes

				95% Confidence Interval	
		Standardizer[a]	Point Estimate	Lower	Upper
TreatmentAt_Mean	Cohen's d	.670	-.350	-.584	-.115
	Hedges' correction	.671	-.349	-.583	-.114
	Glass's delta	.659	-.355	-.592	-.118

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.