

How do Instagram's clean-eating hashtags influence Orthorexia Nervosa and the sense of self in self-identified Orthorexia Nervosa tendencies – A Mixed Methods Study.

A thesis submitted in partial fulfilment of the requirements for the Professional Doctorate in
Counselling Psychology of London Metropolitan University

By

Raechel Horowitz

Student Number: 19001602

Supervised by

Dr Catherine Athanasiadou-Lewis

Declaration

I hereby declare the work submitted in this thesis is the result of my own investigations,
except where otherwise stated.

Name: Raechel Horowitz
Date: 23rd September 2022

Abstract

Background/Aims: Orthorexia Nervosa (ON) involves an obsessional preoccupation with food perceived as healthy (Morozé et al., 2015). Several studies have found those with ON behaviours are particularly active on Instagram. At the time of writing, no research has addressed how those who self-identify as having ON engage with or are engaged by Instagram's clean-eating hashtags, nor how individuals who self-identify as having ON experience their sense of self whilst using Instagram.

Design/Method: A frequency scale, designed to capture engagement with clean-eating hashtags on Instagram, the ORTO-15, and a demographic questionnaire were completed by 104 females who self-identify as having ON and use Instagram. A Spearman correlation was calculated to examine the relationship between ON symptoms and engagement with clean-eating hashtags. Eight participants who scored in the top 40% of the measures were interviewed using a semi-structured process. Verbatim accounts were analysed using thematic analysis.

Findings: A statistically significant relationship between individuals who are engaged with clean-eating hashtags and higher levels of ON symptoms was found. Through thematic analysis, four themes were generated: 'Regulating Self-Worth Symbolically' (which refers to how the participants regulate their sense of self-worth through Instagram), 'Finding Meaning & Purpose' (which discusses how the participant's self-worth and self-esteem are fulfilled through ON behaviours), 'Repeating Negative Cycles' (which describes how the participants' sense of Self is negatively impacted through cycles they find themselves in), 'Negotiation of a Different Relationship with Lifestyle' (which refers to the participants' relationship with changing their ON behaviours).

Conclusions: The quantitative aspect of this study concluded there is a positive relationship between individuals who are engaged with clean-eating hashtags on Instagram and higher levels of ON tendencies. The qualitative findings highlight that individuals with ON symptoms find their sense of self is negatively impacted by Instagram and engage in behaviours on and off the platform to improve their low self-esteem, self-worth, and protect their ego. It, therefore, provides an improved understanding of the development and maintenance of ON. Clinically, the study provides evidence that clinicians can utilise an integrative approach with CBT-E and object-relations theory.

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1 Reflexive Statement Part One

According to Etherington (2004), reflexivity is ‘...an ability to notice our responses to the world around us, other people and events, and to use that knowledge to inform our actions, communications and understandings (as cited in Etherington, 2017, p. 85). Reflexivity is one of the cornerstones of Counselling Psychology. It is the process of being aware of how our responses to academic learning and personal experiences (our personal, social and cultural contexts) inform and impact our interpretations of our research (Strauss, 2017). This reflexive statement will therefore aim to convey my relationship to the research and how my involvement may have influenced it.

I have grown up in various countries influenced by Western ideals. Diet, food, and one’s image have always been a topic of discussion amongst my family and peer group, influenced by the media and the debate of what healthy means and what a ‘good’ and ‘attractive’ body is. My fitness ideas evolved, and I began to link my ability to reject unhealthy food and exercise five-six days per week as a demonstration of my moral character, hard work, and discipline. After completing a yoga teacher qualification, I became a vegetarian and interested in the rising trends of gut health, low carbohydrates, and supplements. With the rising community on Instagram of health food ‘experts’ and yoga teachers preaching how a diet helped them heal their bodies, I became more connected to these beliefs. I enjoyed this ‘clean-eating’ lifestyle and the community I was forming, believing I was on the cusp of a new way to live. It began to dominate my conversations with friends and my lifestyle as I thought my daily yoga practice and eating a clean diet could heal my mind and body from the modern ailments of stress and burnout. It was not until my health started to take a turn for the worse and several of the individuals I followed for nutritional advice, many of whom had become friends, stated they were in treatment for orthorexia nervosa that I decided to take a tough but necessary look at my eating and lifestyle choices. As someone who had completed my Masters in Mental Health

and worked in the field of Psychology for several years, I believed I understood many of the eating disorders and disordered eating patterns. However, I had never heard of orthorexia nervosa, which prompted me to start the research.

It is my own experience, as well as that of the research that I found a link between Instagram and orthorexia nervosa. I had personally enjoyed being part of the Instagram environment in which my healthy eating received accolades from my followers. Once I began to reflect upon this, I realised that without such pressure, I would most likely not have delved so deeply into such a lifestyle. Ironically, to help my anxiety and stress from living a fast-paced and modern lifestyle, I turned to Instagram, which most research tends to argue dramatically impacts the increase in depression and anxiety (Lup et al., 2015), a finding substantiated by a systematic review of the literature by (Adeyanju et al., 2021) in which a positive relationship between higher Instagram use, anxiety, and depression in young people between the ages of 19 and 35 was reported. I started to understand that I was not a unique example of this and that there was a growing need to understand the relationship between orthorexia nervosa and Instagram.

I have tried to use the personal reflexivity (Strauss, 2017) to understand how my experiences have influenced my research topic, my chosen methodology, the papers I decided to discuss and use, and my analysis. I believe my desire to understand better how and why myself, and those I knew, felt that our behaviours were exacerbated by Instagram influenced my interest in my chosen topic. Additionally, I was aware that there was a sentiment amongst my friends that there is a lack of understanding regarding orthorexia and thus, I wanted to also allow for a space for those affected by it to be heard whilst also contributing to further knowledge. I believe this dual interest contributed to the choice of conducting a mixed methods study.

When beginning to approach the literature, I was aware that there were not many studies on orthorexia nervosa and Instagram and none that had looked specifically as sense of self,

orthorexia nervosa and Instagram. I often wondered if my own experience and personal relationship with the topic influenced the amount that I researched and read, as I was aware I wanted to ensure that I had made as many links as I could through transferrable studies on anorexia nervosa and bulimia nervosa and not miss any articles that may help me to better understand the disordered eating pattern.

When devising my agenda, which is discussed in section 3.4.4, I was conscious that the participants could find discussing the topic difficult, thinking about how those that I know who have self-identified as having orthorexia nervosa may have felt about the interview process. I therefore felt a desire to help the participant feel as comfortable as possible and opened with questions around their history of orthorexia nervosa, which I thought would allow them to discuss topics they may feel more comfortable with, such as why they feel they developed it and what 'clean eating' means to them. I also reflected that the participants were self-selecting and wondered why they were interested in talking to me, thinking that it could be because not many people are aware of the disordered eating pattern and thus the interview provided a contained, anonymous space in which they can reflect upon their behaviours and feelings with someone who knows about orthorexia nervosa. I further explore my reflexivity upon this once the interviews took place in the section Reflexivity Part Two at the end of the project.

I have been aware of the danger of inherent bias given my own involvement with the topic throughout the process of undertaking this study, and therefore tried to 'bracket' any assumptions and feelings and have attempted to be objective. It is this reflexivity and subjectivity that, according to Ratner (2002), allows for a more objective understanding as it remains difficult to be completely unbiased in one's research. I describe in further detail in section 3.4.5 how attention was paid to the opportunity for my own experiences to affect the interview conduct and analysis. I also offer reflexivity on this in the Reflexive Statement Part Two, found in chapter six.

Introduction

Let food be thy medicine, and let medicine be thy food
- Hippocrates

According to Bratman (1997), ON is a pathological preoccupation with healthy eating, which can result in impairments in their social and occupational life (Brytek-Matera, 2012), and health (Barthels et al., 2015b; Dunn & Bratman, 2016). To date, there is no agreed upon diagnostic criteria for ON and it is not currently recognised in the DSM-5 or ICD-11. The lack of clarity surrounding ON's diagnostic criteria has been furthered by the ongoing debate as to whether ON is more closely aligned to Eating Disorders (EDs) or Obsessive Compulsive Disorder (OCD), although recent research is demonstrating that ON and ED symptoms are more closely related (Zagaria et al., 2022).

ON has received minimal empirical research (Koven & Abry, 2015), although this trend is changing due to increasing prevalence rates (Brytek-Matera et al., 2020; McComb & Mills, 2019; Yilmaz & Dundar, 2022). One reason for the proposed increase in prevalence rates is the use of social media, and in particular Instagram (Gann, 2019; Greville-Harris et al., 2020; Hanganu-Bresch, 2020; Lanitis, 2020; Santarossa et al., 2019; Valente et al., 2020, 2022; Zemlyanskaya et al., 2022). There have been some proposed reasons as to why this relationship may exist, such as the use of hashtags like #cleaneating (Riesmeyer et al., 2019), which contribute to an echo chamber of healthism (Crawford, 1995) based on Instagram's algorithms. These, combined with the social comparison that takes place (Greville-Harris et al., 2020), have been thought to be why ON and Instagram may be related.

'Sense of self', a concept encompassing self-esteem, self-worth, and self-perception, is closely associated with and believed to be an underlying factor in understanding anorexia nervosa (AN) and bulimia nervosa (BN; Bardone-Cone et al., 2020). As the research on ON is demonstrating that it is more closely aligned to EDs, it can be reasonably posited that sense of self has an impact on the development and maintenance of ON. However, given the limited

research on the sense of self, as relates to ON, this study will explore possible transferable studies for parallels between ON, AN, and BN.

This study is conducted through the frameworks of healthism and social comparison, as well as that of eating disorders, using the psychological theories of cognitive behavioural theory, and object relations theory to help explain development and maintenance factors. Additionally, through extensive discussion with colleagues and peers, it was determined that sense of self was determined to be an appropriate and well-accepted term to use in this study to encompass self-esteem, self-worth, and identity. These frameworks and psychological theories will be further explored in the Literature Review in chapter one.

This mixed methods research was conducted using a critical realist epistemology, and thus attempts to explain the events, experiences, and causal mechanisms of ON and Instagram. This is further explored in section 3.1. As there was no previous questionnaire that looked at how individuals who self-identify as having ON utilise clean-eating hashtags on Instagram, one was devised using existing literature to develop the questions, which for ease of reference has been called the Instagram Hashtag Engagement Scale (I-HES). 104 female participants filled out the I-HES, the ORTO-15 (Donini et al., 2004), and a demographic form. Using a Spearman r two-tailed test, a positive relationship was found between higher engagement with Instagram clean-eating hashtags and higher levels of ON behaviours. Through semi-structured interviews, eight participants who scored in the top 40% of the participants were interviewed to understand how they feel their sense of self has been impacted whilst using Instagram. These interviews were analysed using thematic analysis and found that individuals reported they felt as though their self-esteem, self-worth and identity were negatively impacted. The analysis resulted in four themes: regulating self-worth symbolically, finding meaning & purpose, repeating negative cycles, and negotiating a different relationship with lifestyle. Both the quantitative and qualitative findings are discussed in more detail in chapter four.

This study can help provide a better understanding of the characteristics of ON, and how to help those that display symptoms. Recommendations of how to work with individuals presenting with ON with both a Transdiagnostic CBT-E (Cooper & Fairburn, 2011; Fairburn et al., 2003; Fairburn, 2008) and object-relations theoretical framework will be discussed in chapter five.

2 Literature Review

2.1 Understanding Orthorexia Nervosa

2.1.1 *The Definition of Orthorexia Nervosa*

The term ‘orthorexia nervosa’ finds its roots in the Greek words for ‘Ortho’, meaning correct and true; ‘orexia’, which relates to eating or appetite; and ‘nervosa’, which means obsession or fixation (Bratman & Knight, 2000). Moroze et al. (2015) defined ON as an obsessional preoccupation with healthy eating, with the quality being paramount, and Barthels et al. (2015a) characterising ON as the strict avoidance of food one has decided unhealthy. ON is typically observed through behaviours such as restrictive diet, ritualised patterns of eating and rigid avoidance of ‘unhealthy’ foods. Consuming healthy food is not, in itself, considered a disturbed behaviour, but when an individual begins to give up their everyday lifestyle and experiences impairments, such as social and occupational, it becomes pathological (Brytek-Matera, 2012). As a result of the behaviour associated with ON, individuals may experience nutrition deficiency, weight loss and other physical and medical complications (Barthels et al., 2015b; Dunn & Bratman, 2016), as well as exaggerated emotional distress about food choices perceived as unhealthy (Dunn & Bratman, 2016). Additionally, a sense of superiority over others may be felt (Donini et al., 2004).

As previously mentioned, the DSM-5 and ICD-11 do not currently recognise ON as either an independent disorder or as a subsection of an existing disorder (Düdükçü et al., 2022). Additionally, there is a debate as to whether ON is more closely related to EDs or OCD, as discussed by Zagaria et al. (2022), who concluded based on a systematic review and meta-analysis of 36 studies, that ON and ED symptoms are more closely related. In 2016 in an attempt to coordinate research and progress a deeper understanding of ON, an international task force, whose work continues, was established (Cena et al., 2019). Currently recognised EDs share several component symptoms such as weight/shape concerns, dietary restriction and

binge eating/compensatory behaviours (Segura-Garcia et al., 2015). However, the main difference between ON and these eating disorders is that less emphasis is placed on weight/shape concerns and more emphasis on an almost obsessive need to eat a 'clean' and 'healthy' diet, to the detriment of their social life, physical and mental health (Bratman, 1997; Bratman & Knight, 2000).

2.1.2 Criteria for Orthorexia Nervosa

Currently, there are no official diagnostic criteria for the diagnosis of ON, although there have been four preliminary proposals (Cena et al., 2019).

Setnick (2013) proposed four diagnostic criteria. Criterion A addresses a pathological preoccupation with nutrition, Criterion B stipulates the eating disturbance is not a result of insufficient resources or cultural practices, Criterion C identifies that the drive for health supersedes a drive for thinness, and Criterion D requires that the eating behaviours are not due to existing EDs, OCD, medical conditions or other medical or mental disorders (Cena et al., 2019).

Moroze et al. (2015) proposed a more complete and thorough set of five criteria. Criterion A identifies an individual who exhibits compulsive behaviour and/or mental preoccupation regarding affirmative and restrictive dietary practices believed to promote optimum health. Individuals begin to hold themselves to an extreme benchmark, where any violation of the dietary rules causes exaggerated fear of disease, a sense of personal impurity and/or negative physical sensations. Feelings of anxiety and shame accompany these violations. This criterion includes the individual consuming a nutritionally unbalanced diet due to their beliefs around food purity, a preoccupation with eating pure foods and its impact on their physical and emotional health, and strict avoidance of any food considered unhealthy.

Additionally, the individual demonstrates intolerance of others' food beliefs and spends excessive amounts of time and money on food relative to their income.

Criterion B identifies when an individual's behaviour and mental preoccupation begin to be clinically impairing. Due to the restrictive nature of the diet they adhere to, they experience malnutrition, severe weight loss or other medical complications. The quality of their life begins to suffer as their social, academic and vocational functioning begins to deteriorate due to the amount of time spent on beliefs or behaviours around their healthy diet. The behaviours of Criterion B are widely recognised as pathological or clinically significant, according to Spitzer & Wakefield (1999).

In Criterion C, the clinician's objective is to examine and determine that the behaviours are not due to the prevalence of a primary disorder, such as obsessive-compulsive disorder or schizophrenia.

Finally, Criterion D rules out dietary restrictions due to organised religious food observance, food allergies or medical conditions that require a specific diet.

Barthels et al. (2015b) shared similar proposed diagnostic criteria A and B with Moroze et al. (2015); however, they argued that under Criterion C, the individual should demonstrate at least two overvalued ideas concerning the effectiveness and potential health benefits of food and/or the ritualised preoccupation with buying, preparing and consuming foods due to food beliefs. They state that deviation or inability to follow these may lead to intensive fear.

Additionally, according to Barthels et al. (2015b), Criterion D states that an individual's social, occupational, and other important aspects of life are affected, and/or nutrient deficiency is present, and insight into the illness may be lacking.

Finally, Criterion E addresses weight loss, with the authors believing that although weight loss and being underweight may be present in an individual, the worry around weight and shape should be secondary to concerns around healthy eating. The authors state that criteria

A, B, C, and E must be present to diagnose ON, and criterion D must be at least partially present. If criterion E is questioned, a diagnosis of atypical AN would be recommended.

Dunn & Bratman (2016) argue that Moroze et al.'s (2015) criteria do not address the role of weight loss in ON nor the possibility of fluctuation in diet over time. Therefore, Dunn & Bratman (2016) have expanded Moroze et al.'s criterion A to include the possibility that dietary restrictions may escalate and evolve, eliminating entire food groups and including frequent and/or severe partial fasts considered purifying or detoxifying. Additionally, weight loss resulting from a progression of the pathology may occur, although the desire to lose weight is absent, hidden or second to the compulsive need to eat healthily. This, as well as the concern over the quality, not the quantity of food, are the main differences in diagnostic criteria between ON and AN (Barnes & Caltabiano, 2017).

In response to Moroze and colleagues' Criterion B, Dunn & Bratman (2016) propose the criterion needs to highlight the escalation from mildly disordered eating behaviour into significant pathology. Thus, their criteria highlight that positive body image, self-worth, identity, and satisfaction become excessively dependent on the individual's ability to adhere to their 'healthy' eating behaviour. The authors felt it important to improve the criteria for better and more valid diagnostic measures to be available, leading to more accurate prevalence rates, more risk factors identified and validation of treatment modalities (Dunn & Bratman, 2016).

Whilst there is current debate around these criteria, it is a good starting point for developing a framework for diagnoses of ON (Kline et al., 1986 as referenced in Dunn & Bratman, 2016).

2.1.3 Measures of ON

In parallel with the development of diagnostic criteria, diagnostic tools that identify, record and report prevalence rates are being developed for ON. The four tools used in research,

of which the two more commonly used according to Niedzielski & Kaźmierczak-Wojtaś (2021), are the Braxton Orthorexia Test (BOT; Bratman & Knight, 2000) and ORTO-15 (Donini et al., 2004), followed by the Dusseldorf Orthorexia Scale (DOS; Barthels et al., 2015a), and the Eating Habits Questionnaire (EHQ; Gleaves et al., 2013). The Barcelona Orthorexia Scale (Bauer et al., 2019) has not been used in any studies (Niedzielski & Kaźmierczak-Wojtaś, 2021), and the Teruel Orthorexia Scale (Barrada & Roncero, 2018) and the recently developed Orthorexia Nervosa Inventory (Oberle et al., 2021) have been used rarely in studies (Niedzielski & Kaźmierczak-Wojtaś, 2021). Given the depth of information and data available, the four most commonly used measures are described below.

The BOT (Bratman & Knight, 2000), proposed in ‘Health Food Junkies’ is an informal 10-item yes/no questionnaire, based on an American population to help identify problematic eating. Answers receive a 0 or 1, with a maximum score of 10 and anything more than four signifying orthorexia. The questions ask whether the individual spends more than three hours a day thinking about healthy food; planning tomorrow’s food today; caring about the virtue of food rather than pleasure received from eating it; a narrowing of life (socially, foregoing previously enjoyable activities); increasing restrictiveness; whether self-esteem increases when consuming healthy food and a sense of superiority; and finally whether guilt is experienced when transgressions occur. However, the test is not empirically derived and does not provide data regarding validity, reliability, cut scores or a reference group (Dunn & Bratman, 2016).

The ORTO-15 (Donini et al., 2004) uses the foundation of BOT’s questionnaire and the Scale 7 of the Minnesota Multiphasic Personality Inventory (MMPI-2). It is a 15-item, Likert 4-dimension scale (always, often, sometimes, never) with a score between one (signifying a more pathological and orthorexic attitude), and four (signifying a healthier attitude toward nutrition). A 40-point cut-off, totalled by adding the scores together, is recommended by Donini et al. (2005). In the translation from Italian to multiple languages, the ORTO-15 has

been modified, and a question remains about the measure's applicability to other cultures (Missbach et al., 2015). The validity and reliability of ORTO-15 remain in question due to a lack of validation, no standardisation of the methods, and the inconsistently high prevalence rates of 30% to 70%, compared to other eating disorders of an estimated 2-7.7% in the general population (Dunn & Bratman, 2016; Galmiche et al., 2019; Roncero et al., 2017; Smink et al., 2012). McComb & Mills (2019) have identified a limitation in ORTO-15, suggesting the high prevalence rates identify non-clinical healthy eating, particularly in groups such as athletes (Clifford & Blyth, 2019), doctors (Bağcı Bosi et al., 2007; Fidan et al., 2010), dieticians (Asil & Sürücüoğlu, 2015; Tremelling et al., 2017) and yoga practitioners (Herranz Valera et al., 2014). To further validate ORTO-15, Missbach et al. (2015) suggest omitting 40% of the questions. Some researchers have suggested that the diagnostic threshold be reduced from 40-points to 35-points (Almeida et al., 2018; Ramacciotti et al., 2011; Segura-Garcia et al., 2015), resulting in a mediocre validity and reliability with Cronbach's $\alpha = 0.67$ (Ramacciotti et al., 2011) and thus lowering the prevalence rates (Almeida et al., 2018). Recently, a revised version, the ORTO-R, was developed to try and reduce the problems identified with the ORTO-15. However, it remains unvalidated and could be considered in the future (Ragoza & Donini, 2021).

Developed by Gleaves et al. (2013), the EHQ defines ON as an “overwhelming preoccupation on eating healthfully” (Valente et al., 2019, p. 676). This diagnostic questionnaire is comprised of 21 items ranked on a Likert scale (false, not at all true, very true). There are three subscales which measure the problems associated with healthy eating, knowledge about healthy eating, and feeling positively about healthy eating (Chard et al., 2019). Although there is a high internal consistency of the three factors ($\alpha=0.90$, $\alpha=0.82$, and $\alpha=0.86$, respectively), it uses the analysis of Bratman and Knight's case studies as diagnostic criteria, which has resulted in the criticism of validity and its limited use (Valente et al., 2019).

Based on Dunn & Bratman's (2016) criteria of ON, the DOS, created in Germany in 2015 and validated in English (E-DOS) in 2018, has demonstrated good reliability and validity (Opitz et al., 2020). There are two versions; a 21-item and 10-item Likert 4-dimension scale, with answers ranging from "this applies to me" (four points) to "this does not apply to me" (one point). Higher scores indicate the presence of ON, with the 10-item version's cut-off point greater than or equal to 30. Both items report high internal consistency, with the 10-item $\alpha=0.84$ and the 21-item $\alpha=0.91$. However, the DOS does not seem to differentiate between individuals with ON and AN (Valente et al., 2019) or healthy clean eating and ON (Atchison & Zickgraf, 2022).

The development of the ON task force has highlighted the need to coordinate research to develop better diagnostic tools and diagnostic criteria, which are currently without a clear consensus. Through this, researchers hope to better understand which category ON would best fit into within the DSM and ICD (Cena et al., 2019).

2.1.4 Risk Factors

By identifying and understanding risk factors, researchers and clinicians are better equipped to identify individuals who may develop ON and understand how ON manifests, develops, and is maintained over time, allowing for more targeted interventions to be developed (McComb & Mills, 2019).

McComb & Mills (2019) conducted a comprehensive systematic review of 54 studies, identifying and discussing 22 possible risk factors. Table one lists these risk factors and gives a brief outcome of either positive, negative, or unclear relationship to ON. The third column includes some relevant research conducted post their study.

In the table below, risk factors, which are more relevant to this study, are described in more detail, with self-esteem and social media under sections 2.2.1 and 2.4, respectively.

Table 1

McComb & Mills (2019) list of potential risk factors, a brief description of any relationship to ON, and additional relevant research

Risk Factor	Summary of McComb & Mills	Additional Research
Age	Research shows no definitive relationship between younger age and ON	Bóna et al. (2021) and Yilmaz & Dundar (2022) found ON is more prevalent in younger ages
Gender	There is no notable distinction of prevalence between men vs women	Strahler (2019) found pathological healthy eating is slightly more prevalent in females. Other research has continued to find no difference between men and women (Bóna et al., 2021; Yilmaz & Dundar, 2022)
Familial Socio-economic status & Education Levels	There is a possible link to individuals having access to finances in order to be able to purchase high quality foods. There is no apparent correlation between education and ON.	
Self-Esteem	No relationship between self-esteem and ON found.	Recent research has found there is an association between low self-esteem and ON (Bóna et al., 2021; Brytek-Matera et al., 2022; Greville-Harris et al., 2020). Yilmaz & Dundar (2022) reported high self-esteem in those with ON due to their diet.
Narcissism	A positive relationship with ON has been reported.	
Perfectionism	Most studies have found that those who score higher on overall perfectionism tend to have higher ON tendencies.	Perfectionism has been found to be higher among those with ON (Miley et al., 2022; Novara et al., 2021, 2022; Yung & Tabri, 2022),

The Big Five Personality Traits (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism)	Only neuroticism had any correlation to higher levels of ON.	as well as perfectionistic self-presentation (Pratt et al., 2022)
Obsessive-Compulsive tendencies	Those demonstrating obsessive-compulsive behaviours and/or thoughts are at greater risk of ON.	Moderate relationship found between obsessive-compulsive behaviours and ON (Novara et al., 2021)
Psychopathology	Those with current symptoms, such as depression, anxiety, and body dysmorphia, are more likely to have ON.	Novara et al. (2022) found higher levels of anxiety and emotional dysregulation. Chace & Kluck (2022) found a moderate relationship with health anxiety and ON. Anxiety was further correlated to high levels of ON (Yilmaz & Dunder, 2022). Lopes et al. (2020) reported higher levels of depression, anhedonia, chronic fatigue, and lack of fulfilment in life and ON
Vegetarianism/Veganism	Most studies have found vegetarianism and veganism are positively correlated with ON.	A literature review of 14 studies found a positive relationship between vegetarianism and ON (Brytek-Matera, 2021).
Eating Habits	Overall, disordered eating habits, such as avoiding certain types of food, strict schedules, excess preparation time, and restricting food or energy intake, were all found to be positively related to ON.	Routine restraint found to be positively correlated to ON (Atchison & Zickgraf, 2022)

Dieting	There is a positive relationship between dieting and ON.	Positive relationship found (Gramaglia et al., 2019; Novara et al., 2022)
History of an eating disorder	There is a positive relationship found with ON.	Found to be present in those with ON (DeBois & Chatfield, 2021; Fixsen et al., 2020; McGovern et al., 2021; Valente et al., 2020). Although high levels of self-reported current ED, a history was not found to be correlated in Gramaglia et al. (2019).
Body image	There is contradictory evidence whether there is a link between body image and ON, and the outcome is not clear.	A pre-occupation with weight and shape described in those with ON (Brytek-Matera et al. 2022).
Body dissatisfaction	The relationship is unclear, as studies report conflicting evidence.	Atchison & Zickgraf (2022) in a review of recent literature found inconsistent evidence.
Drive for thinness	A positive relationship between drive for thinness and ON has been found.	Those with higher ON scores have higher drive for thinness (Barthels et al., 2021; Costanzo et al., 2022). A review of literature by Atchison & Zickgraf (2022) found a moderate to large correlation to ON.
Thin-ideal internalisation	A positive relationship between thin-ideal internalisation and ON.	Found to be present in those with ON (DeBois & Chatfield, 2021).
BMI	The outcome is not clear.	Bartel et al. (2020) and found a positive relationship between lower BMI and ON, however whether this is due to health related reasons is unclear. Yilmaz & Dundar

		(2022) found no relationship.
Social media use	Instagram is higher correlated to ON than other social media.	Research has shown those with ON symptoms are particularly active on Instagram (Greville-Harris et al., 2020; Hanganu-Bresch, 2020; Lanitis, 2020; Santarossa et al., 2019; Valente et al., 2020, 2022; Zemlyanskaya et al., 2022; Gann, 2019)
Health related programmes/occupation	Although a positive relationship is reported between health-related programmes/occupations and ON, the causal effect remains unclear.	
Exercise engagement	While the majority of studies have found a positive relationship with ON, a number contradict this, leaving the outcome unclear.	High levels of intense exercise positively correlated to high levels of ON (Brytek-Matera et al., 2022)
Alcohol, tobacco, and drug use	This has been found to be unrelated to ON.	

Perfectionism has been positively correlated with ON (McComb & Mills, 2019; Miley et al., 2022; Valente et al., 2020). Additionally, research demonstrates that those with ON also experience high levels of thin-ideal internalisation (DeBois & Chatfield, 2021; McComb & Mills, 2019), a drive for thinness (Atchison & Zickgraf, 2022; Barthels et al., 2021; Costanzo et al., 2022), and working towards their ideal body (Fixsen et al., 2020). Cheshire et al. (2020) found that those with ON may adjust their diet to achieve their view of a healthy body, with Brytek-Matera et al. (2022) finding those with ON tend to have a preoccupation with body image and shape. Greville-Harris et al. (2022) recently found that the association between being healthy and thin was closely tied, with many participants explaining that bodies which carry fat are unhealthy. Although proposed diagnostic criteria recognise a concern about weight

and shape in ON, it is argued to be secondary to the need to eat healthy food (Barthels et al., 2015b). Striegel-Moore & Bulik (2007) believe the connection between perfectionism and the idealisation of thinness could be influenced by the individual's desire to comply with societal norms.

Studies have reported a correlation between individuals who have ON and high levels of exercise (Almeida et al., 2018; Brytek-Matera et al., 2022; Clifford & Blyth, 2019), with Oberle et al. (2017) finding that those with ON engage in both higher levels of strength-training and aerobic exercise, and Eriksson et al. (2008) finding high sports participation.

Similar behaviours associated with EDs have been reported in studies on ON. McGovern et al. (2021) found a high co-morbidity between a history of an ED and ON. Additionally, ED behaviours, such as, bingeing without purging, compensatory behaviours, such as fasting, and weight and shape concerns were reported. Fixsen et al. (2020) reported that clinicians who work with ON observed a high level of shared characteristics with AN, such as perfectionism, obsessiveness and conscientiousness. Segura-Garcia et al. (2015) posited whether ON co-exists with other EDs as it may be a more socially acceptable method of restriction. Additionally, Greville-Harris et al. (2020) found that four of 15 bloggers reported pre-existing health conditions, mainly gastrointestinal. This finding corroborates Valente et al.'s (2020) study, which reported similar pre-existing health conditions amongst their participants.

2.2 Sense of Self and Orthorexia

The subject of the sense of self is highly complex and unresolved, although work is being done to better define it in the context of ill health and mental distress (Williams et al., 2016). Broadly a sense of self includes self-esteem, self-perception, ego deficits (Bers et al., 2004), and self-worth (Fairburn et al., 1999), all of which are found to have some level of disturbance in individuals with eating irregularities. Research has investigated the relationship

between self-esteem and ON, but limited research has included the individual's personal sense of self. Therefore, transferable studies looking at the sense of self in AN and BN are discussed, and possible parallels to ON are explored.

2.2.1 Self-Esteem & Self-Worth

Dunn & Bratman (2016) capture the link between self and ON, stating that "...orthorexics feel nothing but pride at taking care of their health in the best possible way; (p. 2), which is often '...enhanced by a lofty feeling of superiority towards those who continue to eat a normal diet' (p.9).

Recent research has found an association between low self-esteem and ON (Bóna et al., 2021; Brytek-Matera et al., 2022), although Yilmaz & Dundar (2022) found that those with ON who adhered to their diet experienced high self-esteem and McComb & Mills (2019) reported in their systematic review no relationship between self-esteem and ON. Greville-Harris et al. (2020) discussed the negative and positive impact on self-esteem when individuals with ON socially compare themselves to others on Instagram. This comparison is either downward toward those they judge negatively and thus feel superior to or upward toward those they feel inferior to.

Deviations from goals can result in guilt and shame, with shame linked to negative self-beliefs in research conducted on AN and BN (Goss & Gilbert, 2002). This shame and guilt, described as negative self-beliefs by Cooper et al. (1998) can, the authors argue, lead to higher levels of worthlessness, inferiority, and sense of failure, thereby impacting how the individuals think about eating, shape and weight. It is noted in the ON proposed diagnostic criteria that feelings of anxiety and shame are experienced when a dietary deviation occurs (Barthels et al., 2021; Bratman & Knight, 2000; Moroze et al., 2015). Goss & Gilbert (2002) posited that those with eating disorders who experience shame might be vulnerable to adverse social outcomes,

such as rejection, causing them to attempt to alter their body appearance. Shame has been linked to negative self-belief in research conducted on AN and BN, which may lead to higher levels of worthlessness, inferiority and sense of failure, impacting their beliefs on eating, shape and weight. Gann's (2019) research discussed the amount of shame a woman experiences about her body is a predictor of ON behaviours, which was applied more broadly by Nechita et al. (2021), who linked body shame with eating disorders. Individuals with EDs (Lenzo et al., 2020) and ON (Costanzo et al., 2022) demonstrate involuntary defence mechanisms to protect their self-esteem and ego.

It is relevant to consider non-pathological or healthy narcissism, which is linked to ED and described as feelings of exaggerated self-importance, craving for admiration and empathy deficits which are often connected to a sense of low self-esteem although this may present differently (Bardone-Cone et al., 2020).

2.2.2 Self-Perception

Williams et al.'s (2016) study found that individuals with AN felt their self had been taken over by and enmeshed with AN, saying "the eating disorder seemed to give them a self-image, a persona, and it was an identity over which they had control" (p. 221).

Reindl (2002) described an element of self-perception for those with BN, arguing that individuals may not be able to imagine who they would be without their eating disorder and thus fiercely protect the symptoms that have become part of this self-concept.

Similarly, ON allows an individual to create an identity around their food (Bratman & Knight, 2000), providing an understanding and an image of themselves. In *Health Food Junkies*, Bratman & Knight (2000) describe the "fall from grace" (p. 9) when an individual with orthorexic tendencies eats a type of food believed to be forbidden. The restraint, the self-praise for success and the self-condemnation for lapses all accumulate to form the individual's

opinion of themselves and how they view their worth to others. Individuals with EDs typically display resistance to changing their sense of identity (DeBois & Chatfield, 2021), which requires courage (Bowlby et al., 2015; McNamara & Parsons, 2016) as it involves re-evaluating their beliefs, values, and changing eating patterns (Abbate-Daga et al., 2013).

2.3 Reviewing theories of eating disorders and linking to ON

Currently, there is limited literature discussing the link between ON and existing theories of eating disorders. Therefore, this section references current psychological theories proposed for recognised eating disorders and draws parallels, using the criteria of ON as put forward by Setnick (2013), Moroze et al. (2015), Barthels et al., (2015b), and Dunn & Bratman (2016).

2.3.1 Cognitive-behavioural theory

According to the Transdiagnostic Cognitive-Behavioural Theory for Eating Disorders (CBT-E; Cooper & Fairburn, 2011; Fairburn et al., 2003; Fairburn, 2008), a dysfunctional system for evaluating self-worth underpins the development and maintenance of eating disorders in cognitive-behavioural theory. They argue that an individual's self-worth is made up of their ability to control and be perfect in their eating habits, weight, and shape, avoiding core shame beliefs, and thereby maintaining the eating disorder. Additionally, the negative-belief cycle individuals experience may act as a development and maintenance factor (Fairburn, 2008), resulting in negative self-appraisals and reinforcement of low self-worth and self-esteem (Sapuppo et al., 2018).

Koven & Abry (2015) posited that Cognitive Behavioural Therapy (CBT) provided by an experienced therapist, combined with medication and psychoeducation, could be a successful intervention for ON, with cognitive restructuring likely to be helpful for the

cognitive distortions around food, eating and health and perfectionism. Agreeing with this, Yung & Tabri (2022) argue that Transdiagnostic CBT-E could be a successful intervention for those with ON, believing that perfectionism maintains the over importance placed on appearance in AN and BN and should be expanded to include health in those with ON.

2.3.2 Object Relations

Psychoanalytic schools of thought, in particular self-psychology (Kohut, 1971) and object-relations theory (Fairbairn, 1954; Klein, 1932; Winnicott, 1960), are most suitable for shedding some light on personality development and the fragility of self which may lead the individual to find pathological representation in food. Collectively, the model suggests that the interpersonal relationships that develop in a child's life have their root in the relationship between the child and their primary caregiver. The individual relates to both internal and external objects, with the internal objects often being internal representations or internalised experiences of external interactions. Thus, according to this school, the way the individual responds to food (external object) is due to how they internalised objects in the outside world, such as aspects of their caregiver or caregivers, in early childhood. Individuals with AN are making a statement that they do not have any emotional needs as they do not feel their needs were met adequately at the early stages of childhood. To try and control their emotional needs, the external object (food) becomes the representation of what cannot be ingested (their emotions) and thus, the rigid control of food results (Clinton, 2006). When hungry, the individual is reminded of the need for the 'good object', their caregiver, who as a child is attuned to their needs, and the reality of the 'bad object' in their needs being inadequately met. To try and control the bad object and their associated fantasies around the ingestion of what is 'bad', an individual with ON will only eat 'pure' and 'clean' foods. Object-Relations theory can also adequately describe the need to detox or purge the body of unclean foods.

The proposed criteria state that those with ON tend to restrict their food on an ever-escalating level (Moroze et al., 2015), which often leads to eradicating entire food groups and more frequent/severe cleanses, which are believed to be detoxifying and purifying the body (Dunn & Bratman, 2016). It can be hypothesised that this need is similar to the purging behaviour of BN. This could be due to the intense need for the individual to rid themselves of the emotions stirred up by the unconscious reminder of their interpersonal relationship with their primary caregiver and the position this has taken in the individual's internal world. Additionally, Fairbairn (1954) discusses a specific intolerable event leading to a "split" where the child represses the "neglectful object" (Celani, 2007, p. 121) as a defence and develops obsessional behaviours to keep the repressed object at bay. This may help explain the obsessive focus on health in ON as defined by Moroze et al. (2015).

2.4 Social Media and Orthorexia

As described in the introduction, Instagram has been credited with an increase in mental health issues (Hunt et al., 2018), and a possible increase of ON symptoms (Turner & Lefevre, 2017), with Hanganu-Bresch (2020) positing popular media's rise and related orthorexic behaviours. This review focuses on Instagram and addresses the rise of healthism, the echo-chamber effect and social comparison theory.

2.4.1 The rise of healthism on social media

Healthism, first coined by Crawford (1995), is a term used to reflect a social construction of health (Håman et al., 2015), where an individual is responsible for their own health and thus omitting factors such as socioeconomic status, genetic, environmental and work-related factors (Hanganu-Bresch, 2020). Therefore, if an individual becomes unwell, it

is due to their neglect. Spence et al. (2016) believes healthism is being accelerated by social media, particularly Instagram.

Chung et al. (2017) demonstrated that users often turn to Instagram for support networks, particularly for health and nutritional advice, as evidenced by hashtags, which are propelled by carefully crafted algorithms, such as #cleaneating (Riesmeyer et al., 2019) which had over 47.5 million posts as of 1 August 2022. Users can engage with content without inputting hashtags. The user, who follows, likes, saves, comments and searches for content on Instagram will receive related hashtags on their feed page (Instagram, 2022). This is a function of Instagram's constantly evolving curation algorithm (Fouquaert & Mechant, 2021), designed to facilitate reliance on and increase the usage of the platform (Edgerton et al., 2021). The word 'use' in this context refers to both active inputting of hashtags and the passive receipt of related content.

Turner & Lefevre (2017), using the ORTO-15, found the more an individual used Instagram, the stronger their orthorexic symptoms. Cinquegrani & Brown's (2018) study of online bloggers who posted about ON on social media discussed the individual's description of their experiential process of internalisation, maintenance, and reproduction of ON narratives and how they became caught up in the pursuit of a healthy lifestyle on social media forums. Santarossa et al. (2019) who investigated the #orthorexia conversations, images posted associated with this hashtag, and biographical descriptions of posters on Instagram, found a small and supportive community focused on recovery. Continuing the investigation into whether social media use impacts ON symptoms, Gann (2019) investigated whether time spent on social media and the quantity of posting activity impacted symptoms of ON and body shame. The author found that posting activity did not impact ON symptoms. However, time spent on social media increased body shame, which the study found was positively correlated to an increase in ON tendencies. Greville-Harris et al. (2020) continued the investigation of

already published bloggers' experiences of ON on social media, finding that individuals initially searched the Internet for a healthy diet and lifestyle information before becoming influenced by social comparison and finding themselves in an unhealthy eating pattern. In a mixed methods study, Valente et al. (2020) explored the personal experience of those who shared about ON on their platform, identifying three phases; onset, progression and seeking help. This corroborates the results of previous studies. Lanitis (2020) recreated Turner & Lefevre's (2017) study, incorporating the TOS and a mixed method approach and confirming the original study's findings.

It has been proposed that social media's omnipresence is transmitting cultural values such as thin idealisation (Cinquegrani & Brown, 2018) and creating an environment where individuals tend to view others as happier and more successful than themselves (Chou & Edge, 2012). Mabe et al. (2014) commented that social media platforms, such as Facebook, provide a merging of the two social influences linked to developing an eating disorder; reinforcement of the thin narrative and reinforcement from peers in the form of likes. This is even more prevalent for Instagram as it is an image-based platform in which photographs are accessible to users, and according to Turner & Lefevre (2017), images are more likely to be remembered than words.

With Instagram having a hypothesised effect on the rise of healthism, being utilised as a tool for support networks discussing orthorexic behaviour and a space where cultural values such as thin idealisation are receiving positive feedback, there's growing evidence that there is a bi-directional relationship between ON and Instagram (Greville-Harris et al., 2020, 2022; Valente et al., 2020, 2022).

2.4.2 The Echo Chamber Effect and Social Comparison Theory

The echo chamber effect (Salathé & Khandelwal, 2011) states that individuals perceive their values and world-views to be more common than they are due to interacting with similarly minded people. By selectively viewing similarly minded Instagram posts and blogs, Turner & Lefevre (2017) believe this effect explains why ON and Instagram are positively correlated. They investigated the relationship between social media and ON, finding that higher Instagram use was associated with greater ON symptoms. This, they hypothesise, may be due to users selectively exposing themselves to the content they wish to be exposed to, leading them to believe the behaviour is more prevalent or normal than it is. This perception of reality may lead to social pressure to conform to these behaviours.

Instagram has become a space where health food bloggers who market themselves as ‘experts’ or ‘wellness gurus’ promote healthy diets and lifestyle advice. Many do so without qualifications, making their advice available to those at risk of developing ON as it has been argued that exposure to clean eating messages may increase the likelihood of an individual becoming obsessed with food (Allen et al., 2018). However, the cause and/or effect is unclear as to whether orthorexic tendencies in individuals are heightened by their exposure to the blogs. The authors could not determine whether the participants viewing the clean-eating posts already had high levels of orthorexic behaviours and were seeking out the platforms to justify their behaviours. This finding was corroborated by Valente et al. (2022) and Zemlyanskaya et al. (2022), who both used mixed methods to research the #orthorexia community on Instagram, the latter from a specific Russian-speaking population, aimed to understand who shares #orthorexia content, what type of content they share, and why. Both found that participants felt Instagram was partially responsible for the development of ON but also reported that the participants felt the platform helped raise awareness and recognition of ON.

Blog writers may have eating disorders or a history thereof and often emphasise appearance, thin appearance ideals, and disordered messages about food/nutrition (Boepple & Thompson, 2014). In an analysis of health food bloggers, Lynch (2010) found there tended to be an obsession with food planning and immense guilt if the food consumed was not healthy. Through Lynch's descriptions, these behavioural patterns support the view that the bloggers felt that their happiness/healthiness was tied to their healthy diet and that they received accolades from their fellow bloggers to detox if unhealthy food was consumed. This supports the ideal of healthism put forward with social influence on Instagram, influencing and promoting disordered eating patterns by normalising the idea that detoxing, restricting and eliminating foods is healthy and normal, supporting the Social Comparison Theory (Festinger, 1954).

Social Comparison Theory (Festinger, 1954) argues that individuals compare themselves to those in their social settings to self-evaluate their abilities and opinions. This was later expanded also to include goals (Yang, 2016). Social comparison has been reported by several studies to be present in those with ON who use Instagram (Greville-Harris et al., 2020; Turner & Lefevre, 2017). Additionally, social comparison is higher in those who seek external validation (Crocker & Park, 2004; Stapleton et al., 2017), and when combined with sociocultural pressures to appear a certain way, has been correlated with disordered eating patterns (Corning et al., 2006; Stormer & Thompson, 1996).

By combining the Social Comparison Theory, the echo chamber effect and mixing it with the societal view of the body and the moral obligations that surround one's body, it may be posited that Instagram has a significant impact on an individual's view of themselves, their eating and thus potentially influencing orthorexic behaviours.

2.5 Reflection on the literature and rationale for the current study

Existing research continues to identify and debate ON's construct definition as to whether it is a new eating disorder, a subsection of an existing ED, or belongs in the obsessive-compulsive spectrum (Zagaria et al., 2022). The criteria of ON also remains unresolved, with Setnick (2013), Barthels et al. (2015b), Moroze et al. (2015) and Dunn & Bratman (2016) attempting to define and propose diagnostic criteria. It has been widely accepted that two key features, namely, an obsessive preoccupation with healthy food believed to positively impact well-being and secondly the resultant clinical distress and impairment, should be included in any further proposed diagnostic criteria (Cena et al., 2019). The absence of these diagnostic criteria has impacted the development of diagnostic measures and hindered studies aimed at understanding prevalence rates and risk factors. This lack of clarity contributes to ON not being recognised by the DSM and ICD (Valente et al., 2019), although the ON Task Force aims to create some consensus and clarity (Cena et al., 2019).

Instagram has been linked with increasing ON symptoms (Turner & Lefevre, 2017), although this was disputed by Gann (2019). A growing body of research has found that those with ON tendencies are particularly active on this social media platform (Gann, 2019; Greville-Harris et al., 2020; Lanitis, 2020; Santarossa et al., 2019; Valente et al., 2020, 2022; Zemlyanskaya et al., 2022). Valente et al. (2022) and Zemlyanskaya et al. (2022) have found that Instagram is a platform on which those with ON form a community, supporting each other in their recovery from ON. Bearing in mind the curation algorithm (Fouquaert & Mechant, 2021), users engage with hashtags, whether they initiate the hashtag or not. A user merely has to post, like, follow or search to be the recipient of numerous related hashtags, which is one of the ways Instagram organises its content.

At the time of writing, no research has addressed quantitatively how those who self-identify as having ON engage with or are engaged by Instagram's clean-eating hashtags, as

broadly described above nor how individuals who self-identify with ON experience their sense of self whilst using Instagram. This research aims to understand whether a relationship exists between ON and Instagram by posing the following two questions:

- What is the relationship between Orthorexia Nervosa symptoms and using clean eating hashtags on Instagram? (quantitative)
- How do individuals who identify with orthorexic behavioural patterns experience their sense of self whilst using Instagram? (qualitative)

2.6 Relevance to Counselling Psychology

Counselling psychology has currently made a small contribution to the research of ON. However, it can make a significant contribution by first attempting to understand whether there is a relationship between engagement with Instagram's clean-eating hashtags and ON behaviours before exploring the subjective experiences of individuals who self-identify as having ON and how they feel their relationship with Instagram has impacted them. Counselling Psychology understands the importance of the bio-psycho-social model of psychology (Blair, 2010) often researched through quantitative methods, in conjunction with placing great emphasis on the personal subjective experiences of individuals and the meaning ascribed to those experiences, with the aim being to reduce psychological distress and enhance an individual's wellbeing (Larsson et al., 2012). There has only been a small amount of qualitative research exploring the experiences of those with ON (Cinquegrani & Brown, 2018; Greville-Harris et al., 2020; Lanitis, 2020; Valente et al., 2020, 2022; Zemlyanskaya et al., 2022). Thus, not only would this research be aligned with the theoretical and philosophical understandings of counselling psychology, but it would also help the understanding of development and maintenance factors, helping inform psychological theory and clinicians with reducing levels of distress.

Currently, there is no guidance on how to work with ON therapeutically. However, Koven & Abry (2015) suggest a combination of CBT, psychoeducation, and medication, and Yung & Tabri (2022) posit that perfectionism in CBT-E should be extended to include a self-concept based on health. As scientific practitioners (Bury & Strauss, 2006), Counselling Psychologists recognise the importance of research informing clinical practice. Thus, the proposed study aims to contribute to understanding ON, which can help inform treatment for those with ON.

3 Method

This section will discuss the methodology chosen for the current research, outlining the important aspects supporting the decisions to utilise the mixed methods approach of correlational and thematic analyses (TA). The theoretical background of these methods and their impact on the research processes will also be discussed.

3.1 Choosing a Quantitative and Qualitative Method

This research is a mixed methods study, employing correlational (quantitative), and TA (qualitative) approaches from a critical realist epistemology. Critical realism posits that there is an ‘real’ social world that can be objectively observed through the use of perception, experiences and action, whilst also recognising that the observations are shaped by the individual’s personal, social and cultural framework. There are three critical realist ontological levels of reality: events, experiences and causal mechanisms (Mukumbang, 2023). It is through the use of retroductive reasoning, that researchers employing a critical realist approach are able to infer which causal mechanisms best explain the events (Sayer, 2000). If researchers take into account the three ontological positions and the important use of retroductive reasoning, critical realism can be used in a mixed methods study (Mukumbang, 2023; Scott, 2007).

A mixed methods study was chosen as it would allow for a more flexible and comprehensive understanding of the topic of ON and the important aspects that might contribute to its development and maintenance (Creswell & Plano Clark, 2007). As discussed in Chapter one, one hypothesis for why ON prevalence rates are rising is the increased use of Instagram. When trying to understand why this may be the case, the researcher continued to come back to the use of hashtags and the powerful algorithms Instagram employs. Thus, in an attempt to better understand whether Instagram’s hashtags may be a contributing factor to the increasing prevalence rates of ON a quantitative approach that had two aims was deemed

appropriate. Firstly, the quantitative approach would try to understand whether individuals with ON do in fact engage with clean-eating hashtags, as described by Riesmeyer et al. (2019). Secondly, the quantitative approach would aim to understand to what extent the engagement contributes to the echo chamber effect.

TA, a method often seen as a complementary method to quantitative methods (Braun & Clarke, 2014), was chosen as a result of the current literature as well as the nature of the research topic. As highlighted above, there are minimal studies that have qualitatively investigated how those with ON symptoms are impacted by their use of Instagram. Therefore, the current research attempted to utilise qualitative research methods in addition to quantitative, to capture real-life experiences and perspectives of the participants contributing to the research. In particular, the research aimed to understand the individual's own understanding of the links between orthorexic tendencies and using Instagram, its impact on the sense of self, and whether there is a direction of the relationship (ie do people with ON tendencies engage with the hashtags first or do people with an interest in health engage with the hashtags and subsequently develop ON behaviours). Trying to generate meaning from this research and understand the experiences of an individual runs parallel to the aim of providing research that is clinically relevant and useful to counselling psychology. Counselling psychology emphasises the “phenomenological experience of the client” (Woolfe, 2016, p. 11) and thus, by utilising both qualitative and quantitative methods as complementary tools this research can best inform counselling psychologists and other professionals working with individuals with orthorexic tendencies as it allows for a deeper understanding of the development and maintenance of ON.

3.2 Reflexivity on Epistemology and Ontology

My ontological understanding of our surrounding world and human interpretation (Braun & Clarke, 2013) and my epistemological position of acquiring knowledge (Etherington, 2017) have influenced my research and understanding of the material. I support a critical realist

framework, which argues that social processes and events occur irrespective of the researcher and are always interpreted and understood by the individual's socio-cultural environment. I hold a critical ontology, and I understand that my beliefs and expectations will have an influence (Madill et al., 2000), and a level of subjectivity will exist in the study. The different psychological environments I have experienced in various parts of the world will also influence my perspective.

Living in various Western and non-Western cultures throughout my childhood allowed me to understand that the stories and cultural norms one is exposed to shape how one interprets information. It was recognising this and my desire to understand more deeply how and why people think and behave in a multitude of different ways that spurred my interest in psychology. During my undergraduate studies in psychology, I was exposed to more of a positivist methodology and a more medical model view of mental health. With little emphasis placed on the individualistic and phenomenological underpinnings of similar phenomena, I was left with a longing to understand mental health more subjectively. Work experiences in two completely different cultures furthered the importance of this. Working in a New York City hospital, I was exposed to many women in the Hasidic Jewish community. I became aware that the medical model in which they were being treated may not have been empathetic towards their unique cultural circumstances and interpretations. I was further aware of the possible limitations of the medical model and positivist stance when I was exposed to a mental health hospital in South Africa. Here, individuals were being treated for severe mental health concerns in a Western model, and the Psychologists and Psychiatrists, who were mainly white South Africans, did not always seem to consider the individual's needs in the context of their culture. It was only in my master's degree that I started to engage with more qualitative research, looking at small sample groups and how an event or way of life could be interpreted differently depending on many factors, such as race and culture. Through my experience of growing up and working in

various countries, I started looking for an alternative to the positivist approach to psychology, becoming interested in a more humanistic approach to mental health and therapy and thus applied for and began my Doctorate in Counselling Psychology. I believe my critical realist framework has influenced the research included in the literature review and how I have interpreted the results of my project. My identity and clinical practice as a Trainee Counselling Psychologist have been informed by critical realism and humanistic psychology, which contends that individuals create and interpret their own meaning (Chen, 2001), and has influenced my interpretation and conclusion of this research.

3.3 Quantitative Analysis

3.3.1 Rationale for Correlational Analysis

Correlations within statistics allow for an understanding of whether there is an association between two variables. This is the simplest way to understand whether two variables are associated (Field, 2013). This method of statistical analysis and correlational approaches offers a useful tool within the current aims to determine whether the two variables of interest are related and the directionality of any associations, i.e., the individual's level of ON as determined by the ORTO-15 questionnaire and to what extent they engage with Instagram clean-eating hashtags.

3.3.2 Correlational Analysis

Correlations can be determined first by calculating whether two variables covary. The variance of a variable represents the average amount the data varies from the mean (Field, 2013). This is numerically described through the equation:

$$\text{variance } (s^2) = \frac{\sum_{i=1}^n (x_i - \bar{x})^2}{N - 1} = \frac{\sum_{i=1}^n (x_i - \bar{x})(x_i - \bar{x})}{N - 1}$$

The sample mean is represented by \bar{x} and x_i is the data point in question, whereas N is the number of observations. This equation allows us to understand whether there is a relationship between the variables.

There are three outcomes of correlations, a positive relationship, a negative relationship, and no relationship. A positive correlation shows the researcher a relationship between the two variables. This means that when one of the variables deviates from the mean, so does the other. A negative correlation demonstrates to the researcher that, although there is a relationship between the two variables, they do not move in the same direction. This means that if one of the variables deviates from the mean, for example, increases, the other variables deviate from the mean in the opposite direction, i.e., decreases. A zero correlation means there is no relationship between the two variables.

Certain assumptions determine the next steps in correlational analysis (Coolican, 2018). If the assumptions are met (i.e., normality, homoscedasticity, linearity, interval/ratio data, paired observations, and no outliers), then it is appropriate to conduct a Pearson's correlation coefficient, r . This equation is:

$$r = \frac{COV_{xy}}{s_x s_y} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{(N-1)s_x s_y}$$

However, if the assumptions are not met in the linear model, there are outliers, and the data is ordinal, then the two analyses that can be used are Spearman r or Kendall's tau. Spearman's correlation coefficient, denoted by s_2 , is a non-parametric test used to minimise the effects of extreme scores or the effects of the violations of the assumptions (Field, 2013). To conduct this test, one must rank the data and then apply Pearson's equation to the ranks. Kendall's tau, denoted by τ , is appropriate when there is a small sample or many values with the same score.

3.3.3 Quantitative Design - Questionnaires

The frequency scale questionnaire, which for ease of reference will be referred to as the Instagram Hashtag Engagement Scale (I-HES), was designed to collect initial data on Instagram engagement with hashtags of those who self-identify as having ON (Appendix E). As no validated measures were available for the data collection required for this study, and no similar studies have been conducted, the researcher developed the frequency scale questionnaire based on the engagement with Instagram's clean-eating content, which is organised partly by hashtags. The questionnaire needed content validity, which is crucial when developing a new instrument (Taherdoost, 2016). Content validity is the degree to which the items on the questionnaire are relevant to and represent the intended construct (Haynes et al., 1995). Following the necessary steps to ensure content validity, the research began with an exhaustive literature review, which determined what the items on the questionnaire should be. Through supervision and review by psychology professionals, the measure was judged to what extent the items represented the facets of engagement with Instagram clean-eating hashtags; a recommended necessary step in ensuring content validity (Delgado-Rico et al., 2012; Mastaglia et al., 2003). Once receiving their feedback on whether the items were relevant to and represented the engagement of clean-eating hashtags on Instagram, the questionnaire was finalised, and recruitment began. Below is a description of the scales that formed the administered questionnaires:

1. *ORTO-15*: (Appendix D) A 15-item, multiple-choice questionnaire using closed multiple choice answers (always, often, sometimes, never). It is used to assess orthorexic symptoms. A score between one and four is awarded for each question and totalled up, with a maximum score of 60 points, with lower scores on the measure representing more orthorexic tendencies. Although the authors recommend a 40-point cut-off to diagnose ON (Donini et al., 2005), more recent research recommends a 35-

point cut-off to mitigate the possibility of false-positive scores (Almeida et al., 2018; Ramacciotti et al., 2011; Segura-Garcia et al., 2015). Thus, a 35-point cut-off was used in this research.

2. *I-HES*: (Appendix E) A seven-item, five-point scale using closed multiple choice answers. A score between one and five is awarded for each question and totalled up. Each question refers to engagement described by current literature on ON and Instagram. The questionnaire is split into two parts. Part A is comprised of five questions with a choice of answering: never, <once a month, <once a week, once a week, >once a week. ‘Never’ is awarded a score of 1, ‘<once a month’ a score of 2, ‘<once a week’ a score of 3, ‘once a week’ a score of 4, and ‘>once a week’ a score of 5. With a maximum score of 25, the higher the score, the more engaged the participant is. This section aims to understand how often the participant engages with the clean-eating content. Based on Turner & Lefevre's (2017) conclusions regarding Instagram’s selective photo sharing capability as relates to ON and Santarossa et al.'s (2019) finding that images shared with #orthorexia were 68% food, question one refers to how often the individual posts pictures or stories about food. Questions two and three ask about clean-eating hashtags to understand how those who self-identify as having ON consciously search for and engage with the clean-eating hashtag content on Instagram. Questions four and five aim to establish the engagement and frequency related to giving and receiving advice. These were based on two studies. Chung et al. (2017) reported that individuals who engage with Instagram for healthy eating participate in a community of likeminded individuals. Additionally, Valente et al. (2020) found that individuals with ON engaged with information and advice on nutrition on Instagram, which they felt propelled their symptoms. Part B is comprised of two questions with a choice of answers: 0, <5, 6-10, 11-15, 16>. ‘0’ receives a score of 1 and each answer is

sequentially scored, with '16>' receiving a score of 5. This section seeks to establish the number of accounts the individual follows, as this influences their engagement, Instagram feed and exposure to the clean-eating echo chamber effect. The highest total score for this section is 10, meaning the individual follows more accounts. Question one asks about wellness brands that sell clean and healthy products, whereas question two focuses on the health accounts, such as healthy Influencers.

3. *Demographics and personal information:* (Appendix F) Demographic information, including age, ethnicity, student status, the range of body weight (below normal, normal, above normal), and range of fitness (below normal, normal, above normal) they consider themselves to be. Additionally, they are asked if they have ever tried to lose weight.

3.3.4 Cronbach's Alpha

As the frequency scale was created for this study, a Cronbach's Coefficient Alpha to test internal consistency was calculated, utilising the data of 104 participants recruited for this study (see results for further details on the complete sample of participants). This test, the most widely used measure of reliability (Trizano-Hermosilla & Alvarado, 2016), is important to conduct as a measure cannot be valid unless it is reliable (Tavakol & Dennick, 2011). Part A of the scale, comprised of questions one through five, was run through the analysis and Part B of the scale was run in a separate test. Interpreting reliability estimates followed recommendations by Pallant (2020). Cronbach's coefficient alpha was calculated using IBM SPSS Statistics (Version 28). Pallant (2020) noted that a high alpha is difficult if the scale has less than 10 items. Thus, an alpha above .5 is considered good. Part A of the scale demonstrated good reliability ($\alpha = .74$). According to Briggs & Cheek (1986), the inter-item correlation can serve as a guide for item homogeneity in a unidimensional scale (Piedmont & Hyland, 1993).

Optimal levels of homogeneity occur when the correlation is between the range .2 to .4. The inter-item correlation for Part A is .32, demonstrating good unidimensionality. Part B had good reliability ($\alpha = .62$), and the inter-item correlation was .45, demonstrating good unidimensionality.

3.3.5 *Quantitative Analysis*

3.3.5.1 Correlation. Once the Cronbach's alpha demonstrated good unidimensionality, a correlation was run to establish whether an association between participants' ORTO-15 score and their Instagram clean-eating hashtags engagement existed. Data from the questionnaires were input into SPSS, and a check was performed to assess assumptions of normality/bias. As normality tests are sensitive to sample sizes and small samples often pass normality tests, visual checking (histogram graph and QQ plot) was combined with a Shapiro-Wilk test of normality. The ORTO-15 score implied the data was not significantly different from normal distribution, so an assumption of normality was made. However, the I-HES scores were different from normal distribution (see section 4.1.2.1 for further detail); thus, there was a lack of evidence to accept the null hypothesis. Therefore, a Spearman r two-tailed test was conducted.

3.3.5.2 ANOVA. The participants provided data regarding their self-perceived levels of fitness and body weight relative to their perceived view of themselves against what they considered 'normal'. In both these questions, the participants could answer, 'below the normal range', 'within the normal range', 'above the normal range'. To determine whether there is a statistical difference between the three answers within each question, an ANOVA was run. For a valid ANOVA test, variance equality must be met (Sawyer, 2013). Data from the questionnaires was input into SPSS, and a Levene's test was run to assess for equality of variance (Carroll & Schneider, 1985). The score for body weight was not significant, $F(2,96) = .022, p = .98$. The score for fitness levels was not significant, $F(2,93) = .105, p = .90$. Given that $p > 0.05$ in both

tests, the variables do not violate the homogeneity of variance assumptions required for ANOVA (Nordstokke et al., 2011) and ANOVA tests were run. See section 4.1.3 for results.

3.4 Qualitative Analysis

3.4.1 Rationale for Thematic Analysis

It is important that the research method used by a researcher is aligned with the theoretical assumptions and the research question, thus ensuring coherence within the project (Willig, 2013). Thematic analysis, a method widely used within psychology, was used in this project as it does not dictate specific data collection methodology, hold a particular theoretical position, or specify epistemological or ontological frameworks (Braun & Clarke, 2013). It thus allows for analysis of the content in a data-driven way without being shaped by theory (Braun & Clarke, 2013).

TA was first coined as a qualitative method by Merton in 1975 (Merton, 1975) and since has been used in a multitude of different ways, from quantitatively measuring cognitive complexity to being used interchangeably with terms such as ‘content analysis’ (Clarke et al., 2015). This led, understandably, to confusion about TA and whether it is a valid and actual method (Clarke et al., 2015). Victoria Clarke and Virginia Braun first put forward a reliable and systemic approach to coding in 2006 (Braun & Clarke, 2006) and have since expanded on their work, developing what they call a ‘Big Q’ approach, now more regularly referred to as reflexive TA (Braun & Clarke, 2019). This approach does not seek a universal truth. Still, it emphasises an understanding that meaning is unique to a specific context and that the subjective role of the researcher is not a negative but a positive addition to the research (Clarke et al., 2015).

This method is aligned with the researcher’s understanding of what is important when conducting qualitative research, i.e. “interpreting and creating”, not “discovering the truth” (Braun & Clarke, 2019, p.7) from the data. According to Heidegger (1959/2008), as interpreted

in Ho et al. (2017), one must immerse oneself in their language to understand what an individual is communicating to us. This allows the researcher to experience what the language is communicating, both spoken and unspoken (Ho et al., 2017). Thus, to interpret, the researcher must be fully immersed in the data over time, allowing them to generate themes actively and thoughtfully. Additionally, it enables the researcher to experience the language of the participant, both spoken and unspoken, thus trying to understand a way to approach the meaning of the participant's lived experience (Ho et al., 2017).

3.4.2 Thematic Analysis

Thematic Analysis is unique in that it provides only a method to analyse data and does not provide a method of data collection, theoretical positions, epistemological or ontological frameworks (Braun & Clarke, 2013). Thus, TA can be applied to any type of data or answer any question.

Additionally, researchers utilising TA can identify themes from a 'bottom-up' approach, i.e., by allowing the data to drive what is of interest, or a 'top-down' approach, in which the researcher already has an idea of the topics of interest before beginning the analysis. In reality, it is always a mixture of these two approaches, as the researcher always brings their ideas to the analyses, and it is rare for them to completely ignore the content of the interviews (Braun & Clarke, 2012).

Researchers can apply the method of TA experientially or critically. Experiential approaches aim to ground the research in the participant's narrative, using their language to capture their thoughts and feelings (Clarke & Braun, 2014). By contrast, the critical approach perceives the language used by the participants to gain insight into the social constructs the individual exists in rather than their internal and reflective world.

3.4.3 Other Qualitative Approaches Considered

It is argued by Braun & Clarke (2020) that there are no methodologies that are better than others as there tends to be ample overlap in what the various methods and methodologies can achieve (Braun & Clarke, 2020). I had, however, considered other qualitative approaches before deciding on TA.

Interpretative Phenomenological Analysis (IPA) has grown increasingly popular in qualitative research since the mid-1990s (Hefferon & Gil-Rodriguez, 2011). Unlike TA, IPA is considered a methodology rather than an analytic method and thus has a more stringent framework which guides theory, research question, design, data collection and analytical procedures (Braun & Clarke, 2013). As its name suggests, IPA is concerned with exploring an individual's lived experiences and the meaning they attach to those experiences. Thus, it tends to focus on significant life experiences, often influencing the individual's identity (Braun & Clarke, 2013). IPA has a dual focus on the individual cases and the themes that run throughout the participants' narratives. Therefore, it can lack the depth and richness of TA. Additionally, IPA's theoretical underpinnings in phenomenology, hermeneutics and ideography (Miller et al., 2018) do not allow TA's theoretical flexibility.

Grounded Theory (GT) was developed in the 1960s by Glaser & Strauss (1967) and has since become incredibly popular across the social sciences. Like IPA, GT aims to explore an individual's or group's view and experience through systematic collection and analysis. However, GT aims to understand more social processes and create theories which are 'grounded' in the data (Noble & Mitchell, 2016). GT does not allow for the flexibility that TA affords and has distinctive procedures for gathering and analysing data, such as not engaging with the literature until after completing the analysis. This would have been difficult to adhere to as the critical literature review, research proposal and ethics form was undertaken and submitted before beginning my research. Additionally, GT looks more at the social processes,

whereas TA allows for the flexibility to study an individual's personal experience, which is my research aim.

3.4.4 Qualitative Design - Interviews

To understand the participant's experiences and perspectives about their ON and Instagram, the interviews were conducted using a semi-structured format. This method allowed participants to enter into a dialogue and for the researcher to adapt or probe responses of interest (Smith & Osborn, 2015). Given the topic's sensitivity for the participant, the research was conducted on a one-to-one basis, lasted approximately one hour, and was aligned with Elliott et al.'s (1999) guidelines to protect the quality of the study. These guidelines require that both quantitative and qualitative research demonstrate explicit scientific context and purpose which contributes to knowledge, appropriate methods are specified and utilised, participants are treated with respect, an appropriate discussion is included following clear presentation of the research. Additionally, qualitative research must demonstrate that the researcher owns their perspective, provide a description of the participants, incorporate examples of data, undertake credibility checks, present research coherently, specific research tasks are studied and described comprehensively, and finally that the research resonates with readers. An interview schedule (Appendix G) consisted of four questions. These were 'what is your history of ON?', 'what has been your experience of using Instagram?', 'Can you tell me about how you are being affected by what you see and engage with on Instagram?', 'How do you make sense of your sense of self on Instagram?'. These questions allowed the participants to share their experience with ON and how they believe their sense of self is influenced whilst using Instagram. To encourage participants to expand their thoughts and elaborate, the open-ended questions included prompts to assist the participants should the question appear too abstract (Pietkiewicz & Smith, 2014).

3.4.5 *Qualitative Analysis - TA*

Thematic Analysis utilises the ‘Big Q’ process referenced by Braun & Clarke (2012). For accuracy purposes, interviews were audio-recorded. The researcher transcribed the interviews herself, using the transcription notation system by Braun & Clarke (2013) and ensuring that the transcripts were verbatim, thus reflecting pauses, interjections, unclear words or phrases, laughter and emphasis. All interviews were conducted before beginning the analysis. Continuing with Braun and Clarke's guidelines (2006), the data was analysed in six steps. Once the transcripts were completed, the researcher read the transcript several times to become familiar with the data, record initial thoughts, and contemplate any subtle implications.

Subsequently, the transcripts were read line by line using Microsoft Word, and initial codes were written in a column alongside the transcripts (Appendix Q). The researcher's thesis supervisor reviewed the initial codes of one transcript and approved the process. Once all initial coding was complete, the transcripts were input into the software NVivo (Jackson & Bazeley, 2019). Compatible with TA, this software allows for analysing a large amount of data in a time-efficient manner with a clear audit trail, enabling the analytic decisions and interpretations to be traced (Parkinson et al., 2016). Areas of interest were highlighted and allocated to existing codes or newly created labels. As the process is relatively flexible, it was repeated three times before the researcher ‘searched’ for themes (Braun & Clarke, 2013) and clustered similar codes ensuring they identified meaningful aspects of the data. Initially there were 34 codes that were identified, and it was through ensuring that the codes explained the importance and relationship to the question posed that 14 codes were decided to be most relevant. A full list of the relevant codes and the occurrences of the code across the data can be viewed in Appendix U. The researcher used short phrases for the codes as it was deemed important for the code to be understood in isolation away from the data. When generating the themes, the codes were collated and put into rough thematic maps to try and organise them by areas of commonality.

These were elaborated upon or changed as a deeper understanding of the data occurred. Theme development was done through continuing to group codes together that were relevant, and the visual tool of the thematic map was particularly useful in helping to identify overlap and connection. The themes and codes were subsequently gathered with the relevant quotations to ensure they were not too narrow or broad before being reviewed and defined. As discussed in 'Reflexivity Part One', there was possibly an opportunity for personal experiences to affect the data analysis and so extensive cross checking was carried out at this stage by the researcher's supervisor as well as peers to ensure that personal experiences were taken account of and the analysis was not biased. Peer revision is an accepted tool to help the researcher understand whether the arguments they have put forward regarding the themes are adequate (Angen, 2000).

The researcher subscribes to a critical epistemology and examined the data for patterns and themes, understanding that the participant's language can create, rather than simply reflect, their social reality (Byrne, 2022). It was important to try not to have the themes steered by previous research, and a more inductive and data-driven approach was aimed for whilst also recognising the researcher's role in co-creating themes (Braun & Clarke, 2013). Codes and themes names were discussed with the researcher's supervisor, which helped to bring clarity, and words that were used in the transcripts helped to form the code names. The researcher tried to use words that were used by participants in order to name the codes, as can be seen in Appendices R, S and T, where quotes that made up the codes 'Wanting to Make a Change', 'Seeking & Achieving Perfection' and 'Reinforcing Role of Instagram on Guilt' use the word 'change/changing', 'perfection/perfectionist' and 'guilt/guilty' respectively. Under the theme 'Regulating Self Worth Symbolically, the researcher used the word 'object' to encapsulate the person(s) that influenced the participants, for example 'Comparing to the Good Object', as well

as whom the participants aimed to be, for example 'Seeking to be an Idealised Object'. These steps allowed for the final stage of the process, writing up the findings.

A reflective journal was kept throughout the analytic process, allowing the researcher to be aware of how personal beliefs and experiences may influence the searching for codes. According to Smith (1999), this standard practice can help increase the depth and understanding of qualitative research.

3.5 Data Collection and Recruitment

The recruitment process involved producing flyers (Appendix A) posted on an Instagram account made specifically for this research (@Orthorexia_Research). The posts were promoted using hashtags and sponsored advertising, which targeted individuals who engaged with clean-eating content on Instagram. Individuals interested in participating were invited to directly message on Instagram or email the researcher to receive more information on the study. Those who expressed continued interest were sent an information sheet (Appendix B) and instructed to complete and return the consent form (Appendix C). Once the consent was received, the ORTO-15, the frequency scale questionnaire, and the participant demographic sheet were sent to the participant. The questionnaires were sent in PDF format, or participants were invited to complete them on a secure online survey platform, Survey Monkey. The top quartile of the combined scores were contacted and invited for an interview, with eight individuals in the top 40% consenting to be interviewed. The consent form the participants signed was created prior to the ongoing Covid safety measures and stated the interviews would take place in person. However, having received ethical approval to conduct the interviews online, this was explained to the interviewees. Participants all provided written informed consent and interviews took place via Zoom.

3.5.1 *Interview Practice*

The majority of the questions were well received by the participants which was evidenced by their relevant answers, openness to the topic, and ease of the conversation. However, the phrase ‘sense of self’ in the final question was not well understood by participants and so this was explained to them. In the following excerpt with the participant Ava, the phrase ‘sense of self’ was broken down for ease of understanding; “How do you make sense of your self-esteem, self-worth and identity on Instagram?” (lines 416-417). This was well understood by the participants, and the answers received were subsequently relevant. This is further explored in the final reflexivity.

3.6 Participants

The research had inclusion and exclusion criteria for the participants. Participants needed to be 18 years and older, which helped ensure the largest homogeneous sample pool. Not restricting an upper age limit has been used in several studies (Barnes & Caltabiano, 2017; Barthels et al., 2018; Bundros et al., 2016; Dell’Osso et al., 2018; Dunn et al., 2017; Roncero et al., 2017; Turner & Lefevre, 2017). The age mean was 25.55 years (SD = 8.44) for the quantitative participants and 23.34 years (SD = 5.12) for the qualitative (see Table two below). These are both in line with the studies sighted above. This is in the bracket of Instagram’s user demographics, with ages varying between 18-29 years old (Turner & Lefevre, 2017) and 18 and 24 years old (Clement, 2020). Finally, Arnett (2000) identifies the late adolescence/early adulthood stage as a critical time for social skills, self-dependence and identity formation, which is appropriate for the qualitative element of the research.

Additionally, participants needed to be female, domicile in the United Kingdom, self-identify as having ON and use Instagram. Although some studies, such as McComb & Mills (2019), found there was no notable difference between male and female reported levels of ON, other studies have reported that ON is more prevalent in females than males (Strahler, 2019;

Ramacciotti et al., 2011). Instagram user demographics are also reported to be 50.9% females and 49.1% male (Clement 2020b). Thus, as a homogeneous sample group is recommended for smaller sample sizes in a TA study, (Guest et al., 2006), this study decided to focus on females.

To ensure an accurate sample size for the quantitative aspect of the research, a power calculation was conducted using the *G* Power* (Faul et al., 2007) and taking the effect size from the most recent meta-analysis (Strahler, 2019). Using a one-tailed test, with an effect size of .23, $\alpha = .05$ and $1-\beta = .80$, the ideal sample size was 113. A total of 104 participants were recruited.

For the qualitative aspect of the study, the participants were selected from the quantitative sample and identified by extreme scores of the ORTO-15 and the I-HES. Between six and 10 participants is considered an adequate sample for Professional Doctorate candidates utilising the TA method (Braun & Clarke, 2013). Eight participants were deemed sufficient for the qualitative interviews as the research used a mixed-method approach.

Table 2*Qualitative sample characteristics*

Pseudonym	Age	I-HES Score (Part A)	I-HES Score (Part B)	ORTO-15 Score	Occupation
Jane	29	15	10	24	Physiotherapist
Sophie	22	24	9	23	Student
Laura	18	25	10	30	Student
Alice	28	15	10	26	Manager
Emily	32	22	10	29	Client Director
Ava	20	21	8	29	Student
Georgia	20	22	7	27	Researcher
Grace	18	19	7	27	Student

3.7 Ethical Considerations*3.7.1 Ethical Standards*

Ethical approval for the study was granted by London Metropolitan University's ethics committee (Appendices J & K). Additionally, the research and behaviour of the researcher were in line with the British Psychological Society (BPS; 2014) 'Code of Human Research Ethics'. According to the BPS, ethical research observes four primary principles which are similar to the Research Ethics Policy and Procedures of London Metropolitan University: 1) respect for participants' autonomy and dignity, 2) research is designed to contribute scientific value, 3) research recognises a high level of social responsibility, and 4) the researcher maximises benefit whilst minimising harm. After the interview, space was given to the

participants to ask questions before a debrief sheet (Appendix H) was sent to the participants, detailing information about what will happen with the information gathered, whom they could contact if they have any questions or concerns, and organisations that offer support for general EDs.

3.7.2 Monitoring Distress

The distress levels of the participants were monitored throughout the interviews by paying attention to their verbal and non-verbal cues. Although no participants experienced distress throughout the interviews, a distress protocol (Appendix I) was in place, which directed the researcher on what actions to take.

3.7.3 Confidentiality

Maintaining confidentiality and anonymity is imperative in research. The participants in the research were made aware from the beginning that, if they chose to participate, they would be given a pseudonym, and all their identifying information would be changed within the transcripts from the interviews, which complies with best practice (Braun & Clarke, 2013) and included specific awareness of the limits of confidentiality as relates to issues such as intent to harm either others or themselves.

3.7.4 Data Protection

All data, including forms, questionnaires, and audio-recorded interviews, were stored on a password-protected computer to ensure confidentiality and data protection. Any hard documents were kept in a locked filing cabinet to which only the researcher had access.

4 Findings

The purpose of this chapter is to present the data that has been gathered both quantitatively and qualitatively to answer the following two research questions:

- What is the relationship between orthorexia nervosa symptoms and engagement with clean-eating hashtags on Instagram?
- How do individuals who identify with orthorexic behavioural patterns experience their sense of self whilst using Instagram?

The chapter begins with the quantitative data before presenting the qualitative data.

4.1 Quantitative Analysis

4.1.1 Descriptive Statistics

The descriptive statistics for the demographic variables were explored. The age of the participants ranged from 18 to 60 years ($M = 25.6$, $SD = 8.44$). Table three indicates a balanced distribution between 'Full-time student' and 'Not a student' status, with only four participants indicating they are in part-time studies. The Table indicates a balanced distribution of employment status. There was a less satisfactory distribution among ethnicity, with English/Welsh/Scottish/North Irish and British being overrepresented and White Other the second most represented ethnicity. The participants reported whether they had ever tried to lose weight, with 103 reporting they had and only one reporting they had not ($M = 1$, $SD = .098$). The mean score for the ORTO-15 was 31.62 ($SD=4.83$) with the majority of the participants ($N=104$) scoring below the cut-off of the 35 to determine the presence of ON tendencies (see Figure five for a histogram of the data from the ORTO-15). Mean scores for the I-HES parts A and B were 11.05 ($SD=4.30$) and 6.89 ($SD=2.42$), respectively (see Figures one and three for an illustration of the spread of the data).

Table 3*Demographic Characteristics of Participants*

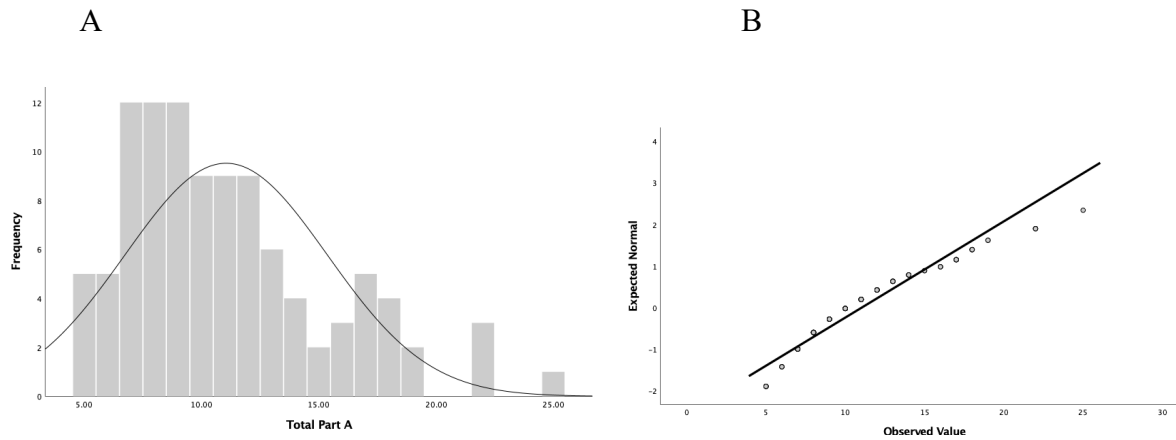
Basic Characteristic		
	n	%
Student Status		
Full-time student	51	50.5
Part time student	4	4.0
Not a student	46	45.5
Work Status		
Full time	35	34.3
Part time	30	29.4
Doesn't work	37	36.3
Ethnicity		
English/Welsh/Scottish/ Northern Irish/British	64	65.3
Irish	3	3.1
Gypsy or Irish Traveller	1	1.0
Any other white background	22	22.4
White and Black African	1	1.0
White and Asian	2	2.0
Caribbean	1	1.0
Any other ethnic group	2	2.0

4.1.2 Correlations

4.1.2.1 Test of Normality. To examine the distribution of the questionnaire data, a Shapiro-Wilk test was performed on scores from the I-HES parts A and B, and scores from the ORTO-15. Examining the I-HES part A, the distribution of data departed significantly from normality ($W(103) = .93, p < .001$). As it is a small sample size, this can be viewed through the respective histogram and scatter plots (Wilkinson, 1999). Part A's histogram chart (see Figure 1A) appears right-skewed (positive skewness), and the points do not fall along the reference line in the QQ Plot (see Figure 1B).

Figure 1

Histogram and QQ Plot for I-HES Part A of I-HES

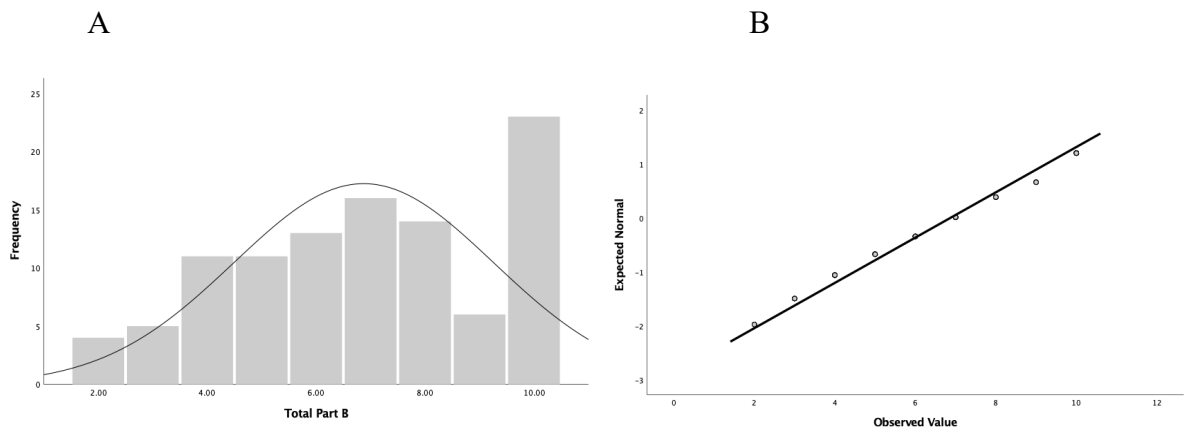


Note. A) Histogram of data from the I-HES part A showing the distribution of scores from across participants. B) QQ plot created from the same data from the I-HES part A.

Similarly, examination of part B of the I-HES also departed significantly from normality ($W(103) = .92, p < .001$) with the histogram for part B of the I-HES (see Figure 2A) appearing left-skewed (negative skewness), with the points not falling along the reference line in the QQ Plot (see Figure 2B).

Figure 2

Histogram and QQ Plot for I-HES Part B of I-HES

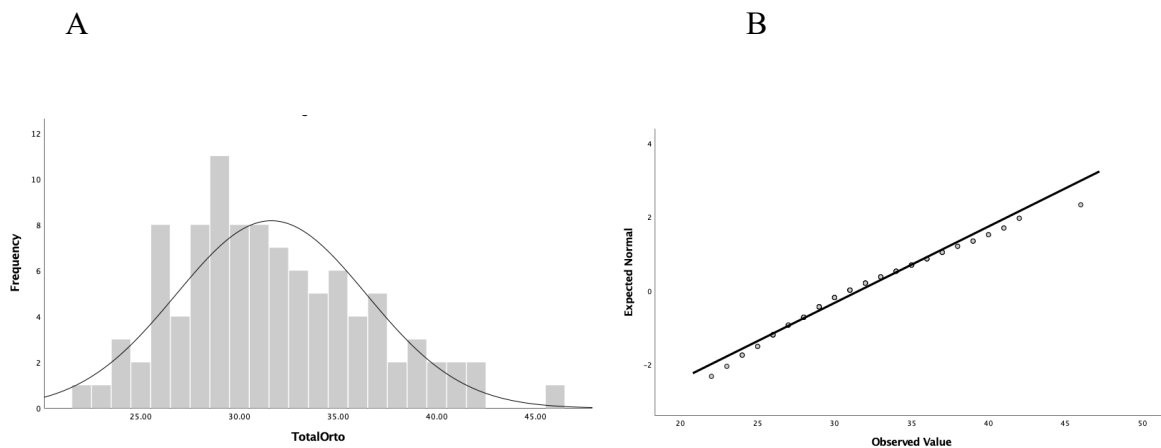


Note. A) Histogram of data from the I-HES part B showing the distribution of scores from across participants. B) QQ plot created from the same data from the I-HES part B.

A Shapiro-Wilk test was also performed on the ORTO-15 scores and marginally did not show evidence of non-normality ($W(99) = .98, p=.68$). The histogram (see Figure 3A) and QQ Plot (Figure 3B) are shown below. Based on the outcome, a Spearman's correlation test was used for proceeding correlational analyses.

Figure 3

Histogram and QQ Plot for ORTO-15



Note. A) Histogram of data from ORTO-15 showing the distribution of scores across participants. B) QQ plot created from the same data from the ORTO-15.

4.1.2.2 The Relationship between ON and Hashtag Engagement. A two-tailed Spearman's rank correlation was computed to assess the relationship between the ORTO-15 and the two categories on I-HES, part A and part B. Part A measures how often an individual engages with the various methods identified on Instagram that facilitate the use of a hashtag. Part B measures the number of accounts the individual follows. There was a negative relationship between the ORTO-15 scores and part A of the I-HES, which was statistically significant, $r_s(97) = -.297, p = .003$. This means that as participants scored higher on part A of the I-HES, they scored lower on the ORTO-15 scale, demonstrating higher traits of ON. There was a strong negative relationship between the scores on the ORTO-15 and part B of the I-HES, which was statistically significant, $r_s(96) = -.411, p < .001$. This means that higher scores on the part B questions were related to lower scores on the ORTO-15 scale, signifying higher traits of ON.

To examine whether a relationship existed between parts A and B of the I-HES, a further correlational analysis was performed. Analysis showed a positive correlation between part A and part B of the questionnaire, which was statistically significant, $r_s(101) = .356$, $p < .001$ (see Table five for a breakdown of the results).

Taken together, these data answer the first research question and demonstrates that the more an individual is engaged with Instagram clean-eating hashtags, the lower their score on the ORTO-15. The lower an individual scores on the ORTO-15, the more they demonstrate orthorexic symptoms. Thus, the data indicates a positive correlation between higher engagement with Instagram clean-eating hashtags and ON symptoms.

Table 4

Spearman's rho Correlations between Total ORTO-15 Scores and Total I-HES Part A Scores, and Total I-HES Part B Scores

Variable	Rho	p
Total Part A	-.297**	.003
Total Part B	-.411**	<.001

** Correlation is significant at the 0.01 level (2-tailed).

Table 5

Spearman's rho Correlation between Total Part A and Total Part B of I-HES

Variable	Rho	p
Total Part A	.356**	<.001

** Correlation is significant at the 0.01 level (2-tailed).

4.1.3 ANOVAS

4.1.3.1 Self-Perceived Body Weight. 99 participants provided information on whether they believed their body weight was below a normal range, within a normal range or above it. A one-way ANOVA was performed to compare the effect of the total ORTO-15 score on body

weight, revealing that there was not a statistically significant difference in mean body weight between at least two groups ($F(2, 96) = [.381]$, $p = .684$). Table six details the ANOVA result.

Table 6

One-way ANOVA results between ORTO-15 scores and Self-Perceived Body Weight

Measure	Below normal range for body weight		Within the normal body weight		Above the normal body weight		F(2,96)	η^2
	M	SD	M	SD	M	SD		
Total ORTO-15 Score	32	4.99	31	4.76	31	5.00	.38	.008

4.1.3.2 Self-Perceived Fitness Level. 96 participants filled in information regarding whether they believed their fitness level was below the normal range, within the normal range or above it. A one-way ANOVA was performed to compare the effect of the total ORTO-15 score on fitness level, revealing there was not a statistically significant difference in mean fitness levels between at least two groups ($F(2, 93) = [1.02]$, $p = .365$). Table seven details the ANOVA results.

Table 7

One-way ANOVA results using ORTO-15 scores and Self-Perceived Fitness Levels

Measure	Below normal range for fitness		Within the normal range for fitness		Above the normal range for fitness		F(2,93)	η^2
	M	SD	M	SD	M	SD		
Total ORTO-15 Score	34	4.36	32	4.79	31	4.9	1.02	.021

4.2 Qualitative Analysis

The qualitative analysis aims to understand how those who self-identify as having ON feel their sense of self has been impacted whilst using Instagram, thereby answering the second research question. Through interviews, qualitative research allows for in-depth exploration, description, and interpretation of a small, well-defined group of individual's personal and social experiences (Willig, 2013). The purpose of this next section is to describe the themes identified as part of the thematic analysis process.

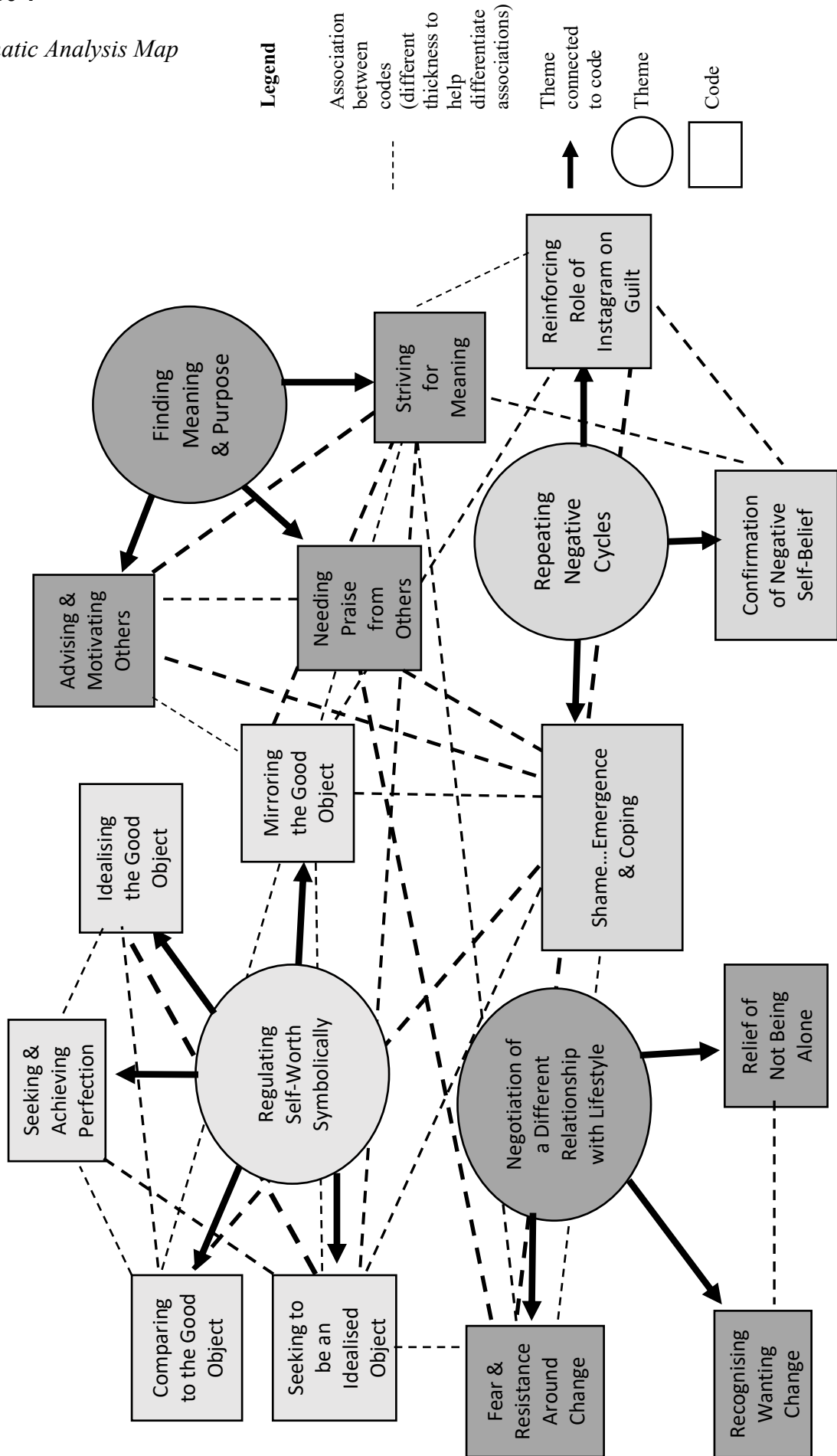
Four themes, comprised of codes, emerged from the TA of the eight semi-structured interviews. Firstly, 'Regulating Self-Worth Symbolically' describes how the participants regulate their sense of self-worth through ideal, or good, objects from Instagram, recognising their perfectionism and how they sought to be idealised individuals on Instagram. Secondly, 'Finding Meaning & Purpose' describes how the participant's self-worth and self-esteem are fulfilled through behaviours that allow them to achieve goals and receive external validation from others on Instagram. Thirdly, 'Repeating Negative Cycles' describes how the participant's sense of self is negatively impacted through cycles they find themselves in. Fourthly, 'Negotiation of a Different Relationship with Lifestyle' refers to the participants' relationship with changing their ON behaviours. Table eight lists each theme and the corresponding codes. To illustrate how these themes and codes are related, figure four was created. A codebook explaining the breakdown of the codes can be found in Appendix U.

Table 8*Qualitative themes and corresponding codes*

Theme and Codes
Regulating Self-Worth Symbolically
Comparing to the Good Object
Idealising the Good Object
Mirroring the Good Object
Seeking & Achieving Perfection
Seeking to be an Idealised Object
Finding Meaning & Purpose
Advising & Motivating
Needing Praise from Others
Striving for Meaning
Repeating Negative Cycles
Confirmation of Negative Self-Belief
Reinforcing Role of Instagram on Guilt
Shame...Emergence & Coping
Negotiating a Different Relationship with Lifestyle
Fear & Resistance around Change
Relief of Not Being Alone
Wanting to Make a Change

Figure 4

Thematic Analysis Map



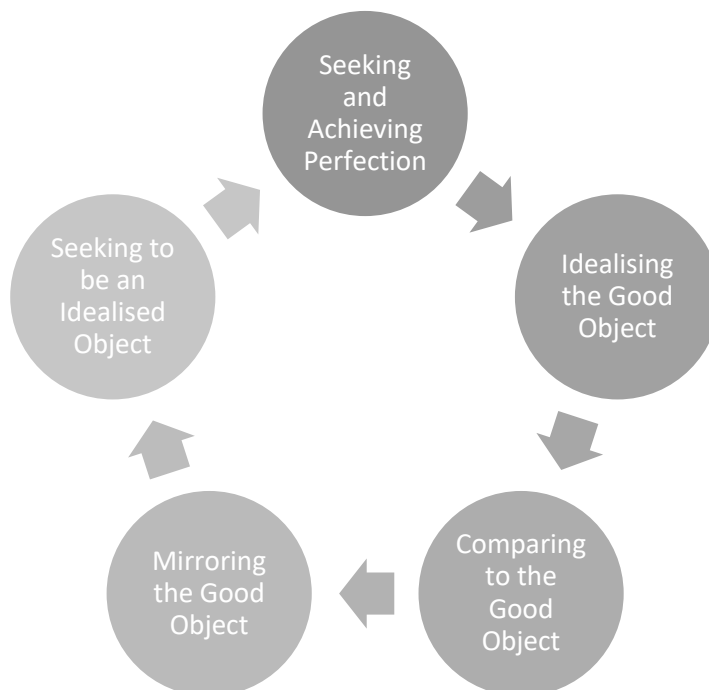
Extracts from the interviews with the participants have been included as they were spoken. However, for ease of reading, repeating words, sentiments and filler words have been omitted.

4.2.1 Theme One: *Regulating Self-Worth Symbolically*

This first theme reflects how the participants' sense of self-worth and self-esteem is regulated through idealised individuals on Instagram, mainly by those known as Influencers. Additionally, this theme encompasses how the participants seek to fulfil their narcissistic needs through curating themselves as an idealised object. It contains five codes, 'Seeking & Achieving Perfection', 'Idealising the Good Object', 'Comparing to the Good Object', 'Mirroring the Good Object', and 'Seeking to be an Idealised Object'. The relationship between these five codes can be understood in Figure five, beginning with 'Seeking & Achieving Perfection'.

Figure 5

'Regulating self-worth symbolically' cycle



4.2.1.1 Seeking & Achieving Perfection. This code refers to the control the participants exercised over themselves, helping to minimise the feelings of low self-worth and esteem the participants felt. The perfectionistic tendencies, they described, began before using Instagram but were often further fuelled by it.

“...I think I...qualify as orthorexic, it needs to be perfect....it's really hard for me to dissociate happiness and goals and achieving something without putting diet and workout and being really...reproachless”.

Emily (585-587)

Emily is linking ON and the literal translation of the obsession with being strict or straight. She recognises that to achieve a sense of happiness and thus a stronger sense of self, she needs to have her lifestyle, i.e., her diet and exercise, be perfect. Only if it is “reproachless” can she feel a sense of happiness and achievement.

“I've wanted to be the best...even if that would cause me to be burned out or get upset or stressed... And that was what happened with the food and the exercise. I wanted to be doing it at the best level, and I wanted to be better than these people on Instagram...it just got so unattainable”.

Ava (362-367)

Ava recognises that her need to “be the best” with her diet and exercise caused her physical, emotional, and psychological distress. Ava used Influencers on Instagram as a benchmark of the highest standard and worked to be better than them, aiming for perfection. By admitting it was “unattainable”, Ava is describing the ever-moving benchmark and how difficult it was for her to try and reach these levels. This, in turn, was most likely perpetuating her low self-esteem and self-worth as she could never achieve her goals. Ava discussed in the interview how she had always had perfectionistic tendencies, which she believes stem from rejection

from a parental figure. This perfectionism, she stated, “got completely projected onto exercise and food” (lines 357-358). Ava is thus attempting to regulate her low sense of self through perfectionistic tendencies.

“Because since I've always been a perfectionist and very tough on myself, it was like I had a voice in my head, always on top of me saying, ‘just do this, don't do that (.) Eat these, eat that’...It was always a constant reminder”. **Laura** (220-223)

Laura describes that she has “always been a perfectionist” and that Instagram helped facilitate a feeling within her that she needed to strive even more for perfection. This, Laura describes, was through Instagram becoming like “a voice” in her head, reminding her constantly of how she should be eating and exercising. The “constant reminder” conjures up the idea that Laura felt there was no escape from her ON behaviours once she began utilising Instagram. Thus, Laura’s self-esteem was impacted by how well she felt she was meeting her perfectionistic tendencies.

4.2.1.2 Idealising the Good Object. The participants described using the photographs, videos and information posted by the Influencers as inspiration for what their body and lifestyle should look like. Additionally, the participants seemed to rely on their idealised object as a source of inspiration to continue living their clean lifestyles. They described how they preferred the Influencer to reflect an ease in living this lifestyle, which they found motivational and inspirational. Georgia described this:

“...they look like they're enjoying a really happy lifestyle. They looked like physique and, the foods that they would share, it looked like the type of lifestyle I would want. But they seem to be doing it so effortlessly”.

Georgia (471-476)

Georgia describes finding and following women on Instagram who looked like they were “enjoying a really happy lifestyle”. It was important for her to idealise not only how they looked but the type of lifestyle they portrayed. Georgia very importantly indicates this was how she would like to live. Interestingly, Georgia also voiced that if an Influencer did not represent their lifestyle to be effortless, she unfollowed them:

“... I quite quickly heard about the narrative of even they struggle, and...a lot of them would come out and say, “I had this eating problem for a year...and I stopped being so obsessed”, they appeared like they had what I had, but maybe they managed to notice it quite early on. So, I realised that they weren't finding it that easy either... then I wouldn't look at those accounts”. **Georgia** (463-469)

Georgia reflects that when her idealised person admitted they were finding their lifestyle difficult and had a disordered relationship with food, it resulted in an internal conflict. By saying that they appeared to have similar feelings and behaviours as Georgia, she feels as though they are no longer able to hold the idealised object status, although “maybe they managed to notice it quite early on”. This, again, demonstrates that Georgia’s self-esteem is being influenced as the individual was able to achieve recognition of unhealthy behaviours before herself.

“...people who seem to be living the life... eating salad and being there...it’s so inspirational to see them do that and they seem to be feeling good, if I do that, I’ll be feeling good as well.... So, I often...at night before going to bed when I feel like tomorrow it's going to be a good day... I'm going to stock up on images of people super running in the morning and feeling so fresh after it and having smoothie bowls...”. **Emily** (227-235)

Emily describes her emotional and behavioural cycle of using Instagram and how this furthers her drive to continue her ON lifestyle. Emily recognises she searches for ways to feel better,

turning to Instagram and those she idealises on the platform. She looks at those who “seem to be living the life”, and in the interview, Emily disclosed that it was important that she “see someone who is happy doing this” (line 252) because she finds her ON lifestyle difficult sometimes. Emily describes how she would go onto Instagram before going to bed so she could find inspiration to continue her clean-eating and exercise. Thus, the Influencers remind Emily that if she continued, she too could “be feeling good as well”. Through Emily saying, “tomorrow it’s going to be a good day”, she is demonstrating that a good day encapsulates clean eating and exercising. Emily strives to improve her self-esteem and self-worth and uses those on Instagram as inspiration to achieve this.

4.2.1.3 Comparing to the Good Object. Participants compare themselves to the Influencers and those they idealise on Instagram, in terms of body shape and lifestyle. This seemed to lead to their self-esteem and self-worth being dependent on how they believed they measured up to the idealised person. Grace discussed this:

“...I feel I need to stop using it because it just makes me feel worse about myself, not even comparing myself to celebrities or models, even just comparing myself to people I know, or my friends, I find myself being really jealous of them and the way they look. And even that I find gets me down quite a lot, so, I think generally just, Instagram can make me feel not great”.

Grace (439-445)

Grace describes Instagram as detrimental to her mental health as she compares herself to celebrities, models, and friends whom she believes to have the ideal body. Grace relays how this process negatively influences her self-esteem. She recognises it is a “toxic app” in that she feels “worse” about herself and “down quite a lot” when she uses it, comparing herself to others on it. However, although Grace says she feels she needs to stop using it, she does not. This

highlights the difficult relationship she experiences with Instagram and her need to continue comparing herself to others on it.

This was further discussed by Ava, who describes the negative impact it had on her self-esteem:

“...at one point, I just viewed myself as worthy as a number on the scale because of what I was seeing posted and seeing these people posting the clean eating and how many kilogrammes they weigh, and if my number wasn't near that, I would just think I wasn't worthy of being like one of these people”. **Ava** (306-309)

Through comparing herself to those she idealised on Instagram, Ava measured her self-worth according to what the Influencers were posting. By believing herself not to be “worthy of being like one of these people”, Ava describes that she was aspiring to be like them and felt it was not attainable. Through comparing herself to their diet and weight, Ava was finding a large part of her sense of self to be based entirely on the comparison she was making.

Participants also discussed how they believed the comparison was useful.

“I felt like by letting go of this [comparison pictures] I would lose touch and have to go through again with a big horrible realisation that I was not where I thought that I would be, et cetera....So I think that's why I don't delete it because I always want to have something to work for and not go astray”.

Emily (492-498)

Emily described previously seeing photographs of herself and feeling “betrayed” (line 492) by herself for putting on weight and looking the way she did. This she describes above as losing touch with reality and causing her distress. Thus, comparing herself to her ideal individuals on Instagram and ensuring she looked acceptable compared to them was a method by which Emily tried to regulate her distress. By stating she does not want to delete Instagram,

she is expressing the fear that if she does not have her idealised individuals to compare herself to, she may lose touch with how she really looks and therefore go through a loss to her self-esteem and self-worth again.

4.2.1.4 Mirroring the Good Object. The participants discuss mirroring Influencers or those on Instagram whom they idealise, believing, as Alice said "...if I copied them a bit better then I could maybe get there" (line 366) and through posting their own clean eating material on Instagram, a sense of "hey I'm almost like them!" (Emily, lines 320-321).

"And I was like, I'm just gonna get it, they seemed so happy, so confident in their body. And I wanted to have that confidence because that is the one thing I was lacking...confidence in myself" **Laura** (89-91)

Laura describes how the individuals she idealises on Instagram portray a sense of happiness and confidence in their body. Laura felt that if she mirrored the individuals she idealised, she too could feel the happiness and confidence they exhibited. "I'm just gonna get it" refers to Laura's determination to mirror their behaviours. This reflects that Laura's self-esteem was not high and she believed that emulating the Influencers would increase her sense of self.

Likewise, Emily describes a similar belief about mirroring her idealised object on Instagram.

"I guess it's what fans do for celebrities... when you get something that they've held or that they do, you feel like you're going to become them and it's great. I guess by buying this protein powder or doing this exercise routine that she posted, or by following the same trainer as this celebrity then I'm going to be one step closer to living their life, and having their body and feeling happy and pleasant because they make it sound so great". **Emily** (393-399)

Emily's analogy of mirroring an Influencer being similar to how people desire to have something of a celebrity to feel closer to them, allows for the reader to deeper understand the

commitment and need Emily feels about emulating those on Instagram. By purchasing products they use, such as protein powders, mirroring their exercise routine, or following the same exercise trainer, Emily feels as though she is going to be closer to having the happy lifestyle they are projecting, with the ideal body. By being “one step closer” to mirroring the idealised individual, Emily is hoping that she too will be able to have a life which “sounds so great”. This would, according to Emily, increase her self-worth and self-esteem.

4.2.1.5 Seeking to be an Idealised Object. This code refers to a process in which the participants discuss curating an image of themselves on Instagram which would lead others to believe they were achieving and thriving in their healthy and clean lifestyle. This control helped fulfil a narcissistic need in them in which they took pleasure in knowing others believed them to be achieving perfection.

“...I post a picture of myself in my workout gear, and I'm like, “Yeah, went for a run”, and I put my run journey...and always put ((laughs)) an emoji or something on my time, because I don't want people to see that I ran really slow, I walked... I think I have a sense of duplicity around this, that I'm playing a game”. **Emily** (360-366)

Emily describes intentionally curating an image of herself which she believes others would admire and idealise. She not only wants to show her body on Instagram by posting a picture in her workout gear, but also how far she has gone in her run by posting her journey. However, Emily recognises that by hiding the time, others need to guess what her time was, which she hopes will be more favourable than her actual time. Through this process, Emily is fulfilling a narcissistic need to be admired by others, aiming to improve her self-esteem and self-esteem.

“I definitely think that when you post, you post things to give a perception...and I was giving the perception that I was like super health goddess”. **Alice** (189-192)

Alice recognises that by posting stories or photographs, she is aiming to curate an image of herself that portrays her as a “super health goddess”, consistent with ON behaviours and lifestyle. Alice said that through this process, she felt “powerful because then you can control what people think of you” (lines 418-819). Thus, Alice is aiming to increase her sense of self by projecting an image that makes her believe others will idealise her.

“...obviously, who doesn't want to get famous or who doesn't want to go viral...I guess that has kind of made me want to create more and more content” **Laura** (507-509)

Laura describes her desire to be famous or an Influencer, the epitome of being idealised, based upon her healthy diet and lifestyle. This encouraged her to post more on Instagram, continuing the cycle in which her sense of self was dependent upon the response from her followers.

4.2.2 Theme Two: Finding Meaning & Purpose

This theme describes the processes the individuals engaged in to try and increase their sense of self. It contains three codes. ‘Needing Praise from Others’, ‘Striving for Meaning’ and ‘Advising & Motivating Others’.

4.2.2.1 Needing Praise from Others. The participants describe how they posted photographs and stories on Instagram to receive praise and validation from their followers. This, they describe, was a conscious choice to increase their self-esteem and self-worth. This is described by Laura:

“... when I post something and I see all these positive feedback and people wanting to see more stuff like that, then I get really hyped and really happy about it. And since me being underweight is not making me be as happy as I was before, those little like pills of happiness that I get from people's comments, I think it makes me feel really good now, because it's the only time that I'm kind of like, happier”. Laura (401-406)

Laura describes feeling happier and an increase to her self-esteem when she receives positive responses to her posts on Instagram. Laura recognises that being underweight used to fulfil this need in her, but no longer does. Thus, she has been able to use the external validation she receives from her followers, which she describes as “pills of happiness”. This is a striking image as it allows the reader to understand it is a small mass that she is symbolically ingesting to feel better about herself and happier.

“...it's, really good for, it'll give me a self-esteem boost... Which makes no sense...I like to think I'm a very rational person...that's not very rational. It's just a couple of people being like, nice plate. ((laughs)) It's silly, but it makes me feel really good about myself”. Sophie (397-401)

Sophie is conscious that she posts photographs on Instagram to receive external validation from others, thus increasing her self-esteem. Sophie’s laughing could be a defence, as she states, “it’s silly” and admonishes herself for the process not being “very rational”.

“And then you eventually plateau [weight loss]. And you'll be like, “shit, no one's ever gonna give me a compliment again” ... people aren't gonna admire me, they're not gonna like me, they're not really impressed by anything I do. There's never going to be an affirmation that what I'm doing is right. I guess that's where it leads back to Instagram, and all social media, that somebody who looks great, gets the most number of likes...I will constantly have driven

for how many likes I can possibly get...because that then affirmed that I looked good. Because if you don't look good in the photos, then why would someone like them? Jane (130-143)

Jane explains how the external validation about her body increases her self-esteem and self-worth. She recognises the compliments she receives directly correlate in her mind to admiration and being liked, reinforcing her sense of achievement and success. By striving for the greatest number of likes, Jane is stating that the external validation she receives on Instagram is one of the only ways she internalises acceptability, again directly impacting her sense of self. In the interview, Jane described when she did not receive likes and positive comments, she became self-critical, saying to herself “you’re worthless” or “you’re not enough” (lines 487-488). This highlights that for Jane to feel happy and have a good sense of self, she needs to receive positive external validation about her body.

4.2.2.2 Striving for Meaning. The participants discuss being goal driven about their body, clean eating, and lifestyle. They found meaning through their behaviours which positively impacted their sense of self.

“...I so desperately tried to continue with it keeping me accountable...it then helped to make me think about food even more, because it had been going so well before, so I was like use it and maybe use it more because it was going so well before, and I was being accountable before”. Georgia (600-604)

Georgia describes how she used the health tips page she had set up to hold herself accountable to the diet and lifestyle she was pursuing. She would log what she ate and her exercises, feeling this was helping her to reach her clean eating and body goals. Georgia felt it stopped helping at one point, describing she was finding her clean eating and lifestyle more difficult. She explained that by increasing the frequency of her logging and advice, she hoped it would again be a method by which she could hold herself accountable. This accountability impacted

Georgia's sense of achievement which directly impacted her self-esteem and self-worth. Through Georgia's use of the word "desperately", one appreciates the driving need she felt to regain this increased sense of self.

"It's something that I do...I don't play music, I don't have any hobby...But I think this is, this is something that keeps me busy" **Emily** (411-416).

In the absence of additional hobbies, Emily's clean eating and ON lifestyle was her sense of purpose, providing a positive impact on her self-worth and self-esteem.

"... if I make a meal, for accountability, I take a picture of it. Which is not great... I do have sort of a way of documenting and sharing what I'm eating"

Sophie (254-256)

Sophie describes holding herself accountable through photographing every meal she has, ensuring she is adhering to her goals around diet and lifestyle. Sophie later in the interview says she does not post every meal, but that she must "just have photos of my meals" (line 259). Sophie's behaviour, even though she recognises it is "not great" demonstrates her obsessive need to document, fearing that if she does not she will not achieve her goals and thus negatively impact her sense of self.

4.2.2.3 Advising and Motivating. Participants describe giving tips on nutrition and clean living, aware they were not always following them themselves. They were either asked by people to give advice, or they would offer it and found people encouraged more content.

"...I was super preachy to people. I was telling people what's good and bad, telling them why you shouldn't eat that...this is what you should be instead. I thought I was...really healthy and some sort of health genius or something". **Alice** (115-119)

Alice's use of "super preachy" implies that she felt a sense of superiority over others in how she was eating, thus positively impacting her sense of self. By telling them what they should and should not be eating, Alice demonstrates she believed her 'healthy' diet was the correct and only way one should be eating. This is further demonstrated by her stating she believed that she was "really healthy" and a "health genius". This links to Alice's previous comments about needing to be seen as an idealised object.

"...I was giving tips that I was not following myself... I was not in a place to say things I was saying or post recipes I was saying". Laura (350-352)

Laura describes posting tips on eating and lifestyle she was not following herself, recognising that she was engaging in unhealthy eating behaviours consistent with ON. In the interview, Laura described that her followers would comment on her posts saying, "oh my g-d Laura we love your recipes, we love your tips, just post more stuff" (345-346). These positive responses, Laura said, increased her sense of self and drove her need for external validation as she was not feeling self-confident. Thus, Instagram became a space in which was not only receiving an increase to her self-esteem and self-worth but was finding meaning and purpose in her ON behaviours. This links in with what was discussed earlier in the theme 'Seeking to be an Idealised Object'.

4.2.3 Theme Three: Repeating Negative Cycles

This theme reflects how the participants describe engaging in negative emotional cycles in both their ON behaviour and engagement on Instagram, impacting their self-esteem and self-worth. The theme is made up of three codes, 'Confirmation of Negative Self-Belief, 'Reinforcing Role of Instagram on Guilt' and 'Shame...Emergence & Coping'.

4.2.3.1 Confirmation of Negative Self-Belief. The participants discuss engaging in behaviours that brought them further away from their goals, which were often determined and

reinforced by Instagram. This distancing then seemed to confirm negative thoughts they held about themselves.

“I could never look at a plate of food and not quickly do a calculation...even if when I made the calculation I'd tell myself like, “Okay, well, that doesn't matter, because you decided you want this” just the fact that I would do it would then at some point, return to me and make me feel guilty...And I'd feel like, I've just given up on the goal I've been doing. And that's the only reason that I can't achieve anything...Because for whatever reason, I didn't have the willpower to”. **Georgia** (511-522)

Georgia describes a cycle where she would change her body ideal goal, influencing her depiction of what clean eating is. This change of body ideal and goals would happen regularly, largely influenced by what she was exposed to on Instagram. Georgia explained that the changing in her goals made it difficult to feel a sense of achievement, something that other participants have highlighted as a maintenance factor of ON behaviours and discussed in ‘Striving for Meaning’. She found that even if she was eating in line with her new goal’s diet, she often felt guilt as she would reflect upon her previous goals. This caused her negative self-belief, as she would admonish herself for her lack of willpower and not being able to reach her ideal body goal. This cycle would negatively impact Georgia’s sense of self.

Likewise, Jane, who seemed to largely measure her worth according to the amount of likes and comments received on Instagram would resist ingesting processed sugar when engaging in intense competitive exercise, feeling that it would bring her further away from her body ideal, and thus the likes and comments. She would then be required to compensate in order to continue exercising by ingesting more processed sugar, resulting in guilt. She said:

“...quite often because I bumped on the bike I'm really angry and annoyed with myself anyway...it's amazing, I straightaway feel like it's gone straight

to my stomach. And then I get the psychological, like stomach cramps and pains and things. And that's where, I mean, that can't happen in two minutes, I'm not stupid, but it does". Jane (lines 246-252).

Jane interprets the processed sugar gel as a negative because it is an unhealthy processed product which will adversely impact her ideal body and health goals. Additionally, by delaying ingesting, her performance dropped, causing her extreme negative emotions. All of these have a negative impact on her self-esteem and self-worth. Perhaps the guilt she feels of then ingesting the gel manifests itself in stomach cramps and pains.

4.2.3.2 Reinforcing Role of Instagram on Guilt. The participants discuss feeling guilty for transgressing from their clean eating diet and lifestyle. Their use of Instagram presented an environment of unobtainable, ever shifting images of people, outperforming, and living the ideal 'healthy' lifestyle. As Alice describes:

"...it definitely highlighted, definitely accentuated my feelings of like guilt...if I did try and transgress and look at other, consume other foods. I think [that's what happens] when you stare at two hours a day of that food...". Alice (488-491)

Alice describes how using Instagram to look at food for two hours a day impacted the way that she began to think about and view food. Alice, earlier in the interview, stated how she began thinking of food as "the good and the bad" (line 74) due to the discourse on Instagram. If Alice ate from the bad group, tried different food, or transgressed from her clean diet, she felt guilty, and believed the amount of time she spent on Instagram impacted this.

"I think it's so bad online now how much it's portrayed as distinct good or bad foods... I never used to categorise food as good or bad... I just think the videos I was watching online; it was just getting into my head that that there

was certain foods that I should be eating and then if I didn't eat those certain foods, it would just surface a lot of guilt". Ava (78-84)

Like Alice, Ava highlights how Instagram has distinctly grouped food into good or bad. If she transgressed from the good category, Ava experienced guilt. She described learning about what foods she should and should not be eating by watching videos on Instagram, and later described how she was "...constantly looking at content or finding content. And if I wasn't on my phone, I was constantly thinking about that" (lines 244-245). The feelings of guilt Ava experienced would then most likely negatively impact her sense of self.

4.2.3.3 Shame...Emergence & Coping. This code refers to how the participants coped with difficult emotions. The participants describe how feelings of inadequacy were further triggered on Instagram and the different participants used various ways of managing. What was evident was that all participants had methods of defending themselves from the feelings of shame on Instagram.

"...I delete it... if I don't get that sort of engagement in the first fifteen to twenty minutes of it being up, it has to go down". Sophie (411-413)

Sophie describes the shame she felt when people on Instagram did not positively respond to her Instagram post, indicating that she has a set amount of time of 15 to 20 minutes for the posting to receive sufficient positive acknowledgment before the shame became too unbearable. Perhaps the shame was due in part to her sense of self being dependent on external validation and the action of removing the photo was defence against experiencing a threat to her ego. The action also destroyed the evidence that people did not positively respond to her and allowed her to feel as though her self-esteem and self-worth remained intact. She described later in the interview that her optimal engagement to feel as though she does not need to take down her post is "...twenty or thirty comments...a hundred likes..." (421-422). Sophie also discussed how Instagram's new setting of being able to hide the number of likes received from

other users has helped with her feelings of shame and with “keeping up appearances” (line 441).

“I really post something that I think I can look at and I can't really pull too much apart from...or if there's something I don't like about it, I almost point it out”. **Jane** (523-525)

Jane describes the process she goes through when deciding on photographs to post. By pointing out the aspects she does not like in the photograph, she is defending herself from experiencing shame by anticipating what others may think or say. As with Sophie, Jane feels shame most likely due to a low sense of self and her method of coping is to protect against experiencing further feelings of low self-esteem and self-worth.

4.2.4 Theme Four: Negotiating a different relationship with lifestyle

This theme reflects the feelings participants expressed when beginning to consider making a change to their clean eating lifestyle and behaviours. It contains three codes, ‘Relief of Not Being Alone’, ‘Wanting to Make a Change’ and ‘Fear & Resistance Around Change’.

4.2.4.1 Relief of Not Being Alone. This code describes the relief the participants expressed when they realised that others experience similar thoughts, emotions and behaviours associated with ON. This, they often realised through Instagram, and even from the individuals they idealised and mirrored.

“...it takes away some of the anxiety when you see people who...would be posting about these nine million things to do and don't and avoid them.... being like, “Well, nobody actually really lives like that, like nobody cares about that” ...it's not necessarily like...they're a trusted source... But it takes

away some of the anxiety when it comes to maybe not being as strict with what you're consuming". Sophie (307-314)

Sophie describes that she felt a reduction in her anxiety and relief when Influencers and individuals she idealised altered their discourse and admitted they had possibly been duplicitous in how they portrayed their clean eating lifestyle. For Sophie, she found the “nine million things” posted were important to her, she listened and followed their tips, feeling distressed when unable to follow them perfectly. Thus, when her idealised individual’s discourse shifted, Sophie felt relief at not needing to hold herself to such a high standard.

Ava discussed what she experienced when Influencers described their own relationship with ON.

“... just knowing that other people have identified this as a problem and that it's okay to go through this and that you're not alone is what gave me comfort because... I'd never heard like a name to it, I thought it was just something that my crazy brain was going through and that I was all on my own with it. To just to know that it was established as something, and a problem just made me feel a lot better”. Ava (465-471)

Ava describes experiencing relief when she saw that people on Instagram recognised ON behaviours and lifestyle as a problem. By realising that she was not alone, that others experience the same thoughts, emotions and distress associated with ON and that it is okay to be in this position, Ava felt “a lot better”. The label of Orthorexia Nervosa also seems to have been containing for Ava and helped her to feel as though she wasn’t “crazy”.

4.2.4.2 Wanting to Make a Change. This code relates to the participants beginning to recognise that they would like to make a change to their orthorexic behaviours and lifestyle. Interestingly, although Instagram was identified as a platform that, as Emily describes “was throwing gas on the fire” (line 659) to disordered eating behaviours, it also was the platform

on which many of the participants first learnt about ON. As Laura said “Maybe because through Instagram, obviously, it's gotten worse. But it, it's also made me realise that I have it” (lines 450-451).

“And then it would take the odd influencer...who would then open up and say they're really sorry about what happened...they've only just realised... And that's when I realised, I need to do that and choose to recover, I need to accept that what I've put my body through, it isn't okay, and that that's not what living life is about”. Ava (531-538)

Ava reflects what several of the participants described, that a narrative was beginning to shift on Instagram where Influencers were feeling empowered to disclose that they have been engaging in orthorexic disordered eating patterns. Additionally, some of the Influencers apologised for the content they have been posting and recognised the impact this may have had on their audience. Ava felt as though she was able to identify with what the Influencer described, giving herself permission to “choose to recover”. Interestingly, there is an aspect of mirroring occurring here, as Ava said “I realised, I need to do that” when the Influencer described disengaging from their disordered eating and lifestyle patterns. However, she is also recognising that she has put her body through unhealthy and damaging eating and exercise regimes and that she would like to have more that her clean eating and lifestyle in her life.

Sophie describes that lockdown helped her to recognise her Instagram usage was unhelpful, encouraging her to make changes.

“... like I said a lot of time to be introspective over lockdown. I'm very aware of what it does to my mental health, my anxiety and whatnot. So I'm really trying to engage a lot less... with not following food pages, not following my healthy eating tip pages....It's not very beneficial to anyone. And again, nobody lives like that. And when you try to live like that, you realise...it's not

a good way of eating and I feel like... it's sort of gateway to really other damaging eating habits". Sophie (447-450)

Sophie felt that lockdown due to the COVID-19 pandemic afforded her more time to be introspective. It was during this time that she reflected on Instagram negatively affecting her mental health, the clean eating echo chamber she was engaged in, and the importance for her to make a change. For Sophie, she decided that by disengaging from the various accounts that promoted ON behaviours, she would be able to have a better perspective about a healthy way to eat and live.

4.2.4.3 Fear & Resistance Around Change. Although there was a recognition that many of the participants wanted to make a change to their disordered eating, they discuss the fear and resistance they felt about it as well. As Sophie describes:

"But again, like I said, it's the putting it into practice..., it's been too long and it's too anxiety inducing to not do what I've done for these last couple years".

Sophie (228-230)

Sophie recognises that although she wanted to change, which she evidenced by unfollowing the diet pages and disengaging from her own diet tip page, the anxiety she experienced was too overwhelming for her to put the necessary changes needed into place. Earlier in the interview Sophie said "...I'm not being the healthiest, cleanest version of myself, because I'm not fuelling my body properly" (lines 114-115). This demonstrates that Sophie recognised she needed to change and that her diet did not correlate with her desire to live a healthy lifestyle. However, the fear and resistance she experienced, which manifested through anxiety, was too great for her to physically put those changes into practice.

"...it feels like it's just stuck in my brain forever, like my brain is just going to be like this forever...I don't want to change, and I'm scared to change..."

Grace (73-75)

Grace describes a feeling of being “stuck” in her disordered eating thinking, but also a strong desire to not make any changes to her lifestyle as she felt fear. Grace relayed later that she would sometimes think “Right, that’s it, that’s final, I’m changing now” (lines 425-426), however, the fear and resistance around change was always stronger and she would revert to her disordered eating patterns and clean lifestyle.

Laura describes an aspect of fear and resistance to change which included how others would view this.

“... I've always been seen as...not the perfect girl, but like, she's healthy, she's happy, she's thriving, she's just amazing. I don't want to go out in public and say, I have orthorexia”. Laura (429-432)

Laura in the interview described wanting to make changes to her diet and lifestyle. However, later, she described finding that although she had the theory from reading about ON, putting changes into practice was difficult. Part of this fear and resistance, Laura describes above, is around her self-identity and how others may respond. Laura found her self-esteem and self-worth was influenced by being seen as “that girl” (line 176), who was healthy and admired. Laura describes that for her to change her behaviours and state that she has a disordered relationship with food and exercise, would be shameful, potentially meaning she would have to learn how to have a strong sense of self from different aspects in her life.

5 Discussion

The findings will be contextualised within the existing published research literature, and will examine the implications for theory, research, and clinical practice as well as include some suggestions for future research. A reflexive statement covering the process of the research will be discussed at the end.

5.1 Research findings in relation to the existing literature

The study aimed to answer the following research questions

- What is the relationship between orthorexia nervosa symptoms and using clean eating hashtags on Instagram?
- How do individuals who identify with orthorexic behavioural patterns experience their sense of self whilst using Instagram?

In answering the first research question, the primary quantitative finding was that individuals who engage with clean-eating hashtags on Instagram demonstrate higher levels of orthorexic behaviours. Additionally, the results indicated that individuals found themselves in an echo chamber of ON related content due to the engagement with clean-eating hashtags and the number of health food and wellness accounts they followed.

Regarding the second research question, four main themes were identified from the qualitative thematic analysis. The first theme, Regulating Self-Worth Symbolically, describes how the engagement with clean-eating hashtags and time spent on Instagram, furthered their pre-existing relationship with perfectionism and social comparison, leading them to try and improve their self-worth and self-esteem through what they were exposed to and engaging with on the platform. The second theme, Finding Meaning & Purpose, depicts how posting and engaging with Instagram provided the participants with a method for improving their sense of self. This was again furthered through engagement with clean-eating hashtags and the building of a community around clean-eating. The third theme, Repeating Negative Cycles, details how

the participants engaged in negative cycles that were furthered due to their high engagement with Instagram and therefore hashtags. The final theme, Negotiation of a Different Relationship with Lifestyle, describes how the participants were beginning to recognise the negative impact of their clean-eating, lifestyle and use of Instagram, and thus wanting to make a change. The ‘clean’ lifestyle that many engaged in was often due to or furthered by what they were exposed to on Instagram. Thus, the quantitative and qualitative findings highlight how pre-existing characteristics and behaviours are furthered by the use of Instagram and engagement with clean-eating hashtags.

The study’s findings in relation to existing literature, are discussed in more detail below, beginning with the quantitative analysis before discussing the four themes mentioned above.

5.1.1 Quantitative Findings

The current study found a relationship between individuals who are engaged with clean-eating hashtags and higher levels of ON symptoms. These findings confirm those of the limited literature that has been published on Instagram and ON, namely that Instagram has been linked with increasing ON symptoms (Turner & Lefevre, 2017), and those with ON have been shown to be particularly active on Instagram (Gann, 2019; Greville-Harris et al., 2020; Hanganu-Bresch, 2020; Lanitis, 2020; Santarossa et al., 2019; Valente et al., 2020, 2022; Zemlyanskaya et al., 2022).

In the current study’s findings on self-reported levels of body weight, no significant difference between ‘below the normal range for body weight’, ‘within the normal range for body weight’ and ‘above the range for body weight’ was found. Interestingly, the eight individuals who took part in the qualitative aspect of the current study all described taking pride in their below average body weight and striving to either be thin or to be slim and

muscular. This inconsistency may be due to the over general subjective nature of the questions, which were framed without a benchmark. The framing of the question may also account for the discrepancy with the existing literature, which supports the qualitative participant's experience, and is described in detail in section 5.1.2 below.

In the current study's ANOVA findings on self-reported levels of fitness, there was no significant difference in mean fitness levels found between 'below the normal range for fitness levels', 'within the normal range for fitness levels' and 'above the range for fitness levels'. This deviates from the current literature, which argues that individuals with ON tend to engage in higher than average levels of exercise compared to those without orthorexic symptoms (Brytek-Matera et al., 2022; McComb & Mills, 2019). Thus, those with orthorexic behaviours tend to have higher levels of fitness (Oberle et al., 2017), and high levels of exercise have been identified as a potential risk factor for developing ON (McComb & Mills, 2019). Additionally, all eight participants in the qualitative aspect of the current study reported engaging in high levels of exercise, many of them several times per day. The inconsistency between the current study's findings, the quantitative and qualitative participants, and existing literature, may be due to the question being presented too generally and without a benchmark, which in turn allowed the participant to select an outcome based on their own interpretation of 'normal'.

In the quantitative research, 103 participants out of 104, reported trying to lose weight at some point. This supports the qualitative participant's experiences and existing literature that those with ON tend to have a drive for thinness (Atchison & Zickgraf, 2022; Barthels et al., 2021; Costanzo et al., 2022) and thin-ideal internalisation (DeBois & Chatfield, 2021; McComb & Mills, 2019). The impact will be discussed further in section 5.1.2 below.

5.1.2 Theme One: Regulating Self-Worth Symbolically

As discussed in section 4.2.1, the first theme reflects the participants trying to regulate their self-worth and self-esteem through the idealisation and engagement with individuals on Instagram, as well as trying to portray themselves as an idealised object. Beginning with ‘Seeking & Achieving Perfection’, the four remaining sequential codes are: ‘Idealising the Good Object’, ‘Comparing to the Good Object’, ‘Mirroring the Good Object’, and ‘Seeking to be an Idealised Object’. These are discussed further below.

Consistent with the existing literature on ON that suggests perfectionism is a risk factor for ON (McComb & Mills, 2019), the participants expressed a pre-existing relationship with perfectionism, which was heavily focused on their orthorexic diet and lifestyle and further fuelled by their Instagram usage. By seeking and trying to achieve perfection they managed their feelings of low self-esteem and self-worth by setting and revising goals, sometimes extreme, based on what they were exposed to on Instagram and their idealised body, diet, and lifestyle. This corroborates current literature which argues that high levels of perfectionism is associated with low self-esteem (Fearn et al., 2022; Zeigler-Hill & Terry, 2007). According to Valente et al.'s (2020) research, those who self-diagnose as having ON tend to score themselves as having highly perfectionistic tendencies compared to those who do not self-diagnose as having ON. Additionally, according to Striegel-Moore & Bulik (2007) those individuals with perfectionism, are more likely to comply with societal norms. It is noteworthy that the societal norms referred to are Western, given that the participants were all domiciled in the United Kingdom. It is also worth considering that research shows the idealisation of thinness is linked primarily to a Western society (Becker et al., 2002; Culbert et al., 2015). The pursuit of thinness and the idealisation of thinness was experienced by all the eight participants. This is again consistent with the current research which has found those with higher ON scores have a higher drive for thinness (Barthels et al., 2021; Costanzo et al., 2022; Fixsen et al., 2020), and thin

ideal internalisation (DeBois & Chatfield, 2021; McComb & Mills, 2019). Amongst the participants, there was a narrative of thinness being connected to better health, demonstrating control and perfectionism. However, this seemed to be secondary to the body ideal appearance. This study's finding supports Barnes & Caltabiano's (2017) finding that higher orthorexic tendencies are correlated with higher scores for appearance orientation, as well as Mitrofanova et al.'s (2021) research which found participants were motivated to eat more healthily by a desire to improve their appearance. However, this research's findings contrast Greville-Harris et al.'s (2020) research, which found that bloggers with ON tended to focus on ideals around health rather than thinness, and research by Valente et al. (2020), which reported that Instagram users with ON reported weight loss was for health reasons rather than appearance. Thus, as these two referenced studies are in line with the proposed diagnostic criteria and contrast the current study's findings, further investigation is warranted to remove the contradictions and better understand the order and impact of health and thinness.

Seven of the eight participants reported a history of restriction and purging (either self-induced vomiting or laxative misuse), and/or a health problem, which warranted being prescribed a restrictive, low sugar diet. Having a history of an eating disorder has been found to be a significant predictor of ON (DeBois & Chatfield, 2021; Fixsen et al., 2020; McComb & Mills, 2019; McGovern et al., 2021; Valente et al., 2020). Additionally, pre-existing health problems, mainly gastro-intestinal, have been reported by Greville-Harris et al. (2020) and Valente et al. (2020). The disordered eating behaviour reported by the participants seems to already have been present, but symptoms may have been exacerbated by what the individuals initially began searching for, before being furthered by Instagram's algorithms. The participants found themselves in an echo chamber of healthism, engaging in behaviour which enabled them to have reinforcement from peers in the form of 'likes', as described by the participants in code 'Seeking to be an Idealised Object'. This is consistent with the research

put forward which argues that social media platforms provide a merging of two social influences important in developing an eating disorder; reinforcement of the thin narrative and reinforcement from peers (Mabe et al., 2014). Additionally, this finding allows for further understanding on the direction of the relationship between ON and Instagram queried by Allen et al (2018), and corroborates more recent research which found those who self-diagnose with ON believe Instagram was partially responsible for the development of it (Valente et al., 2022; Zemlyanskaya et al., 2022). The majority of the participants, as mentioned, had disordered eating patterns and described using Instagram to seek advice and inspiration in their pursuit of their health and ideal body. It was then through the exposure to the content on Instagram that the participants found their ON behaviours increased.

The current study found that participants idealised individuals on Instagram, whose photographs, videos, and information became an inspiration for how they should be living their lives and what they should look like. This supports the object-relations theory and current literature both on ON and broader social media usage. According to the object-relations theory, one idealises an object that can be “admired, identified with, and whose strength can be shared” (Marcia, 2001, p. 7160). This process is important to the maintenance and enhancement of the individual’s self-esteem and self-worth. This theory is supported by Valente et al.’s (2020) research which reported that individuals who self-diagnose as having ON felt as though happiness and success were equated with health and thinness, which was amplified by their exposure to Instagram. This is consistent with findings by Chou & Edge (2012), in which Instagram users consider other users to be more successful and happier in their lives than themselves. This study does find, as Greenwood & Pietromonaco (2004), discussed in Bamford & Halliwell (2009), that some women with disordered eating more closely identify with and idealise media characters. They propose this is due to a highly anxious attachment style. In the only study done on attachment style in ON, Barnes & Caltabiano (2017) determined those with

ON tend to have a less secure attachment style. The attachment style of the participants was not investigated in the current study; however, it would be a useful area for further research as it would be helpful in understanding the development and maintenance of ON.

The study found that participants compared themselves to Influencers, friends, and those who professed a clean-living lifestyle and who presented the ‘ideal’ body. If they were able to positively compare themselves to those on Instagram, they were able to increase their self-worth and self-esteem, avoiding ego deficits. This finding is consistent with Festinger’s (1954) Social Comparison Theory as the participants’ self-evaluation of abilities, opinions, and goals (Yang, 2016), became dependent on how they were measuring up to their social media ‘social setting’. It has been found that individuals who rely on external validation for self-worth tend to engage in higher levels of social comparison (Crocker & Park, 2004; Stapleton et al., 2017), which combined with sociocultural pressures to appear a certain way have been correlated with disordered eating patterns (Corning et al., 2006; Storrer & Thompson, 1996). The participants described a negative impact on their self-esteem and self-worth if they viewed themselves to be less successful than those they idealise. However, they also tended to select their idealised individual based on them living happier and more successful lives than themselves. This introduced an upward social comparison, which has been found to negatively impact self-esteem on social media sites (Kim & Lee, 2011; Vitak & Ellison, 2013) and specifically Instagram (Greville-Harris et al., 2020). This corroborates Greville-Harris et al.’s (2020) finding of Instagram bloggers with ON felt to be below the standard of one’s source of comparison, which led them to engage in stricter clean-eating rules. The participants in the current study described a similar feeling of being below standard if an upward social comparison was made. However, some of the participants feared not having these comparisons as it was “something to work for and not go astray” (Emily, lines 492-498). This appears to be

consistent with the goal-orientated nature of the participants, which is further explored in section 5.1.3.

The current study found that participants mirrored the Influencers and those whom they idealised on Instagram, through behaviours such as exercise and diet plans. This has not previously been discussed in the existing literature on ON and Instagram. Mirroring referred to in this study is used in the context of self psychology (Kohut, 1977), a branch of object-relations theory, which hypothesised that an individual is trying to maintain and enhance their sense of self and may recognise their object as someone who reflects their grandiose ambition of self (Marcia, 2001). Thus, the individual attempts to improve their self-worth and self-esteem by mirroring the behaviour of those whom they have found to be the 'good object'. All the participants put the 'good object' on a pedestal and experienced some degree of mirroring. They discussed how they copied and emulated the 'good objects' by following the same strategy of posting and commenting on Instagram, by following the strict exercise and training routines, and by purchasing and consuming recommended brands and products. By pursuing this behaviour, the participants expressed a sense of hope that they would meet their body ideal goals and live as happily and confidentially as the 'good object' portrayed.

As discussed in Section 4.1.3, six of the eight participants within this study sought to be idealised objects on Instagram, even if their profiles were not public, demonstrating that their self-worth and identity became enmeshed with their ability to adhere to their 'healthy' diet and lifestyle, and thus experiencing a sense of superiority. The participants carefully curated a positive image of themselves, worthy of idealisation, even if some of the portrayal was not accurate. In their photos and stories, they selected images with a flattering choice of clothing, surroundings, and in which they were seen to be thriving and achieving their goals of a healthy and clean diet and lifestyle. This is similar to the discussion by Dunn & Bratman (2016) in which they hypothesised that an individual's positive body image, self-worth, identity

and/or satisfaction becomes increasingly dependent upon their ability to comply with their 'healthy' lifestyle. Thus, the current study's findings demonstrate that these feelings are found also within the online world of Instagram and portrayal of their 'healthy' lifestyle. Research by Williams et al. (2016) and Williams & Reid (2010), both found that an individual's pride and identity can become enmeshed with their disordered eating, as well as a sense of strength and success. Particularly striking is the quote in Williams et al.'s (2016) study in which individuals with anorexia felt their self had been taken over by AN, "the eating disorder seemed to give them a self-image, a persona, and it was an identity over which they had control" (p. 221). This shares a strong parallel to the description the participants in the current study give about their relationship with ON and Instagram. These findings are corroborated by Bratman & Knight (2000) in which they discuss that praise received from another to an individual with ON for their ability to adhere to their strict diet and lifestyle influenced their self-worth and how they related to others. Thus, through curating the image that they were portraying, the participants were fulfilling a broadly defined characteristic of non-pathological narcissism, in which they were hoping to be seen as superior. By hiding perceived weaknesses, the participants were providing a protection against any threat to the sense of self. This, is in line with the research on self-image portrayal on Instagram, in which it has been found that there is a willingness to portray oneself as superior to others (Miller & Campbell, 2011) as well as conceal perceived weaknesses (Lukowitsky & Pincus, 2013). This finding again supports Greville-Harris et al.'s (2020) research regarding a sense of superiority expressed by bloggers with ON, supporting both Bratman & Knight's (2000), and Donini et al.'s (2005) argument that those with ON feel a sense of superiority and flaunt their 'healthy' diet and lifestyle. However, it deviates from DeBois & Chatfield (2021) finding that individuals with ON were uncomfortable disclosing their dietary behaviours. As this current research has found corroborating evidence to suggest

that those with ON seek to increase their self-esteem and self-worth through idealisation, it helps the further understanding of the development and maintenance of ON.

5.1.3 Theme Two: Finding Meaning & Purpose

As discussed in section 4.2.2, the second theme reflects how the participant's post on Instagram seeking praise and validation, pursuing their goals which give them meaning and purpose, and offer advice and motivation to improve their sense of self. The three codes, 'Needing Praise from Others', 'Striving for Meaning', and 'Advising and Motivating' are discussed below.

Stapleton et al. (2017) reported that individuals whose sense of self is dependent on external approval are provided a platform on Instagram on which to achieve their self-validation goals and thus improve their self-worth. Participants in this study described behaviours they engaged in on Instagram with the purpose of trying to increase their self-esteem and self-worth. Not only did the participants aim to be an idealised object on Instagram, but they described experiencing an improved sense of self from the happiness they felt when receiving validation. Laura powerfully explained that the external validation was like "pills of happiness" (lines 404-405) for her. Sheldon & Bryant (2016), who administered a questionnaire to 239 undergraduate students to understand motives for using Instagram found that the likes and comments they received on their posts was a large reason for participating with the platform. This, they posited positively impacted the individual's self-esteem and self-worth. The consequence of not receiving validation was also described by the participants in the current study. There was an awareness of the correlation with their own improvement, the number of positive postings, and the number of likes received, with the participants experiencing shame, and a decline in self-esteem if the number of validations were not

forthcoming. This is further discussed in the paragraph addressing the code ‘Shame...Emergence & Coping’, in section 4.2.3.3.

Participants in the study discussed being goal driven about their body, clean-eating, and lifestyle and thus the term ‘meaning’ in this context describes the individual’s establishment of goals, finding purpose, and measuring achievement in life. The behaviours they engaged in positively impacted their sense of self, helping them to find meaning in their daily life. This fits within the narrative described by Cinquegrani & Brown (2018) in which the Western goal orientated society tends to view the body as a ‘project’. Additionally, Fixsen et al. (2020) found that individuals who identified as having orthorexic tendencies discussed working towards achieving the ideal body as an aspect of their ON. The participants created a sense of purpose by being preoccupied with their ‘ideal’ body type, and the constant effort of striving to achieve their goals. The participants discussed the importance of a clean-eating diet in meeting their goals, which is corroborated by Cheshire et al. (2020) who found that individuals with ON may adjust their diet to achieve their vision of health. According to Bratman & Knight (2000), the identity of an individual with ON behaviours becomes intertwined with their ability to adhere to their goals, with self-praise for success and self-condemnation for transgressions all accumulating to form the individual’s opinion of themselves and how they view their worth to others. Thus, the participant’s goal driven behaviour around their body, diet and lifestyle are consistent with the current literature.

The current study’s participants provided tips on their chosen ‘healthy’ diet and lifestyle, presenting themselves as compliant, whether they were or were not. This is consistent with the behaviour of an individual seeking to be an idealised object and began when the participant was either asked for advice, or they offered advice and received a positive response. The frequency of the activity increased with the receipt of positive responses. By offering advice and motivation, the participant’s sense of superiority was increased, even though they

knew they were not necessarily complying with the advice they were giving. This supports Bratman & Knight, (2000) argument that individuals with ON tend to feel immense pride in taking care of their health, which is often "...enhanced by a lofty feeling of superiority towards those who continue to eat a normal diet" (p.9). Greville-Harris et al. (2020) also found that downward social comparisons towards those who were seen as eating a less healthy and clean diet led individuals with ON to negatively judge the other and thus feel superior. This corroborates the current research's findings. The action of advising and trying to motivate others seems to have enhanced the participant's already present sense of superiority, and thus positively impacted their self-esteem.

5.1.4 Theme Three: Repeating Negative Cycles

As discussed in section 4.2.3, the participants described engaging in behaviours that facilitated negative emotional cycles, which manifested feelings such as guilt and shame, and may have reduced self-esteem and self-worth. The first code discussed is 'Confirmation of Negative Self-Belief', and the sequential codes are 'Reinforcing Role of Instagram on Guilt', and 'Shame...Emergence and Coping'.

This study found that when the participants engaged in behaviours that confirmed their negative self-belief and moved them further away from their goals, they experienced a decline in their self-esteem and self-worth. The participants were subject to constant influence from Instagram, which presented conflicting images of others easily achieving their goals and living the 'healthy' lifestyle. This is consistent with the cognitive behavioural theory for EDs and literature on EDs but has not been previously investigated in ON. Due to the participant's low sense of self and negative thoughts about themselves, they would engage in behaviours that seemed to prevent them from achieving their goals. The cognitive behavioural theory posits that the negative-belief cycle may act as a mechanism for development and maintenance of disordered eating (Fairburn et al., 2003). This seems to also pertain to ON. Sapuppo et al.

(2018) found that individuals who engage in behaviours in which they negatively appraise themselves, use this as further proof of their lack of value, capacity to control and their self-control. This as described by participants in section 4.2.3.2, furthered feelings of guilt and shame, reinforcing the low self-esteem which is typical in those with disordered eating patterns (Fairburn et al., 2003). Although this development and maintenance cycle has been well documented in other eating disorders (Fairburn et al., 2003), it has not been applied to and investigated in ON. Therefore, further research would help in better understanding whether this is part of the development and maintenance cycles of ON.

This study's participants discussed that by viewing Instagram and being under the influence of their ideal objects, they experienced a feeling of guilt when they failed to comply with the strict discipline, which threatened the prospect of meeting their goals. In 'Idealising the Good Object', the participants described finding the influencers to be a source of inspiration and motivation for their body and lifestyle, thus creating positive emotions for them. However, in this code, the participants discussed the negative emotion of guilt that was felt by the participants when they transgressed. This is consistent with the object-relations theory of AN and current literature on ON. A trend on Instagram discussed in the study is the classification of food into 'good' and 'bad' categories, the posting of users' opinions on food, as well as their detailed and specific food intake. An example of this is a trend called "What I Eat in a Day", which six out of the eight participants regularly watched. Participants described feeling a sense of failure to control themselves when they transgressed from their ideal objects' diet and lifestyle, resulting in guilt. To try and mitigate this, the participants seemed to try and control their emotions through the rigid control of 'pure' and 'good' foods and exercising further control. This is a similar experience discussed in the object-relations theory of AN, where the need to control the emotional state, leads to food (the external object) becoming the representation of what cannot be ingested, ie the individual's emotions (Clinton, 2006). This

study's finding is consistent with the research by Greville-Harris et al. (2020), in which women with ON who published online blogs, described their strict rules around clean eating as a coping strategy to feel 'perfect' and in control. Similar to these findings, some of participants in this study relayed the realisation that their clean diet and lifestyle, which had started as a method of enhancing their sense of control, had in fact ended up controlling them. Ava described this when she said, "I used to view the clean eating...as what was actually benefitting me, and it was keeping me from being damaged, when in fact, it was doing the complete opposite" (lines 258-261). It has been proposed by Vuillier et al. (2020) that individuals with ON may feel more out of control when they transgress and experience negative emotions than those without ON tendencies, a finding corroborated by Yilmaz & Dundar (2022). Additionally, they argued that those with ON tend to increase their control of food in an attempt to emotionally regulate. The above studies support the concept that the influence of Instagram may provide a similar coping mechanism for those with ON as it does for those with other eating disorders (Dignon et al., 2006). The environment created by Instagram is conducive to and may support behaviors leading to a sense of guilt which originated from the user comparing themselves to others, setting highly ambitious goals and then transgressing by not strictly complying. Further research into how those with ON attempt to emotionally regulate when experiencing difficult emotions, such as guilt, would help shed light on the maintenance factors of ON.

The current study found that the participants experienced feelings of shame, an emotion triggered by the reaction (or lack of) from others on Instagram to their posts. The participants described engaging defences, which have been discussed in the cognitive behavioural theory of ED and literature regarding EDs, but not ON. Participants discussed either removing the image from their Instagram page to eliminate evidence of a lack of engagement, or, as discussed in section 4.2.3.3, Jane would point out any possible flaws to pre-empt any criticism or to account for a possible limited response. This is consistent with the research by Gann (2019),

in which the amount of shame a woman experiences about her body is a predictor of ON behaviours. Shame beliefs are core to the underlying belief system associated with development and maintenance of eating disorders within cognitive behavioural therapy, seen through perfectionism, low self-esteem, mood intolerance and interpersonal difficulties (Fairburn et al., 2003). Additionally, body shame is consistently linked with eating disorders (Nechita et al., 2021), and this supports the behaviour of participant Jane who will point out perceived flaws of her photograph. This current research corroborates the existing research, demonstrating that individuals with disordered eating patterns develop coping mechanisms to deal with any form of social rejection or put down, which may exacerbate feelings of shame. This is further supported by Goss & Gilbert (2002) who argue the shame cognitions experienced by those with eating disorders make the individual vulnerable to negative social outcomes, such as rejection, resulting in them attempting to alter their body appearance. This current study found that in addition to the altering of one's body in the physical world, the participants tried to negate shame by either completely removing their picture or pointing out their flaws in their virtual world. Although this probably does not apply to ON specifically, a deeper understanding of the implications of 'real' vs 'virtual' behaviour arising from body shame may be helpful.

5.1.5 Theme Four: Negotiating a Different Relationship with Lifestyle

There was a point in all the participants' journeys in which they recognised or realised that there are negative implications in their chosen pursuit of an 'clean' and ideal lifestyle. This was triggered by either extreme personal distress, causing the individual to seek relief, or when an idealised object confessed to their own distress and disordered eating. The codes discussed below address three stages as individuals work with or through a sense of relief of not being alone, working to make a change, and finally the possibility of fear and resistance to that change.

As discussed in section 4.2.4.1, four out of the eight participants expressed relief when they realised that others, especially those they had been idealising, experienced similar distressed thoughts, emotions and behaviours associated with not living up to and or coping with the high standards of their 'healthy' diet and lifestyle. The idealisation, upward social comparison and mirroring of the diet and lifestyles portrayed on Instagram had caused distress for many of the participants, and thus the prospect that they may be aiming for impossible standards, created relief. The striving, despite distress, described by participants highlighted the perfectionistic tendencies of those with ON, discussed earlier in section 5.1.2. There appears to be no specific research related to relief in the context of ON, however, this relief from anxiety is related to the search of community, which is discussed in the next code.

Six of the eight participants disclosed they were eager to make a change to their strict diet and lifestyle. By beginning to unfollow the Influencers and 'good objects' as well as their own tip and advice pages, the participants experienced a reduction in distress. Interestingly, the participants highlighted that Instagram had negatively affected their ON, but that it was also the platform from which many learnt of the existence of ON. This confirms the finding by Valente et al. (2022) and Zemlyanskaya et al. (2022), in which they found those who self-diagnosed with ON tended to learn about ON through social media. The participants discussed there was a shift beginning to be witnessed in which Influencers talked about the how unhealthy some of the extreme healthy diets and lifestyles they have been living were, with some of them apologising for what they have promoted when they have been unwell. This allowed for a conversation to begin about when healthy eating and lifestyle becomes unhealthy. This finding supports the existing literature surrounding the current conversation about ON on Instagram creating a supportive and educational environment about how healthy eating can become unhealthy (Valente et al., 2022; Zemlyanskaya et al., 2022; Santarossa et al., 2019; Valente et al., 2020). One of the participants discussed finding a supportive community for those

recovering from ON on Instagram, which she found helpful in the absence of medical or psychological help. This supports Chung et al.'s (2017), McGovern et al.'s (2021), and Valente et al.'s (2020) finding that individuals with ON will turn to social media for support networks, with the later study also finding that individuals who self-diagnose with ON found one of the major barriers to recovery was a lack of professionals knowledgeable about ON. The current study's findings, which corroborate current literature, highlights the need for help and support for individuals with ON who are finding their disordered eating distressing.

The participants who disclosed a desire to make a change also discussed fear and resistance to changing their ON behaviours and lifestyle, a finding that mirrors feelings experienced in those with EDs. The rigid avoidance of certain foods, physical symptoms, distress, guilt, and the shame felt when eating impure foods became too overwhelming for the participants, who recognised that their 'healthy' lifestyle may not be as healthy or beneficial as they thought. Some of the participants made changes to their life in order to try and mitigate the echo chamber they were in, such as unfollowing Influencers and Instagram pages that were promoting clean-eating, ON behaviours and lifestyle. However, there was a narrative that making more substantial changes, such as incorporating other foods, created too much anxiety, and thus they resisted making any serious improvement to their diet and lifestyle. This resistance is typical of the distress triggered by changing diet and behaviour, which Abbate-Daga et al. (2013) argues is one of the hallmarks of an eating disorder. This study corroborates Cinquegrani & Brown's (2018) research which described how bloggers who had ON began to choose recovery when the distress and impairment in life became too overwhelming. In addition to the fear felt by altering dietary restrictions, participants described a fear around losing one's identity. As described in section 5.1.2, participants expressed that their self-worth, self-esteem, and identity had become enmeshed with their ability to comply with their 'healthy' lifestyle. This, combined with their desire to be admired and praised, meant that there was a

fear around admitting they were struggling and in need of support. Current literature on eating disorders supports this finding. At the center of change, lies the courage to alter one's identity (Bowlby et al., 2015; McNamara & Parsons, 2016), on top of which requires the individual to re-evaluate their beliefs, values, and relinquish their disordered eating patterns (Abbate-Daga et al., 2013). Thus, the current study demonstrated that in order for individuals who self-identify as having ON tendencies to begin to overcome their fear and embrace recovery, they are going to need the confidence to not only change their 'healthy' eating and lifestyle, but also adjust their self-identity, values and beliefs. In the current study, there were three participants who had begun to embrace the process of pursuing change and challenging their resistance. Two had sought the help of a mental health professional, one after the intervention of a family member, and the third participant was trying to pursue change themselves via information they were learning on social media. Although some of the participants described trying to reduce influences on their ON diet and lifestyle, such as unfollowing Influencers and their tip pages, there was fear and resistance expressed around making substantial changes.

5.1.6 The use of ORTO-15

At the time when the research commenced, the ORTO-15 was the most widely used tool in studies on ON (Missbach et al., 2017; Valente et al., 2019). Although this continues to be the case, the EHQ and DOS have gained in popularity despite both possibly screening for healthy clean-eating behaviours as well as unhealthy orthorexic symptoms (Atchison & Zickgraf, 2022). Had this study used the other tools, the results probably would not have been any different as the participants were self-identifying as having ON, and the interviews conducted addressed and confirmed the existence of behaviours assessed in all three of the measures, namely impact on lifestyle, feelings of guilt, and restriction of diet. Therefore, if this study were to be replicated in the future, it would be good to use the other measures which

have been found to have high integrity (Niedzielski & Kaźmierczak-Wojtaś, 2021), but the results are unlikely to differ.

5.2 Applications for clinical practice

Even though ON is not recognised within the DSM-5 or ICD-11, and remains a relatively under researched disordered eating pattern, clinicians may find it useful to understand the characteristics of ON, and how to help those who display symptoms. Whereas there is nothing wrong with a healthy diet and lifestyle, it is important for clinicians to be aware of, or sensitive to, the individual's level of distress which is a consistent finding within the study and is supported by the research discussed. The clinician should be aware that low self-worth and self-esteem may motivate the individual towards adopting defenses and coping mechanisms, which may manifest in the following characteristics discussed below and summarised in Table nine. Afterwards, recommendations of how to treat those presenting with ON with both a Transdiagnostic CBT-E (Cooper & Fairburn, 2011; Fairburn et al., 2003; Fairburn, 2008) and object-relations theoretical framework will be discussed.

The study found that those who engage in this behaviour and lifestyle tend to exhibit very strong perfectionistic tendencies, which influence their need to fit within the norm of what their society and culture dictates as desirable, all of which have worked towards their 'ideal' body, which includes embodying the drive for thinness. Individuals may choose figures to idealise, who they believe to have their 'ideal' body and live the 'ideal' lifestyle, to idealise. Mirroring of this idealised individual's behaviour and lifestyle may occur, which is then intertwined with their high levels of upwards social comparison, their need for external validation and the setting of and working towards body and lifestyle goals. A sense of superiority is experienced by individuals linked to their ability to adhere to their goals and ON behaviours, as well as downward social comparison, or judgement towards those who do not live according to the

same principles. Individuals may portray an idealised image of themselves and may partake in advising others of their idealised way of life. Additionally, this study found that individuals may disclose a duplicity in the portrayal of this idealised self. This finding is corroborated by Pratt et al. (2022), who evidenced a positive relationship between those with higher levels of ON and perfectionistic self-presentation. As their self-worth, self-esteem, and identity become increasingly dependent on their ability to consume and adhere to their selected 'healthy' diet and lifestyle, guilt and shame were experienced if transgressions occurred. Additionally, there a high level of body shame felt by the participants. When experiencing these emotions, the current study found that there were defense mechanisms put in place to protect any threat to the ego. Individuals who experienced ON tendencies may have engaged in a cycle that confirmed negative self-belief. This may have presented through behaviours that brought the individual further away from their goals and 'ideal' body, thus confirming their lack of value, low self-esteem, and self-worth.

Due to increasing levels of distress, individuals who engaged in strong ON tendencies may experience a desire to reduce the behaviours associated with ON, prompting them to seek support from mental health professionals, or non-professional support groups. However, fear of changing their 'healthy' diet and lifestyle may be experienced due to their identity being very intertwined with it. Thus, resistance to change may result. The characteristics are summarised and briefly explained in Table nine below.

Table 9

Characteristics that may be present in those with ON tendencies and a brief explanation

Shame, low-self-worth & self-esteem	The research supports this as the most probable common underlying driver behind the behaviour characteristics.
Perfectionism	The individual seeks to fit in with societal norms and pursue the 'ideal' body and 'healthy' lifestyle, which may include 'idealisation of thinness'. Goals can be revised in pursuit of perfection.
Idealising another	Individuals admire and are inspired by those they believe are living an ideal life
Comparison	Individuals compare themselves to those they idealise. If they interpret their compliance to be below standard, negative emotions may be experienced which could result in stricter clean eating rules.
Mirroring	Emulating the behaviours and lifestyle of those they idealise in order to be more like them.
Creating an idealised persona	The individual may present behaviours and a lifestyle based on those they idealise and who fit within their social norms, irrespective of whether this is accurate or not. How others view them impacts their self-worth, which is intertwined with their ON identity.
Needing external validation	Validation of the presented diet and lifestyle may be needed to improve low self-esteem and self-worth and is also linked to social comparison. The individual may partake in behaviours that will spur external validation, and in the absence of recognition may evoke shame.
Goal driven	The individual may set high standard goals, related to clean eating, 'ideal' body, and lifestyle. Individuals may feel this offers them a sense of purpose. The ability for the individual to achieve their goals impacts their self-esteem & self-worth.
Advising others	Individuals may offer tips and advice on diet and lifestyle, which may enhance a sense of superiority. Positive acknowledgment increases the activity and sense of self. This behaviour may be in the interest of becoming an idealised object and may be duplicitous. A sense of superiority may also be achieved through downward social comparison when the individual judges others.

Confirmation of negative self-belief	The individual may engage in intentional or unintentional behaviours that move them further away from their ideal and goals, interpreting this as proof of their lack of value, and confirming feelings of low self-worth and self-esteem.
Guilt when transgressing from goals re diet & lifestyle	The individual displays a strong need to control their diet, and behaviour towards their lifestyle and idealised body. Non-compliance and transgression of these standards implies a lack of control which may result in guilt and shame. The individual may increase control behaviour in an attempt to mitigate these feelings.
Fear & resistance to change	Distress is common and may motivate an individual towards change. However, fear may be experienced, and major changes resisted, which may emanate from the prospect of losing one's identity, source of praise and sense of self-worth & self-esteem.

Clinically, counselling psychologists can utilise the enhanced Transdiagnostic CBT-E (Cooper & Fairburn, 2011; Fairburn et al., 2003; Fairburn, 2008). Consistent with this model, perfectionism and the over-evaluation of control over eating, shape or weight in those with ON impact the individual's self-esteem and self-worth. Yung & Tabri (2022) posit that for treating ON, the over-evaluation should extend to health, which this research corroborates. These factors, according to CBT-E, lead to strict dieting and other weight-control behaviours. This too should be modified to allow for the health-related obsessive behaviours those with ON display. Additionally, the use of Instagram can be added to the Interpersonal Difficulties that are seen as contributing further to the maintenance of the ED (Cooper & Grave, 2017). This study found that individuals expressed relief at recognition that they were not alone and were using communities on Instagram for support. Those seeking help with ON may therefore wish to engage in group CBT-E, delivered by an experienced therapist. Group CBT-E has been found to be an effective method of intervention (Wade et al., 2017), and in order to allow for more individuals to access therapy, online delivery, through platforms such as Zoom and

Skype, has been found suitable (Murphy et al., 2020). However, as distance therapy has been mainly used since the COVID-19 pandemic, further research will need to validate whether this is indeed as beneficial as face-to-face therapy.

In addition to CBT-E, object-relations theory can be utilised when working with ON. Through humanistic values, such as empathy, unconditional positive regard and genuineness (Stewart & Williamson, 2004), the counselling psychologist can build a strong therapeutic relationship, which Fairbairn believed to be the most crucial aspect for facilitating change (James & Gilliland, 2003). Once a level of trust has been developed the therapist can begin working with the therapist-to-client relationship and transference (Gomez, 1997), assisting the individual towards recognising the self that is split and repressed, addressing these aspects of themselves and thereby experiencing a more authentic existence (Goldstein, 2010).

Recognising that ON characteristics exist with or without the use of Instagram, clinicians should be aware that at the points when the individual chooses to access the platform to explore health and nutritional advice and/or inspiration in their pursuit of the ideal body, that Instagram may begin to exacerbate the characteristics and behaviours associated with ON. Increased time spent on Instagram, coupled with the algorithms, may trigger the echo chamber effect, healthism, exposure to body idealism and the related social expectation narrative. By reducing the time spent in the pressure cooker environment of Instagram, clinicians may be removing one of the maintenance factors of ON, enabling them to better address underlying developmental and other maintenance issues.

5.3 Limitations and suggestions for future research

All academic study has limitations. This section will discuss the limitations of the study and suggest future areas for research.

This study's demographics overrepresented Caucasian participants, which is in line with other research (Andreoli et al., 2021; McComb & Mills, 2019). The only study at present

that has attempted to better understand whether there is an actual racial difference in ON symptomology, was conducted by Andreoli et al. (2021) in which they distributed the EHQ and demographic questionnaire to 535 self-selecting participants across the United States. They reported that Caucasian individuals scored higher than Asian/Asian American individuals in EHQ scores, but no other racial differences reported. This finding suggests that further research that focuses on this area of investigation would be important to better understanding ON. Additionally, the majority of studies have been conducted in Europe, with limited numbers in Australia, Latin America, and North America (Niedzielski & Kaźmierczak-Wojtaś, 2021), India (Grover & Gupta, 2021), and one study conducted in China (He et al., 2021). The lack of studies in non-European and non-Western societies may be due to the argument put forward by some researchers that Western culture may be a influencing factor in the development of ON (Syurina et al., 2018). This is consistent with concept that the ‘idealisation of thinness’ and the thin ideal are more linked to Western societies (Striegel-Moore & Bulik, 2007), as discussed in section 5.1.2. Furthermore, this fits within the narrative described by Cinquegrani & Brown (2018) in which the Western goal orientated society tends to view the body as a ‘project’, as discussed in section 5.1.3. As the majority of the research for ON has been conducted in Western societies, this is a self-limiting research field which requires further investigation to understand true demographic and prevalence rates. This will enable counselling psychologists to provide better access to care and resources to individuals who have previously been misdiagnosed or under-recognised (Andreoli et al., 2021)

As discussed in section 3.6, this study focused on females who self-identify as having ON. However, as some studies have found that there is a high prevalence rate of ON amongst males, it would be prudent to conduct the same study that included males. This would potentially allow for a better understanding of the development and maintenance of ON as

males would be able provide information of their engagement with clean-eating hashtags as well as describe how they feel their sense of self has been impacted by ON and Instagram.

Given this research has identified the active and passive usage of clean-eating hashtags, it may be helpful to explore further by including questions that more obviously identify the individuals actions that drive the algorithm, such as liking and saving posts.

The inconsistencies between the qualitative and quantitative participants as well as the existing literature, when considering the questions on self-reported body weight and fitness, may have emanated from the over general subjective nature of the questions, which were framed without a benchmark. The quantitative findings may thus not be fully representative of the relationship between ON and the two constructs; body weight and fitness levels.

Future research is important in helping to further understand ON and in the context of this study, the following areas have been identified. To narrow the discrepancy between the existing research, as well as this study's findings, further research into understanding the role of weight loss within ON and whether it is a primary criterion, or secondary to the restrictive diet resulting from obsessive health concerns and wellness is suggested. Coupled with the further research addressing weight loss, the role of the idealisation of thinness and the drive for thinness should be further explored both within and outside of a Western society context. Thus, a better understanding of the role of weight loss and drive for thinness will help to further strengthen proposed diagnostic criteria.

Further research which aims to better understand the development and maintenance factors associated with ON would start to close an existing gap and may begin to facilitate a better understanding of the treatment side of ON. This applies to the prospect of further research on mirroring, idealisation, and the attachment style of those with ON, all of which were referenced in section 5.1.2. Additionally, understanding how individuals with ON attempt to regulate when experiencing difficult emotions, such as guilt and shame, as well as regulate

their sense of self, fulfilling their narcissistic needs via Instagram. As discussed in section 5.1.4, a deeper understanding of the implications of the behaviour in the ‘real’ vs ‘virtual’ world arising from body shame may be helpful. The cycle of negative self-belief, also in this section, addresses a maintenance cycle that is well documented in other eating disorders, but understanding how this is relevant to ON will help to further close the existing gap in knowledge.

All interview participants discussed the social media platform TikTok, which has been on the ascendency and incorporates the visual drive discussed with Instagram. It would be prudent to re-create this study incorporating TikTok and other platforms to understand the impact they have on ON.

6 Reflexive Statement Part Two

In the first reflexive statement I discussed my interest in the topic of ON, Instagram, and sense of self, reflecting upon how my own experiences with orthorexic tendencies and Instagram usage. In the reflexive statement on my epistemological and ontological views, I reflected upon how I subscribe to a critical realist framework and the importance of needing to engage in self-reflection and ‘bracketing’ of one’s personal experiences, beliefs, and expectations in order to remain as unbiased as possible throughout the gathering of literature and starting the research. This reflexivity will discuss my reflections on the methodology, analysis, and findings of the research.

It was critical for me to be aware of how my own assumptions about ON, Instagram and my own identity as a Trainee Counselling Psychologist may be influencing the analysis, and so I used personal therapy, supervision, and my reflective journal to try and ‘bracket’ my thoughts and feelings. This was particularly important throughout the interview process, as I often reflected on how I used to engage on Instagram when I subscribed to a vegetarian, low carbohydrate diet in which I excessively exercised. I felt that at times I related a lot to what the participant’s described and questioned whether I was distanced enough from my previous diet and lifestyle choices as I initially believed. I used my personal therapy to further explore this and discussed with my thesis supervisor the differences between healthy eating and ON. These explorations helped me to maintain objectivity when analysing the data. Additionally, I utilised peer revision to try and ensure I was remaining close to the transcript and data and was told that what I was finding was grounded in it.

During the interview process, when participants discussed their ‘history of ON’ and ‘Impact on Sense of Self’ I found myself identifying with several of the participants, especially Jane and Emily as they were of a similar age. I identified with their upbringing around diet and diet culture and related to some of the ‘clean’ behaviours they described. I found myself

laughing with them at points throughout the interview, almost like peers, and wonder whether this may have affected their willingness to be open with me.

As discussed in the first reflexive statement, I designed the interview schedule to allow for the participants to have space to discuss what they felt was relevant. However, I found that in two of the interviews I steered the conversation back to the interview schedule when I worried that we were talking too much about food choices as I worried that my own interest in the topic may be influencing the interview and thus the data. In section 3.5.1, I explain how I noticed that the participants did not understand the final question of ‘How do you make sense of your sense of self on Instagram?’ and explained it to them. It is upon reflection that I recognise that ‘sense of self’ is a very psychological term and this is important for me to keep in mind in future research and clinical work.

As I reflected in the section Reflexivity Part One, I thought about why the participants were willing to volunteer their time to talk to me, curious if it was because it was a space to explore and reflect with someone who understood ON. This seemed to be the case and I noticed that throughout several of the interviews, participants often thanked me for the opportunity to talk about it. I was aware that when this occurred, I felt happy to have been able to provide the individuals a space as they were eager to explore their experiences with ON and Instagram. However, I also noticed I felt a sense of sadness and regret that they did not feel as though there are other places they could seek understanding from, such as therapy or support groups. Throughout the entire interview, analysis and writing up stages, I was deeply aware of the powerful narratives from my participants and felt incredibly honoured. The trust they placed in me, as well as the gratitude they expressed at being able to explore their experiences of ON and Instagram, created in me a resolve to try and bring more awareness to ON. In the final year of my training, I decided to work specifically with an eating disorder population and subsequently have continued to focus on this population clinically, working with several clients

who display ON tendencies. Interestingly, the clients tend to have heard of ON and either self-identify as having it or have been told they may have it by friends and family. I have found that because of my research I have been able to provide a thorough psychoeducation about ON and have incorporated health into the CBT-E maintenance cycle, finding that the clients feel it to be relevant and beneficial. I have also developed a deeper understanding of other psychological theories throughout this research, such as object relations, and have incorporated it into my clinical work. Additionally, I believe that by talking to the participants, I have been better able to understand the socio-cultural environment of a lot of the younger clients I worked with, which has helped me when working with them to try and mitigate the pressure cooker environment of Instagram.

I have wondered about the impact of the interviews taking place online via Zoom, due to the COVID-19 pandemic. Although this allowed for participants from all over the UK to engage in the interviews, it meant that I did not have the opportunity to sit face to face with them. This platform has been found to be an acceptable method for qualitative interviews (Archibald et al., 2019; Gray et al., 2020), however it is also recognised that in-person nuances may be missed (Olliffe et al., 2021), and I was aware that technological complications, such as losing signal, impacted the flow of the interviews and I often became anxious about trying to not interrupt or to remind the participants of what they were saying. I wonder whether my anxiety around trying to be ‘a good enough’ interviewer may have created an uneasy feeling within the interview, influencing what was said.

I had never conducted a research project on such a large scale, using mixed methods, and I found that there were many moments during the creation of the research and analysis that I doubted my ability to manage. However, it was also an incredibly exciting experience, that has increased my confidence, and provided me with a determination to continue to work with this population and help to grow awareness about it.

7 Concluding Words

The quantitative aspect of this study found a relationship between individuals who are engaged with clean-eating hashtags on Instagram and higher levels of ON tendencies.

The qualitative interviews highlighted that individuals with ON symptoms will engage in some, if not all, behaviours identified to improve their low self-esteem, self-worth, and protect their ego. Coupled with their pre-existing perfectionistic tendencies, individuals will idealise others, compare themselves to those on their Instagram feed, and mirror their idealised individual's behaviour and lifestyle. Additionally, the majority of individuals endeavoured to create an idealised version of themselves on the platform, providing them with external validation and a sense of superiority through advising others. There is a merging of the online and offline world (Shumar & Madison, 2013), where individuals are constantly reminded of the ideal they should be striving for, and if failing, either engage in cycles which confirm the negative beliefs they hold about themselves or they experience guilt, both having a negative effect on their self-esteem and self-worth. Those with ON symptoms recognise that their lifestyle gives them a sense of purpose and identity, helping them cope with their low sense of self. However, their diet and lifestyle also create an internal conflict, and many participants highlighted they found their ON tendencies distressing and felt a desire to change. This was often met with fear around the possible changes to both their body and identity, which led to resistance to altering or adjusting their diet and lifestyle.

The findings of this study have offered additional insights into how those with ON manage their sense of self and how they interact with Instagram. This provides an improved understanding of the development and maintenance of ON. This should additionally offer clinicians more clarity as to how to best help those seeking treatment and provides further evidence that clinicians can use an integrative approach with CBT-E and Object-Relations theory, specifically tailored to the individual and ON. Additionally, because the participants

expressed relief on realising others are experiencing similar symptoms, group CBT-E, again tailored to include a focus on health and appearance, could be utilised by practitioners to help treat ON.

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9 Appendices

Appendix A: Recruitment Poster

Appendix B: Participant Information Sheet

Appendix C: Participant Informed Consent Form

Appendix D: ORTO-15 Questionnaire

Appendix E: Instagram Clean Eating Hashtags & ON Frequency Scale

Appendix F: Demographic Details Form

Appendix G: Interview Schedule

Appendix H: Debriefing Form

Appendix I: London Metropolitan University Distress Protocol

Appendix J: Ethical Consent Certificate

Appendix K: Ethical Approval E-mail

Appendix L: Example of participant's transcript 1 (Jane)

Appendix M: Example of participant's transcript 2 (Alice)

Appendix N: Example of participant's transcript 3 (Ava)

Appendix O: Example of participant's transcript 4 (Emily)

Appendix P: Example of participant's transcript 5 (Laura)

Appendix Q: An example of a participant's (Sophie's) annotated transcript

Appendix R: An example of quotes for code 'Wanting to Make a Change'

Appendix S: An example of quotes for code 'Seeking & Achieving Perfection'

Appendix T: An example of quotes for code 'Reinforcing Role of Instagram on Guilt'

Appendix U: Codebook for all codes

Appendix A: Recruitment Posters & Hashtags Used to Promote Research

ORTHOREXIA
RESEARCH

COULD YOU HELP?

A CALL FOR VOLUNTEERS TO HELP
WITH A DOCTORAL STUDY

@Orthorexia_research

Who

- Female over 18
- Self identify as having Orthorexia Nervosa
- Use Instagram
- Live in the UK

@Orthorexia_research

What

This study is looking at:

- The relationship between ON and Instagram clean eating hashtags
- How ON impacts the sense of self

@Orthorexia_research

Why

- There is little research on ON despite clinicians seeing an increase in prevalence
- Could help with understanding ON and how to best help those with it

HOW

- 2 questionnaires that will take 10 minutes in total
- Email RAH0493@my.Londonmet.ac.uk
- Share this with anyone you think would be interested

@Orthorexia_research

Orthorexia Nervosa Research

WE NEED YOUR HELP

VOLUNTEERS NEEDED FOR A DOCTORAL STUDY

@Orthorexia_research

WHO

- Females over 18
- Self identify as having Orthorexia Nervosa
- Use Instagram
- Live in the UK

@Orthorexia_research

WHAT

This study is looking at:

- The relationship between ON and Instagram clean eating hashtags
- How ON impacts the sense of self (self-worth & self-esteem)

@orthorexia_research

WHY

- There is little research on ON despite clinicians seeing an increase in prevalence
- Could help with understanding ON and how to best help those with it
- Social Media usage has increased with lockdowns, it's important to understand how this impacts those with ON

@orthorexia_research

HOW

- 2 questionnaires that will take 10 minutes in total
- All information is completely anonymous
 - Email RAH0493@my.Londonmet.ac.uk
- Share this with anyone you think would be interested

@orthorexia_nervosa



ORTHOREXIA RESEARCH

CAN YOU

HELP?

- FEMALE, 18 YEARS +
- SELF IDENTIFY AS ORTHOREXIC
- LIVE IN THE UK

LITTLE IS KNOWN ABOUT ORTHOREXIA, THIS RESEARCH MAY HELP AND CONTRIBUTE TO A BETTER UNDERSTANDING

I am currently conducting my doctoral research on the relationship between Orthorexia Nervosa and Instagram

**Interested to volunteer? Contact me on
RAH0493@mylondonmet.ac.uk**

[View Insights](#)

[Boost post](#)



19 likes

orthorexia_research Orthorexia Nervosa is a excessive preoccupation with healthy eating. All the research is completely anonymous and may help with understanding what relationship ON and Instagram have. Additionally, it will help with an understanding of how ON impacts self worth and self esteem. If you you resonate with ON characteristics please do reach out to me.

[#healthyeating](#) [#orthorexia](#) [#orthorexianervosa](#)
[#orthorexiaawareness](#) [#cleaneating](#) [#healthyfood](#)
[#veganfood](#) [#ketodiet](#)

Boosted posts targeted those who engaged with:

Organic Food
Healthy habits
Planet Organic
Healthy Food
Health and Wellness
Living Healthy
Sugar Substitute
Detox
Healthy Diet
Eating Well
Vegetarianism
Veganism
Ketone
Clean food
Healthy life
Clean eating
Clean eating online
I quit sugar

Appendix B: Information for Participants

How do Instagram's clean-eating hashtags influence Orthorexia Nervosa and the sense of self in self-identified Orthorexia Nervosa tendencies – A Mixed Methods Study

My name is Raechel Horowitz and I am a Trainee Counselling Psychologist at London Metropolitan University. I am carrying out this study as part of a Doctoral qualification in Counselling Psychology. The research is being supervised by Dr. Catherine Athanasiadou-Lewis (senior Lecturer and Counselling Psychologist at London Metropolitan University).

Before you decide whether you would like to give consent to take part, please take the time to read the following information, which I have written to help you understand why the research is being carried out and what it will involve.

Please feel free to ask any questions or for clarification on anything that you do not understand.

What is the purpose of the research?

The study has two aims; one is to understand the relationship between Orthorexia Nervosa and Instagram clean eating hashtags and the second aim is to gain an understanding of how Instagram's clean eating hashtags influence individuals with self-identified Orthorexia Nervosa sense of self. Orthorexia Nervosa is a relatively new term referring to the behaviour associated with eating too healthily. It is hoped that findings from this study will enhance clinicians understanding of Orthorexia Nervosa and possibly inform service provision.

What is involved?

If you decide that you would like to take part, then please contact me using the details below. I can provide you with some more information about the research after which you will have time to think about participating, or we can arrange a time and place to meet and I can answer any questions.

If you are still happy to continue, I will send you a consent form to agree to take part in this research. I will also ask you to fill out two questionnaires, the ORTHO-15 and a questionnaire which asks you about your Instagram usage. If you prefer, we can arrange a time and place to meet. This assessment will take approximately 20 minutes.

Some individuals may be invited for an interview. If you are happy to engage, we will agree on a convenient date, location and time to meet. The interview can be conducted in a private room at London Metropolitan University in Holloway Road. The interview will last approximately one hour to one and half hours. During this time we will discuss your relationship with food, with Instagram and your sense of self. The interview will be audio-recorded. I may take notes during the interview as prompts for myself.

After the assessment and the interview, you will have the opportunity to discuss any questions you have with me. I will provide you with a debrief sheet which expands upon the research and details further support available.

What will happen to this information?

The two questionnaires will be statistically analysed in order to understand whether there is a correlation. The recording of the interview will be typed out so the information can be looked at in detail. The aim is to examine themes that are important in understanding the experiences we discussed. The assessments, the recordings and transcripts will be kept separately in a locked cabinet and the recordings and transcripts will be anonymised.

Will my taking part in this study be kept confidential?

Your name will not be used in the research in any way. If excerpts of your interview are used within the thesis, a pseudonym will be adopted, and no identifiable information will be given. All data will be destroyed at the end of this study.

What are the possible disadvantages and risks of taking part?

It is important for you to understand that the questionnaires and interview may cover sensitive topics and may evoke some distressing and uncomfortable feelings for you. You do not have to answer all questions and you may stop the interview at any point without an explanation. Please do let the researcher know if you feel upset at any point as the interview can be paused or finished at another time.

You will have the opportunity to discuss any feelings at length after the interview. You will also be provided with a list of relevant services.

Who do I contact about a problem?

If you are unhappy or would like to make a complaint, please contact my supervisor, Dr. Catherine Athanasiadou-Lewis at c.athanasiadoulewis@londonmet.ac.uk.

Contact details

Please contact the project researcher, Raechel Horowitz, with any questions you may have or if you would like to take part in this research.

Raechel Horowitz

Email: RAH0493@my.londonmet.ac.uk

Adapted from Shariff (2020)

Appendix C: Participant Informed Consent Form

How do Instagram's clean-eating hashtags influence Orthorexia Nervosa and the sense of self in self-identified Orthorexia Nervosa tendencies – A Mixed Methods Study

Researcher: Raechel Horowitz, Trainee Counselling Psychologist

Description of procedure: In this research you will be asked to fill out 2 questionnaires. You may be invited for an audio recorded interview where you will be asked questions around your relationship with food, with Instagram and your sense of self.

- I confirm that I have read and understood the information on the information sheet.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without consequence of any kind.
- I understand that I can withdraw permission to use data from my assessment/interview within two weeks, in which case the material will be deleted.
- I have had the purpose and nature of this study explained to me in writing and I have had the opportunity to ask questions.
- I understand that any information provided is confidential and any identifiable information will be anonymised prior to transcription. In the transcript and write up, a pseudonym will be used and all details which reveal any personal or identifiable information will be disguised.
- I agree to my interview being audio-recorded and transcribed. I understand that anonymous direct quotes will be used in the write-up.
- I understand that signed consent forms and original audio recordings will be retained in a locked area which is only accessible to the researcher until the board confirms the results of this thesis.
- I understand that under freedom of information legislation I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further information.
- I understand that I will have a debrief after the assessment/interview during which time I can ask questions and receive any guidance.

Signature of research participant

Signature of researcher

Print name:

Print name:

Date: _____

Date: _____

Appendix D: ORTO-15 Questionnaire

Participant Name: _____ Date: _____

TABLE 1				
Test for the diagnosis of orthorexia nervosa.				
ORTO-15				
	Always	Often	Sometimes	Never
1) When eating, do you pay attention to the calories of the food?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) When you go in a food shop do you feel confused?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) In the last 3 months, did the thought of food worry you?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Are your eating choices conditioned by your worry about your health status?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Is the taste of food more important than the quality when you evaluate food?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Are you willing to spend more money to have healthier food?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Does the thought about food worry you for more than three hours a day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8) Do you allow yourself any eating transgressions ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9) Do you think your mood affects your eating behavior?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10) Do you think that the conviction to eat only healthy food increases self-esteem?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11) Do you think that eating healthy food changes your life-style (frequency of eating out, friends, ...)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12) Do you think that consuming healthy food may improve your appearance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13) Do you feel guilty when transgressing ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14) Do you think that on the market there is also unhealthy food?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15) At present, are you alone when having meals?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SCORING GRID FOR ORTO-15 TEST RESPONSES				
ITEMS	RESPONSES			
	Always	Often	Sometimes	Never
2-5-8-9	4	3	2	1
3-4-6-7-10-11-12-14-15	1	2	3	4
1-13	2	4	3	1

From the ORTO-15 developed by L. Donini, D. Marsili, M. P. Graziani, M. Imbriale & C. Cannella. For research information, contact Dr. Lorenzo Donini at lorenzomaria.donini@uniroma1.it.

Permission received to use 12 April 2021

Appendix E: I-HES

Part A

1. How often do you post pictures or stories about food?

Never < once a month < once a week Once a week > once a week

2. How often do you use #cleaneating?

Never < once a month < once a week Once a week > once a week

3. How often do you use other clean eating hashtags?

Never < once a month < once a week Once a week > once a week

4. How often do you take advice from health food accounts?

Never < once a month < once a week Once a week > once a week

5. How often do you give advice on your healthy lifestyle?

Never < once a month < once a week Once a week > once a week

Part B

1. How many wellness brands do you follow?

0 < 5 6-10 11-15 > 16

2. How many health food accounts do you follow?

0 <5 6-10 11-15 > 16

Appendix F: Participant Demographic Form

In order to learn about the range of individuals taking part in my research, I would be appreciate it if you could please answer the following questions. All information is anonymous and confidential.

Please either write your answer in the space provided or circle/tick the answer the best describes you. (Adapted from Braun & Clarke, 2013)

1	How old are you?			
2	I am a	Full-time student	Part-time student	Not a student
3	Do you work?	Yes, full time	Yes, part-time	No
3a	If you work, what is your occupation?			
4	How would you describe your sexuality?	Heterosexual Bisexual Homosexual Other		
5	How would you describe your race/ethnicity?	White English/Welsh/Scottish/Northern Irish/British Irish Gypsy or Irish Traveller Any other White background Mixed/Multiple ethnic groups White and Black Caribbean White and Black African White and Asian Any other Mixed/Multiple ethnic background Black / African / Caribbean / Black British African Caribbean Any other Black / African / Caribbean background Other ethnic group Arab Any other ethnic group		
6	I consider myself to be:	Below the normal range for body weight	Within the normal range for body weight	Above the range for normal body weight
7	I consider myself to be:	Below the normal range for fitness	Within the normal range for fitness	Above the normal range for fitness
8	Have you ever tried to lose weight?	Yes		No

Appendix G: Interview Schedule

This appendix includes a list of initial semi-structured interview questions with prompts used to facilitate conversation.

1. What is your history of Orthorexia Nervosa?
2. What has been your experience of using Instagram?
3. Can you tell me about how you are being affected by what you see and engage with on Instagram?
 - a. What are your feelings about this?
 - b. What are your beliefs around this?
 - c. What are your memories about how you have been affected?
Prompt: physically, emotionally, mentally
4. How do you make sense of your sense of self on Instagram?

Appendix H: Debriefing Form

How do Instagram's clean-eating hashtags influence Orthorexia Nervosa and the sense of self in self-identified Orthorexia Nervosa tendencies – A Mixed Methods Study

Thank you very much for participating in this study, your participation has been incredibly invaluable. This debriefing form will help to provide you with more information about the study and how this research will now be used.

Purpose: The questionnaires you have filled out will be statistically analysed to determine whether and the is a relationship between Orthorexia Nervosa and Instagram's use of clean-eating hashtags. If you participated in the interview, it will be transcribed and analysed as part of the researcher's doctoral research. Your personal experience is valuable and by sharing it you have contributed to the study, which will further our knowledge of Orthorexia Nervosa. This study will allow psychologists to better understand how those with Orthorexia Nervosa tendencies engage with and are impacted by their interaction with Instagram. It may also help improve the way in which we work with clients in therapy addressing these issues.

Confidentiality: The information you have provided will be used for this study only. Any information provided is confidential and all identifiable information will be changed/removed in order to protect your anonymity.

Contact: Please feel free to contact me with any questions or concerns about the study. If you wish to withdraw from the research, please contact me within 2 weeks of filling out the questionnaires or attending the interview. If you would like to receive a copy of your interview transcript and/or a summary of the study, please do let me know and I will be happy to provide that for you. Additionally, if you have any further questions at any point, please do not hesitate to contact me or my supervisor.

Researcher: Raechel Horowitz
Trainee Counselling Psychologist
Email: RAH0493@my.londonmet.ac.uk

Research Supervisor: Dr. Catherine Athanasiadou-Lewis
Email: c.athanasiadoulewis@londonmet.ac.uk

Further support: I am aware that it may have been difficult to answer some of the questions throughout the assessment/interview and that they have brought up feelings of anxiety or distress. If this is the case, please do reach out to someone. Attached is a list of organisations that you may find helpful.

List of helpful organisations

If you would like to speak to someone for general counselling/support or more specific guidance regarding Orthorexia Nervosa, this is a list of useful organisations.

Samaritans

Offers a 24-hour help-line service.

Tel: 08457 90 90 90

British Psychological Society

A helpful organisation to find qualified psychologists throughout the UK

Tel: +44 (0)1 16 254 9568

Fax: +44 (0)1 16 227 1314

British Association for Counselling and Psychotherapy (BACP)

A professional body who can provide information on counselling and a list of accredited therapists.

Tel: +44 (0)1 45 588 3300

Email: bacp@bacp.co.uk

Beat

A large UK based eating disorder charity.

Tel: 0808 801 0677

Email: help@beateatingdisorder.org.uk

Mind

A charity aiming to provide advice and support to anyone experiencing a mental health problem.

Tel: 0300 123 3393

Text: 86463

Email: info@mind.org.uk

Appendix I: London Metropolitan University Distress Protocol

This is to be followed if the participant becomes distressed during participation:

This protocol has devised to deal with the possibility that some participants may become distressed and/or agitated during their involvement in the research into sense of self, Orthorexia Nervosa and Instagram's clean-eating hashtags. The principle researcher (Raechel Horowitz) is a trainee counselling psychologist at London Metropolitan University and has experience in managing situations where distress occurs. As the participants will be self-identifying as having Orthorexia Nervosa symptoms it is not expected that extreme distress will occur. Participants will also be reminded they may stop the interview at any time or choose to not answer questions they do not want to. Below is a three-step protocol detailing signs of distress that the researcher will look out for and the appropriate actions to take at each stage. These steps have been adapted from Cocking (2008), distress and risk management protocol.

Mild distress:

Signs to look out for:

- Tearfulness
- Voice becomes choked with emotion/difficulty speaking
- Participants become distracted/restless

Action to take:

- Ask the participant if they are happy to continue
- Offer a break from the interview, if needed
- Offer them time to pause and compose themselves
- Remind them they can stop at any time they wish if they become too distressed

Severe distress:

Signs to look out for:

- Uncontrolled crying/wailing, inability to talk coherently
- Panic attack – e.g. hyperventilation, shaking, fear of impending heart attack
- Intrusive thoughts of any traumatic event

Actions to take:

- The researcher will intervene to terminate the interview
- The researcher will acknowledge and validate the participant's distress
- If appropriate, relaxation techniques will be suggested to regulate breathing and to reduce agitation
- Debriefing will begin

- If any major issues arise during the interview, accept and validate their distress, but suggest they discuss with mental health professionals and remind participants that this is not designed as a therapeutic intervention
- Details of available psychological and mental health services will be offered to the participant

Extreme distress:

Signs to look out for:

- Severe agitation and possible verbal or physical aggression

Actions to take:

- Maintain safety of participant and researcher
- If the researcher has concerns for the safety of the participant or others, she will ask the participant to approach the GP and offer them information for other sources of support

Appendix J: Ethical Approval

PSYCHOLOGY: REVIEW

Reviewer

Enter X in correspondence with one and only one of the following statements:

C	Clear without amendment.	x
M	Clear conditional on the requested changes being made (minor modifications). ¹	
R	Revise and resubmit (major modifications). ²	

Comments (required for M and R referrals).




	Name	Signature	Date
Referee	Dr Angela Ioanna Loulopoulou	A I Λουλοπούλου	01/03/21

¹ The project must be revised. The revised project has to be approved by the supervisor **only**. The revised project, signed by both student and supervisor, must be submitted, for auditing purpose, via the **Minor Modifications Archive** submission link.

² The project must be revised, signed by both student and supervisor, and resubmitted via the ordinary submission link as if it were a new submission.

Final judge (if one was appointed)

Enter X in correspondence with one and only one of the following statements:

C	Clear without amendment.	
M	Clear conditional on the requested changes being made (minor modifications). ³	
R	Revise and resubmit (major modifications). ⁴	


Comments (required for M and R referrals).

Final judge	Name	Signature	Date

³ The project must be revised. The revised project has to be approved by the supervisor **only**. The revised project, signed by both student and supervisor, must be submitted, for auditing purpose, via the **Minor Modifications Archive** submission link.

⁴ The project must be revised, signed by both student and supervisor, and resubmitted via the ordinary submission link as if it were a new submission.

Feedback from Ethics Review Panel

	<i>Approved</i>	<i>Feedback where further work required</i>
Section A		
Section B		
Section C		
Date of approval	09/03/2021	
NB: The Researcher should be notified of decision within <u>two</u> weeks of the submission of the application. A copy should be sent to the Research and Postgraduate Office.		
Signature of RERP chair		

Appendix K: Ethical Approval E-mail

Angela Loulopoulou <A.Loulopoulou@londonmet.ac.uk>

9 Mar 2021, 12:12 ☆ ↶ ⋮

to me, Catherine ▾

Hi Raechel,

please find your ethics application form fully approved. You can proceed with recruitment or seek further external approval (such as NHS) if relevant.

Kind Regards,

Angela

Dr Angela Ioanna Loulopoulou PhD; AFBPsS; FHEA (she/her) | HCPC Registered Practitioner Psychologist;
EMDR Therapist | Principal Lecturer in Counselling Psychology; Programme Director of the Professional Doctorate in
Counselling Psychology | School of Social Sciences

Member of the Global Diversities and Inequalities research centre | Chair of Subject Standards Board for PG Psychology | Chair of Ethics
Review Committee for PG Psychology | Lead for Postgraduate Psychology

Appendix L: Example of participant's transcripts 1 (Jane)

Int: Okay, great. So I guess if we start off, just, I could ask what's your history around orthorexia?

Jane: Okay, so a bit of my history. So I am a, I was originally a gymnast, as a child. Um, and gymnastics is very much about how you look and being a specific weight and so as soon as your body starts to change, your coaches used to shout at you and be like, "Well, actually, you're, um, it's because your bums too big or like you need to lose weight" So actually a lot of my childhood was very much around that in sport and how I didn't look like a certain somebody or I wasn't making a skill because my bum was too big or I wasn't making I was never gonna make it past nationals because I wasn't this like. So that's how mine started. Um, gymnastics as a whole was kind of like an abusive sport.

Int: Mmmm

Jane: I then also did, I also swam, and I did trampolining at the time, just kind of but they were both sports that you had to be in a leotard, swimming costume, so I'd always kind of felt a little bit self-conscious but hadn't really been aware of how much I was in those sports, um, and then the first time I really remember feeling a little bit ugh was when I was at Nationals I, I stood on top of a friggin met, metal podium and all I cared about was how looked rather

Int: Mhmm

Jane: then that I was national champion. So that kind of like that tainted that but I never had issues with eating at that time I'd eat anything. Um, I say I didn't I wonder if I kinda did because I would just maybe binge, or I would...um... I wouldn't... If someone told me I couldn't eat something well I would, but then I, I do it because they told me I couldn't. It's a bit like someone says you can't do as you're going to

be told you can't. So I kind of, how I was with that. Um I then went to university and gave up gymnastics and obviously my body changed with that

Int: Mhmm

Jane: because I no longer had this restriction put on from my coaches and the restrictions were completely lifted. So I found alcohol, I found pasta, I found cheese! ((inaudible, laugh))

Int: Mhmm (laugh)

Jane: My first year I did put on a fair amount of weight. Um, I moved into track and field and I became a heptathlete at that point. And I was kind of written off as an athlete, because of my size. I mean, I've never been big as I've never been bigger than like a size 10 um, but, I didn't have the definition, I didn't have the look. Um and I guess I've never ((pause)) I'm not really going to have the definition, that like I know. Um, so my end of my first year I kind of went on what I would say was my first diet and, and that was kind of when my restrictive eating really started or I started to become more aware. So I've made it to the competition and I stood there watching these girls in the starting blocks. We were stood at, like it was first a 100, a 100 hurdle sprint like final and it was the first, like it was the final that I wanted to make my way to maybe the next year, year after and I just looked at the girls was like 'g-d, okay, this is the race I want to be in'. And I was stood together with this girl who just went 'oh my g-d look at their rolls and that in that in the blocks. Oh they've got these rolls'. And I straight away like what I remember is so vividly my hand went straight to my stomach and I was like, 'Oh my g-d'. I was bigger than those girls, I was not as confident as them, I wasn't as good as them and I was like 'well if they've got rolls, I've got bigger rolls, I can never be as fast as them, I can never be as good as them', so I think that was like kind of like that final trigger that

was really aware of that it kind of started to send me over the edge. Um, so that summer, I lost probably about two stones which I didn't have to loose and I did gain some of it back when I went back to uni but it was very much around the fact my mum was on Slimming World so I've just kind of followed that, um I very much restricting a lot of the time but I've never been able to maintain restriction and I would always binge and purge and that was kind of the way that I managed to lose my weight, more through binge purge and, um, counting calories to the extreme ((pause)) um, I went back to the second year and they turned around and were like 'oh my g-d you're look amazing you lost so much weight'

Appendix M: Example of participant's transcripts 2 (Alice)

Int: Mhmm. And what was it like for you when you were telling people how to eat or what they were eating was not healthy?

Alice: I felt clever. I thought I was right. I definitely did. I thought I'd find like a secret

Int: Mhmm

Alice: Yeah.

Int: It was this a secret that you did sort of devel, like taken. How did you come up with it?

Alice: It was kind of weird so I'm there preaching to people telling them what's good and bad and stuff but whilst also telling them I'm doing it because of FODMAP and it was it was very weird thinking about it now, a little hypocritical and confusing (.) um yeah.

Int: And what what was your, so it sounds as though you got quite um ((pause)) a boost of self-worth would you say?

Alice: Yeah, yeah for sure. So I definitely lost weight from it like a lot and to be honest, like (.) yeah, when you post pictures on Instagram and you just get so many more like likes, comments, um replies to your stories we get all of that so you feel like you know so then they are 'oh how do you look this good and stuff' and I thought 'oh yeah, well you know I do this and x y&z'. Yeah.

Int: Okay, so not only were you getting the boost by telling your friends, what they were eating was wrong, but then it sounds like because you lost weight, and then you are getting validation on social media, people telling you how good suddenly you were looking?

Alice: Yeah.

Int: Then that also created a boost of self-esteem.

- Alice: Definitely.
- Int: Do you think if people were not commenting the way that they were, it would have continued?
- Alice: Uhh it's a hard one isn't it? Because I think ((pause)) oh I don't know. Maybe not as much to be honest. It was kind of feeding it a bit like the more people were telling you you look good, the more you think you're doing the right thing. So you keep doing it and keep going. I kept getting like more and more obsessed. So I guess maybe not.
- Int: Mhmm. So it sort of became a little bit of a cycle.
- Alice: I think so.
- Int: Were you posting about, so it sounds, you posted about your body and how you looked?
- Alice: Yeah
- Int: Did you also post about your food?
- Alice: Um, yeah, so I would definitely take pictures of food. It's a hard one I used to be so, I used to be crazy active on Instagram like posting every day but in the last sort of lockdown was a bit, a bit less going on wasn't there. So I would say I wasn't posting as much but I would, I would post pictures of like smoothie bowls and stuff like that but I wouldn't say too often.
- Int: And what was that like? What what was it for you that you posted pictures of smoothie bowls or food?
- Alice: Because I thought it looked really nice and healthy and uh yeah, I don't know. I definitely think that when when you post when you post things to give a perception don't you and I was giving the perception that I was like super health goddess and the smoothie bowls and that, you know the rainbow rolls that you make with the

rice paper, like things like that I would make them make them look pretty and then I post those ones and yeah, I think they made me look like I was like really healthy.

Int: So you almost were wanting to portray this um really healthy lifestyle it sounds like

Alice: Yeah, definitely lots of exercise and yoga and stuff like that. That's, that would be more what I would post.

Appendix N: Example of participant's transcript 3 (Ava)

- Int: Okay. And how do you feel like this had an impact on how you viewed yourself?
- Ava: I just, I remember, like, I was obsessed with one point, constantly taking loads of pictures um, of myself for progress. Obsessed with it. I'd go, and when I would be up, up just about to sleep, just trying to like, the mirror checking was constant. And even if I didn't have a mirror, I balanced my phone on something and then lift my jumper up to just check my body. That's that's still something I struggle with to this day. But no, I, I was definitely aware of the cycle I was in. And I used to think that it was quite good that I was aware of what was going on. But I still didn't try to get out of that.
- Int: And do you feel like there's aspects of yourself that you feel like the clean eating would help with?
- Ava: I used to just think in my head, it's not worth eating what I want for a day, it's not worth doing that because I'm just gonna feel bad. So I've just keep doing what I'm doing and that's good for me. So I used to view the cleaning eating, as making my own food as what was actually benefitting me, and it was keeping me from being damaged, when in fact, it was doing the complete opposite.
- Int: Mmm. And when you say damaged, what does that mean to you?
- Ava: I'd say ((pause)) just long, not realising at the time but long term, this was gonna really change my outlook and way of thinking for the foreseeable, because as much as I know, I could go to my boyfriend I know, you know, I felt it's a very isolating thing. I think in my head, I won't be able to be able to talk about stuff that I've done because unless someone else was going through the same thing, they wouldn't get it. And I would, I would just think some days I'd be like I want to recover from this damage that I've caused but then it'll just take one little thing to like relapse again

and then just go back in that way of thinking and it, yeah, it just seems like a never-ending state of mind.

Int: And the things that would set that off, what was that?

Ava: My phone, like going back on it and seeing these posts on Instagram and the ‘what I eat in a day’ and people going on holiday. Whereas I used to view a holiday as you eat what you want, you relax, lie by the pool and then seeing them doing these excessive workouts in their hotel room, which would be like so tiny, and like packing protein bars in their suitcase and things and I was like, I just, and I remember I went for two weeks in Malta that summer, and I just, like looking back on it, I just was like I had the most awful time because I've constantly thinking about what I looked like and what I was eating and looking at how many steps I was doing and looking for the clean food options and menus and it, it just took over because it was what I was filling my head with everyday looking on my phone.

Int: So (.) sounds like if you had a day where you thought to yourself you really want to get out of the cycle, you want to start to get better and eat what you can um, you'd then go back on your phone

Ava: Yep

Int: See the accounts, the women that you were following, and get back into it

Ava: Yeah. And, and that would make me think, like go ‘What am I doing?’ like ‘No, you need’ and it would just be like a comfort blanket, so even though I hated it would just be like a comfort to fall back into it because I felt like I was keeping myself safe when I was actually just wrecking myself is what I can only describe as

Int: And the foods that you ((pause)) have had such a fear around, I know that you say that they caused guilt, but what was it that that fear was so pronounced around do you think?

Ava: I think just the fear that I was gonna make me just like if I, if I, the thought of me having something like that I viewed as unhealthy, if had that meal would just make me think that's me wrecked everything for the week, and my body is going to just completely change. And anything that I've done that week is just going to be wrecked from that one meal or something.

Appendix O: Example of participant's transcript 4 (Emily)

Int: So does it, it sounds as though you've ((pause)) you ((pause)) uh it gives you a lot of psychological (.) and emotional um (.) support and a boost as well as

Emily: Yes

Int: So, almost more than the physical um

Emily: Yeah

Int: Impact

Emily: But the downside is that I, I feel even worse when I break it than,

Int: Mmm

Emily: than if you know I'm just 'okay a bit chocolate, it's okay'. Rather than 'oh my g-d I had a whole colonics and I ate a little bit of chocolate' it takes proportions that are bigger.

Int: Okay, okay. Do you feel as though, um (.) your sense of self-worth and self-esteem is very tied into this?

Emily: Completely. Yes. I literally feel really bad and depressed for the past few days whereas whilst I was in quarantine, which is more of a stressful situation, for me because I was exercising and eating well, I felt super good.

Int: Mm interesting.

Emily: So it's really really linked, yeah.

Int: And do you feel, so you mentioned briefly that you get some of your information from Instagram and social media and online and that you, (.) sort of find that the uh algorithms of Instagram

Emily: Mmm

Int: Have made it so that your entire pages are populated by food et cetera

Emily: Yeah

Int: Um, how often do you feel like you're on Instagram using it for these purposes?

Emily: Uh, I think I mainly use it, so it would be like half to follow up on my friends and a half to, to, I think it's like the the the seeking a solution to not feeling well. So I'm like okay I'm gonna go on this and feel inspired to, you know, like people have, who seem to be living the life happening you know, eating salad and being there and I'm gonna be like, they make it you know, it's so inspirational to see them do that so uh, and they seem to be feeling good, if I do that I'll be feeling good as well and and so I do it. So, I often do it now that you actually mentioned it, at night before going to bed when I feel like, you know, like tomorrow it's going to be a good day blah blah blah, before going to bed I'm going to, you know, stock up on images of you know people are like super running in the morning and feeling so fresh after it and having smoothie bowls and and stuff so that's ((inaudible)) ((both speaking))

Int: Sorry. So it sounds as though it's um, the pictures that you then say that's the life that I'm wanting and they look so happy in it

Emily: Yeah

Int: and so A) I want to feel as happy as they are and B) they're living the type of lifestyle I want. Is that correct?

Emily: Yeah, the type of lifestyle that would support my being, you know, very healthy, very strong, thus feeling well in my body, thus feeling well in my head, thus being happy overall, which, you know, it's only my guess it's it's not sustainable, because I guess even you know, kiwi eating people have down and bad days ((laughs)) it must be happening as well. So yeah, it's more, yeah, a boost and inspiration and motivation behind the whole behaviour of, you know, looking and scrolling down on these kinds of topics and pages

Appendix P: Example of participant's transcript 5 (Laura)

Laura: Exactly. And not only that, it was because when you, when you see um, because I mean social media and the internet is very smart, so whatever you're looking up, they try to give you that content that you want to see. So it's kind of like personalised if, for example, I would always like talk about cars, look up cars on the internet, my Instagram feed would be full of cars. But it's because I was looking at like health and wellness and like these kind of people, my Instagram page would be full of that. So I would start like I would go into Instagram, see more profiles that I didn't know they existed and started following them. So I started following following more people on Instagram that were had the profile that I was looking for. And (.) yeah.

Int: And what is that profile?

Laura: Kind of like healthy, um sporty, confident, they showed they had like the perfect lives, like happy, um all the people that I followed were older than me. Um I think that is something to point out because of one thing I've learned is that we tend to rush things like our generation tends to rush things. So we want to grow up before we actually grow up. So [inaudible] for choice, testing, adopting, but I tried everything in my power um to kind of like change that and get the goal faster. So I, for example, yeah, I just um, and that profile was finan, financially independent girls who are just, I guess had the money to buy or get like expensive treatments and certain protein powder and like Whole Foods and organic stuff, which tends to be more expensive, and they were getting those things for themselves. For me, I'm kind of dependent on my family and I can't buy something just for myself and I, when it's my parents who are like, kind of, I guess paying for everything, um and stuff like that. So, yeah. And (.) and I just wanted to be like that. And that was the

profile I was looking for. And girls that posted recipes and tips on nutrition and fitness and yeah

Int: So

Laura: ((overlapping talk)) that sort of thing.

Int: Sorry, I cut you off.

Laura: No, that's okay. I uh, I finished.

Int: So it sounds like it's almost the people that you were looking at, not only just for recipes and fitness, we're also selling a lifestyle. Is that correct? And is that a sort of lifestyle that you associate a certain eating way and a certain uh uh health?

Laura: Yes.

Int: Okay.

Laura: Yeah.

Appendix Q: An Example of a Participant's Annotated Transcript (Sophie)

On the right-hand side of transcript are the exploratory comments, highlighted in colour to differentiate the sentence the comments are referring to.

Int:	So do you feel like it has impacted you in mentally, emotionally, physically?	
Sophie:	<p>Um, yeah. 100% I think especially. I think physically, yeah. Because, you know, those, like, there's always like, being tired. Sometimes, like, I, I still haven't managed to overcome. Give your body what it actually needs sort of thing. So, I'm very, very aware that I'm not the healthiest version of myself. So, like, I'm always like, always just like a little bit tired. Or like feeling rundown or like, have a bit of mental fog. And I know, it's because I'm under fuelling, but I can't bring like, because there's so many things that I'm scared about eating. I sort of can't bring myself to do it, if that makes sense.</p>	<p>Always tired</p> <p>Can't give her body what it needs</p> <p>Not her the healthiest version</p> <p>Tired, rundown, mental fog</p> <p>Fear of certain food stops properly fuelling</p>
Int:	Mhm	
Sophie:	<p>And then obviously, there's like a lot of anxiety around eating and, you know, going out and all sorts of things like, even sometimes, I just think if I if it's not going to be like a good, like decent quality of meal then I'd rather just not eat,</p>	<p>Anxiety around social eating</p>
Int:	Mmm	

Sophie:	<p>If that makes sense. So I do that quite a lot. And I used to do, I was really, really bad for at uni. But I've moved back home now with my mum, who she's like a mental health nurse. So she's really into her science and whatever. And so she sort of like keeps an eye on that not eating thing, but I genuinely would just rather not eat if I can't make a good meal. Like I just there's no point, I think, putting rubbish in my body. So yeah. Which is silly. But yeah.</p>	<p>Wouldn't eat if not decent quality food</p> <p>Not eating worse at uni</p> <p>Mother keeps an eye on not eating</p> <p>No point putting rubbish in body</p>
Int:	<p>It's something that you're experiencing in reality. So thank you for sharing. Do you ever allow yourself to have a transgression of what you believe is unhealthy?</p>	
Sophie:	<p>Yeah, yes. And then I like, but I do, from time to time. And then it's like, there's like a lot of guilt around it. If that makes sense. It's very, very much like, Oh, my G-d, like, and that takes like, the enjoyability out of what I'm doing</p>	<p>Sometimes allows transgressions</p> <p>Guilt around transgressions</p> <p>Guilt removes enjoyability</p>
Int:	<p>Mmm</p>	
Sophie:	<p>Because it's such like it feels like dirty, if I'm doing it, you know what I mean? And I'm like, nobody cares (laughs). But me. So, yeah.</p>	<p>Transgressions feel dirty</p> <p>Nobody else cares about her transgressions</p>
Int:	<p>And how, how do you manage that feeling?</p>	

Sophie:	Um, I don't (scoff) I don't I just sort of let it just ride the wave, really. But yeah. And it will be a thing of if I do something like that, then I'll sort of like the next day be very, very vigilant about what I consume, it's almost sort of, like, make up for it, if that makes more what I do. But again, there's like, that's not very good. And there's loads, like is very anxiety inducing. So I'd rather just not, and it's good talking about this, but because I was very, very unaware of it	Compensates for transgressions Transgressions cause anxiety Used to be unaware of unhealthy relationship with food
Int:	Mmm	
Sophie:	For a while. But then I've actually become quite like consciously like, well, maybe you probably shouldn't think about food that way. Like, it's not right. But it's the actual putting it into practice.	Aware unhealthy relationship with food Difficult to change behaviour around food
Int:	Mhm	
Sophie:	Still isn't, um, still is there.	
Int:	What do you think changed in your awareness that you did start to become more aware of it?	
Sophie:	Um, so for me, it was mainly, like, I sort of did like, or do a lot of like, scientific reading and whatnot. Um, but my degree was in neuroscience.	Degree in science helped awareness
Int:	Mhmm	
Sophie:	And in the, in my final year, like, we were had, like a neurobiology of like, eating or something	Read neurobiology of eating

<p>bizarre like that. And then I started doing a lot of reading around the topic. And then I was just like, Oh, my G-d, like, this sounds. Like, I don't think this is how people should have an attitude towards food. It's not, it shouldn't be a reward, and being around like, you know, said being around these other people, um, especially like athletes who were actually, you know, not necessarily doing what people would consider clean eating. Sort of, like, let me push up the boat a little bit, because I'm like, here are people who are, you know, in their best condition, and they're not eating the way you are. So it was like, okay, but it could be a thing of individual differences. But I'm like, think about how you feel some of the time with your current diet. Like you're so worried about what you're eating, you don't feel happy eating it anyway, for most of the time. But, and you're always tired, you probably, you know, so that sort of led me to think, yeah, you probably have a bit more of a irrational attitude to food than you should do.</p>	<p>Reading helped realised attitude toward food is not healthy</p> <p>Food shouldn't be a reward</p> <p>Athletes not clean eating</p> <p>Confused by how athletes eat</p> <p>Diet differences could be due to individual differences</p> <p>Reflected on unhealthy attitude towards food</p> <p>Physical symptoms caused reflection of attitudes</p>
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Appendix R: An example of quotes for code 'Wanting to Make a Change'

Files\\Participant 1 - Jane

3 references coded, 3.26% coverage

Reference 1: 0.35% coverage

Jane: Um I kept in that cycle I would say for about four years

Int: Mhmm

Jane: until I was able to kind of just go 'whoa what the hell are you doing, stop this'. But then even now I still go back into that cycle every now and again.

Reference 2: 0.52% coverage

Jane: And like this is the first time I've gone on a waiting list to ask for help, since what I was eight. So 22 years, I mean, it's not something that you just suddenly go, 'Oh, I'm having difficulty with my eating. I'm now going to ask for help' you kind of deny it the whole time. Um. Yeah, so the waiting lists are really long.

Reference 3: 2.39% coverage

Jane: I follow a lot of athletes. Um and when I first went on, back on Instagram, I was like, 'I'm only gonna follow athletes that I feel lead by a good example, don't really care so much about their bodies'. Or maybe ex-athletes. People that are kind of posting more fully dressed or having a more of a balanced life. But I've definitely found myself going back to people that it's all about how they look, maybe, um I no longer follow anything like, so. I've got a friend who absolutely loves the food medic.

Int: Mhmm

Jane: So, yeah, like, seems great. She's a doctor. She is a fitness. She's got her own, like, cookbooks for all of this stuff. But even she is really skinny. She only eats vegan, she restricts stuff. And I'm like, I have to come away from that. Cause I was like, actually, this is not a great role model. Um and I've started unfollowing anyone who now starts doing 'what I eat in a day'

Int: Mhmm

Jane: Cause that is a huge trigger for me, that is huge because it's absolute bullshit what they post, there is no way they eat as little as they say they do. It's impossible. They're looking at like ten, like eleven, twelve thousand calories. And I'm like, there was no way you're eating that and you're going to the Olympics. And so I've started...yeah, I started unfollowing that because I started being like, 'Oh my g-d, they're, they're eating so much less than me. And they're better than me. So obviously, they're fuelling enough and blah, blah'. Yeah.

Files\\Participant 2 - Sophie

5 references coded, 10.64% coverage

Reference 1: 2.77% coverage

Sophie: But then again, it is sort of like okay, well, it's almost like the the damage is too far gone. Like it's done. Now, and you know, I'll never eat pork again, ((laughs)) like so. It's like, whilst it is helpful now and to see the discourse around, you know, health and lifestyle, changing a little bit and becoming a little bit more positive. I think for people who actually genuinely have tough relationships with food and being overly conscious about what they eat, Instagram was not good for that. But they've they have sort of fixed their algorithm a little bit now. But there was a moment in time that if you searched like any sort of like, food or health thing, it was so easy to find yourself in it just like, you know, pages that will tell you to do very

concerning things, like even things that I was, like, you know, you can't do that, like, you're gonna kill yourself if you live that way. So yeah, it's good that they've sorted that out. I suppose.

Reference 2: 1.60% coverage

Int: Mhm. Do you spend a lot of time on Instagram?

Sophie: Um, not as much as I used to before, but still probably a considerable amount of time on Instagram. Um. But like I said, in the last couple of years I've sort of tried to reduce the amount of sort of that content that I'm consuming

Int: Mmm

Sophie: Because I'm very aware that it's not, it's just not good for my mental. So yeah, I'm spending. I think we've all had like a year and a half of just staring at our phones, like, I'm just, I'm over. I'm just not, not doing too much Instagramming recently.

Reference 3: 1.69% coverage

Int: Do you feel like us being in lockdown has had an impact on your relationship with food?

Sophie: Yes, it really has. Um, because not being busy, like not having other things to do. You do, you sort of spend a lot of time just like thinking and scrolling. And like, I probably tried every trendy, like, you know, whatever was going on in lockdown thing. So it probably hasn't helped. But it did give me a lot of time to be introspective about my eating habits. Um, it has made me very more like, aware of my, like thought processes towards food. So yeah. Suppose it was good in that regard.

Reference 4: 1.09% coverage

Sophie: Yeah. So when I do post um on my, like, that page that I mentioned. Um, I would like you know, do like clean, clean eating vegan blah blah blah or whatever. Um, and then in that sort of process, you engage with the hashtag. And you know, you scroll through and you read and you look at pictures and see what people are doing like, so yeah, I do I do engage with those. But I try not to.

Reference 5: 3.48% coverage

Sophie: Yeah, yeah, I am. I've just only because I know what it (.) like I said a lot of time to be introspective over uh over lockdown. So I'm very aware of what it does to sort of like my mental health, my anxiety and whatnot. Um, so I'm trying I'm really, really trying to engage a lot less.

Int: Mm

Sophie: So like with not following food pages, not following my healthy eating tip pages. Like it's just not. It's not very beneficial to anyone. And again, nobody lives like that. And when you try to live like that, you realise it's actually not a very, it's not a good way of like eating and I feel like it's almost like it's sort of like a gateway to really other like damaging eating habits in a way. Um, but I think the only thing that sort of helps me not going into like, really, really concerning places with my eating was, I have like a really, really (.) What's the word? I'm a bit of a hypochondriac. I think I am, like, I'm very concerned about being unwell. So if it's just like the fatigue from not eating loads, and having to take some supplements, I'm fine. But knowing that there could possibly be like, long term health risks to me, stop me, you know, fully, fully engaging in that lifestyle.

Files\\Participant 3 - Laura

5 references coded, 6.34% coverage

Reference 1: 1.41% coverage

Laura: I do, um, not as much as I used to do. Because since I'm trying to gain weight I'm trying to cut to kind of like, hold back on doing a lot of exercises. Like then again, I just, it's so easy to fall in the trap and just go crazy doing exercise. In terms of like recipes and tips. Um, I'm trying to kind of like hold myself back also because I'm kind of like, shy in that aspect of knowing that I might lie in some like, not lie in terms of what I'm I'm posting, but in terms of I feel guilty knowing that I don't follow um a hundred percent of the time, that advice that I'm giving. So I'm trying to hold myself back.

Reference 2: 0.80% coverage

Laura: And I'm trying, it's like you're trying to, to, to fix um to kind of like, get better and get healthier and go back to the way things were before and you're trying your very best, um but without any help. It's not, it's really, really tough. I'm not saying it's impossible, you have to be very strong and kind of find yourself in that process.

Reference 3: 0.54% coverage

Laura: But what really has helped is those little groups on Instagram or Facebook that do share, do share their stories and testimonials, and their journeys, and, and yeah. But in terms of like medical help, there's almost nothing.

Reference 4: 2.06% coverage

Laura: Probably. Maybe because through Instagram, obviously, it's gotten worse. But it, it's also made me realise that I have it.

Int: Mmm

Laura: And I put a name because I didn't fall into the group of anorexia or bulimia or binge eating or anything. I just didn't know. I knew something was wrong with me. In a way, I didn't really pay, pay much attention to it. But then I didn't realise like I put a name to it. And I said, this is it, it's called orthorexia. It's a new term. It's something that I didn't know. Um looking back at I don't like I guess, women, there must have been a history of this for centuries now, for years. And because they didn't have social media or anything, they simply didn't care and many of them died and and just never and got all these problems in the future like osteoporosis or an infertility because they didn't know how to reverse this um habit

Reference 5: 1.52% coverage

Laura: As I was saying the problem with those like, um groups, support groups on Instagram is that it's easy to see their recovery, their journey, to read about the theory, the theory is really easy. But then, once you put that into practice, and that's the hard part. And that is, that has nothing to do with them.

Int: Mmm

Laura: It has do with you, your willpower and your strength. And you have to kind of like it to the mind when you are stronger than your thoughts. And and yeah.

Int: And that's not, as you say, it's not easy. Otherwise, it would be

Laura: It's not easy. Because I've been there and I haven't been able to do anything about it.

Files\Participant 4 - Alice

5 references coded, 11.60% coverage

Reference 1: 1.66% coverage

Alice: So that's, that's definitely where it started and it was easy to keep that as an excuse for a long time. Uh but then it turned out that I did have something, I had like um gallbladder disease so luckily I got that taken out um in maybe around April or May and to me it kind of signalled

'right, okay, you now don't even have an excuse to say to people and you can no longer turn up if you took whatever boxes so someone's got to change' so I started seeing like a counsellor to address the situation and I feel loads loads better and do feel (.) It's still there, it's always going to be there but it's better.

Reference 2: 2.48% coverage

Alice: Um I think it was really when I had my surgery that I was like something doesn't feel right anymore something feels dark you know. For that whole sort of like a week recovery after I felt really ill my mom was here and she was sort of commenting on like, so I don't live I've not lived with my mom since I was like eighteen, but she came to stay, we live quite far away from each other and she came to stay for a week, and I think she started noticing you know what I was eating, what I was saying, what I was doing, why wouldn't eat stuff. You know it's just kind of got a bit hard I was like oh, okay, yeah, and now I don't really have a reason to do this anymore. A reason. Um it started to feel quite bad and then after that it felt very dark so, and certainly like if I did transgress trying to throw up when you have cuts in your stomach wasn't exactly very fun, so I think that was kind of a turning point for me

Reference 3: 1.91% coverage

Alice: Yeah and I was still trying to like so I could ((laughs)). I was on like morphine and stuff but I was still trying to like make sure I got my ten thousand steps and my mom's like you can barely walk like that. And I was like that actually isn't right, like that's quite wrong. And I didn't think it at the time but I was quite really quite skinny and like you know, like quite skeletal and just like my skin, my skin's not great right now but my skin was so bad and you would have thought it would have been good and I couldn't understand how I was eating all this healthy food and preaching to everyone how I was this health genius but my skin was bad and I was always cold and that's not healthy

Reference 4: 2.13% coverage

Alice: Um, so ((sighs)) when I started seeing a counsellor it's funny because I sort of just said 'oh I've just got some issues of eating and some other things too'. And it was just the way that they ended up that they became linked. So by helping myself in other maybe past issues from childhood or whatever has also helped me be able to lose or let go a bit of that control over the food or or not deem things as good and bad and healthy and clean and dirty. And you know, like I felt that I was a dirty person for one reason and then eating clean was making me feel cleaner. Um but now I don't feel like I need to do that

Int: Mhmm

Alice: As much because I've spoken about some of those issues.

Int: That's

Alice: Obviously still a long way to go. But yeah, definitely made good progress.

Reference 5: 3.42% coverage

Alice: I just knew I knew I needed to do it. Um because as I said I was just got very dark at the end and I was feeling horrible. And yeah, I just, it didn't feel right, it felt so just obsessive. It was just all I thought about all day and I, the way I was speaking to myself was just awful. You know, like ugh, and you know, my housemate was starting to be like, you know, she heard me. She'd be like 'what on earth like how, what are you, what are you talking to yourself like that for?' And you know, like oh, and yeah, I just thought, 'oh G-d', like I didn't really realise I was doing it that much until you know how other people started noticing more. Int: Mhmm

Alice: So I think I just at that point, I was like, I need to help, get help.

Int: Mhmm

Alice: Because I kept saying to myself, I was like, 'right I'm going to stop'. Um, I think I said, I said to my housemate multiple times, I was like 'I'm going to stop, I'm going to stop, I'm going to stop doing this as obsessive I'm going to get I'm going to stop doing as obsessive like after this week and all like after this after that', and then she be like 'are you still, are you still doing it?', and I'd be like 'yeah'. So it just never stopped. So I knew I needed to sort of draft someone in to help me.

Files\\Participant 5 - Emily

1 reference coded, 0.70% coverage

Reference 1: 0.70% coverage

Emily: So a few years ago, I uh stopped gluten as well because I had um an infection in my um intestine that um was suspected to be the Crohn's disease

Int: Mhmm

Emily: So I tested for this which was negative but still since it was one of the symptoms I stopped it and so I stopped it for a few years and now I've reintroduced it a month ago and everything's fine

Files\\Participant 7 - Georgia

5 references coded, 3.04% coverage

Reference 1: 0.91% coverage

Georgia: I think that's what a reason of why recently I deleted them. Like the apps, I've gone the rest of deleting it when it just felt like it was being really unhealthy. It's only quite a recent thing I've done, because for a while, like I, I didn't even think that I'd be able to comfortably delete it, because of the thing like social media is like really addictive for a lot of people. Um but I ended up deleting it in summer, for a few months. And I thought it was great.

Reference 2: 0.84% coverage

Georgia: And then for a short while, I thought to use it more, then I realised after the short while of using it more, I was becoming more obsessed, something that I knew that like I didn't want to be because of the years of experience of becoming obsessed with eating, it takes up my thoughts, it's so draining, it's really upsetting. So shortly after using it more to try and help, I didn't use it again. Um. I haven't used it since.

Reference 3: 0.70% coverage

Georgia: Yeah, I think it's just a lot of reviewing of the the many years I'd spent uh adapting what I thought was healthy, what I would do in the coming years. Although I would always never hope it would be years, it hope it would be like um, yeah, I hope hope I would be like I'd come out of being so obsessed. Um, and, yeah, just yeah, that's probably the pandemic.

Reference 4: 0.18% coverage

Georgia: Um I think it was probably the time I slowly started deciding I wanted to come away from it.

Reference 5: 0.41% coverage

Georgia: Um, but I, I kind of thought like, I've been doing this a bit more than most people, because I don't feel like most people spend seventy-five percent of their thoughts at times a day, like, thinking about it.

Files\\Participant 8 - Grace

2 references coded, 0.97% coverage

Reference 1: 0.30% coverage

But I'm also just like, "That's just how they live their life." and I'm a different person to them, so.

Reference 2: 0.67% coverage

For a week, I'd be like, "Right, that's it, that's final, I'm changing now," but I just...I just couldn't do it, I just kind of keep going back to how I was, because I just wasn't happy with the way that I looked. Not happy with looks

Files\\Participant 6 - Ava

10 references coded, 9.39% coverage

Reference 1: 1.43% coverage

Int: Mhm, mhm. Okay. And do you feel as though Instagram has played a role in this?

Ava: Oh, I'd say mainly Tik Tok. But Instagram a hundred percent because I remember, there's one day in lockdown, I just went through all the people I followed and I had to be brutal and unfollow all the people I knew that were feeding my problem, and posting things like clean eating and their meals and labelling foods as distinct as that and I had to just remove these people. Because it got to a point my life was based around people I'd never met. And I'd (.) tried to mirror people that I don't really even know what was going on in their lives at the time.

Reference 2: 0.61% coverage

Ava: And I would, I would just think some days I'd be like I want to recover from this damage that I've caused but then it'll just take one little thing to like relapse again and then just go back in that way of thinking and it, yeah, it just seems like a never-ending state of mind.

Reference 3: 0.70% coverage

Ava: And, and that would make me think, like go 'What am I doing?' like 'No, you need to' and it would just be like a comfort blanket, so even though I hated it would just be like a comfort to fall back into it because I felt like I was keeping myself safe when I was actually just wrecking myself is what I can only describe as

Reference 4: 1.00% coverage

Ava: But I was never happy and that's what I still look back on now to remind myself but I get moments where I'm like, 'g-d, I looked this way in the summer. I looked amazing'. I, I felt the worst, what people may looked at me at some point and thought she looks the best she's ever, I felt the worst I've ever done in my life. So I, I was just a constant like pe, just like what people may have viewed me as at the time it was just completely different in my mind

Reference 5: 0.30% coverage

Ava: I think it was, because I would, when I was leading to the point where for I need to recover now from this because I can't carry on.

Reference 6: 1.18% coverage

Ava: And then it would take the odd influencer (.) and like, I could even name her off the top of my head, because I still follow, who would then open up and say they're really sorry about what happened. And they've only just realised and surfaced what they were going through, because they were in such a cycle that they felt they couldn't break out of it. And that's when I

realised, I need to do that and choose to recover, I need to accept that what I've put my body through, it isn't okay, and that that's not what live in life is about.

Reference 7: 0.38% coverage

Ava: So people I'm following is people like those girls who are saying they're recovering now, you can do it, if I can, you can. So filling my feed with better content helps.

Reference 8: 0.88% coverage

Ava: I'm just taking a moment to just say like, 'it's okay', like, what I went through wasn't okay, but (.) just to remind myself that I've came quite far is what I think gives me some comfort knowing, even though I'm nowhere near to a hundred percent, I'm still better than I was this time last year, even if it's by slightly, I'm still a bit better. So that's the only thing that just keeps me going.

Reference 9: 0.72% coverage

Ava: It's taken a lot of work and just, in just wearing like, baggy clothes to just, so I'm not constantly fixated on how I look, and just trying to remind myself to not keep mirror checking and things. So I'm more aware of the behaviours I'm doing now. And recognising that it's not good for me and trying to pull my way from that.

Reference 10: 0.75% coverage

Ava: I'm more aware of it in the sense, even though I was aware that before I was still doing it, but now I do pull myself back and think 'right', kind of like a self-talk, to just try pull myself out of that and trying to maybe even if it's only small thing, but share with my boyfriend how I'm feeling ever so slightly. Just helps a little bit.

Reference 11: 1.45% coverage

Ava: I've more had some body acceptance, of realising like women's bodies are amazing, what we can go through and that they are constantly gonna change each month and constantly saying to myself, in ten years' time, when I'm thirty, forty, or fifty, I'm not going to look back, and care about what I looked like at this point in time now, and just reminding myself that people don't remember me for how I look or my body, it will be my personality, or the great chat we had, it won't be because of how I looked that day. So just reminding myself that life isn't based around physical appearance as much is what's comforting for me to keep pushing through.

Appendix S: An example of quotes for code 'Seeking & Achieving Perfection'

[Files\\Participant 1 - Jane](#)

3 references coded, 2.05% coverage

Reference 1: 1.14% coverage

But then even now I still go back into that cycle every now and again. Um...and it normally comes down to if there's like a stressful situation. So leading up to a major championships, leading up for like an international, leading into well kind of if there loads of stress, so like I'm a physio. So, I straightaway last year when we started having to respond to COVID

Int: Mhmm

Jane: that was a real big trigger for me. Um, but I did recognise that one, that wasn't too bad. And then another trigger was like when I was sexually assaulted by my athletic coach

Int: Mhmm Jane: so there've, there, there have always been things that trigger them, but I'm not necessarily aware of it at the time.

Reference 2: 0.20% coverage

So I will try and control calories so I'll get straight back into counting calories and make sure that I'm cutting each day.

Reference 3: 0.70% coverage

Um I guess I would post on a story say a birthday cake that I bake a lot, but I don't eat it. So anything I really post tend to be served I haven't necessarily eaten.

Int: Okay. And why do you think that you post it then?

Jane: To make people think that I'm eating it.

Int: Okay.

Jane: Yeah, I guess so, I guess that's the reason um because 'I'm normal like everyone else, so I must eat cake'. And I yeah, so it must be I guess that's the reason

[Files\\Participant 2 - Sophie](#)

3 references coded, 3.54% coverage

Reference 1: 0.59% coverage

But and I was really self-conscious about what I was eating and being like, 'Oh, um, you know, you've got to look a certain way, run a certain time'. And that all comes from how you'd like fuel your body.

Reference 2: 2.57% coverage

I think physically, yeah. Because, you know, those, like, there's always like, being tired. Sometimes, like, I, I still haven't managed to overcome. Give your body what it actually needs sort of thing. So, I'm very, very aware that I'm not the healthiest version of myself. So, like, I'm always like, always just like a little bit tired. Or like feeling rundown or like, have a bit of mental fog. And I know, it's because I'm under fuelling, but I can't bring like, because there's so many things that I'm scared about eating. I sort of can't bring myself to do it, if that makes sense.

Int: Mhm

Sophie: And then obviously, there's like a lot of anxiety around eating and, you know, going out and all sorts of things like, even sometimes, I just think if I if it's not going to be like a good, like decent quality of meal then I'd rather just not eat,

Int: Mmm

Sophie: If that makes sense.

Reference 3: 0.38% coverage

I genuinely would just rather not eat if I can't make a good meal. Like I just there's no point, I think, putting rubbish in my body.

[Files\\Participant 3 - Laura](#)

6 references coded, 5.58% coverage

Reference 1: 1.11% coverage

Yes, um, so, I've always been very, um I'd say like, tough on myself and perfectionist, and I've always wanted to be the best at everything, not because it was imposed on me by my parents, or by my teachers, or by anybody, I just, I really enjoyed being like that. And you know, just um having good grades and being good at sports, playing instruments, just being able to do a little bit of everything and being somebody um who was kind of, like, admired by other people.

Reference 2: 0.73% coverage

Um, I was just not not good place. So I guess I started eating less. A few things obviously happened with my friends and just boy drama and stuff like that. So I just I was not hungry anymore. And the only thing that I could control and then made me feel good was exercise and food. So I started um working out so much

Reference 3: 1.38% coverage

Um, because I didn't, I saw kind of, like, I saw food in two ways. A) kind of like, as as bad because it was kind of like ruining my progress, like my fitness progress. And two as good because obviously, I kind of needed to fuel my body to get those abs, like protein. But in between that balance, it was more of seeing food as kind of like, a way of not reaching my fitness goals. That's why I started putting out off group of food groups that just like yeah, fats and carbs and um and that's why I stuck with the, the plant based diet um because it was like low calorie and ((pause)) and yeah.

Reference 4: 0.46% coverage

Um, stress because you um can't go out with your friends and enjoy a nice meal without going crazy about um the quality of what you're eating. Because it's not the quantity it's more the quality.

Reference 5: 1.43% coverage

So yes, stressed because um I couldn't do groceries without having um battery in my phone or having signal on my phone to scan those products at the supermarket and couldn't enjoy meals. Um I was constantly thinking about what I was putting into my body. The day before I was planning where I was going to have for breakfast, lunch and dinner. Um I would get really frustrated if I didn't know, if I didn't cook for myself or if I didn't know exactly the ingredients that my parents were cooking with if they put too much oil, um I would get so frustrated

Reference 6: 0.47% coverage

I think I was not in a position, I was giving tips that weren't, I was not following myself. Um and I was not in a place to say things I was saying or post recipes I was saying. I think I was under eating.

[Files\\Participant 4 - Alice](#)

9 references coded, 8.74% coverage

Reference 1: 0.63% coverage

Int: Mhmm. And what was your fear of eating these processed or the lactose or gluten or sweets? Alice: They'll make you fat, make you feel like ill or disrupt your insides or make you sick ((scoff)) All of those sort of things.

Reference 2: 1.72% coverage

I definitely think that when when you post when you post things to give a perception don't you and I was giving the perception that I was like super health goddess and the smoothie bowls and that, you know the rainbow rolls that you make with the rice paper, like things like that I would make them make them look pretty and then I post those ones and yeah, I think they made me look like I was like really healthy.

Int: So you almost were wanting to portray this um really healthy lifestyle it sounds like Alice: Yeah, definitely lots of exercise and yoga and stuff like that. That's, that would be more what I would post.

Reference 3: 1.56% coverage

Alice: It was definitely linked. Um I think it was the thinness thing that got um probably toxic. You know, like the thinner I was getting, the more I couldn't understand, I couldn't see it. And I was finding more things wrong with myself. Yeah. So yeah, it was definitely the lowest weight I'd ever been, and then I was like, thinking I was fat. And I needed to go on, you know, even more clean, to get even more thin. But I was just really getting myself to like go for an extra run. Or had to earn my dinner calories by burning them off more than I then. You know? Yeah.

Reference 4: 1.20% coverage

Alice: Uh yeah, I definitely do that thing where if you add a new person you look at your own profile. And try and think what they'll think of you.

Int: Mhmm

Alice: Yeah, so you're like 'Oh, do I look ((pause)) it's always like to look thin enough in this picture' or 'wha, what vibe am I given off? Or? You know, so? Yeah Int: And what is it that you try to portray? Alice: Definitely try and portray uh thin, Zen yoga doing health person.

Reference 5: 0.74% coverage

Int: And when you think about that place that you, that page that you've concocted, that is you as this healthy Zen yoga girl. How does that feel for you?

Alice: Um, I think sometimes it makes me feel like powerful because then you can control what people think of you

Reference 6: 0.46% coverage

Um but then sometimes, you know you're just overthinking everything that you post. Does it fit? Do I. What are people gonna think of it? it's just a bit exhausting.

Reference 7: 1.46% coverage

Alice: Um, well I think because I've been quite big before really big and for me at that time in my life everything was really out of control and like I wasn't as good of a person. I was drinking too much so I don't drink alcohol either. I think that's part of this. Yeah, so I've not drinking like eighteen months and that's a health, that's definitely a health thing. So, I think, I linked being out of control being a bad person and being fat and that's kind of sometimes still sometimes what I think when I look at other people.

Reference 8: 0.53% coverage

So doing more and more um clean eating, it made me feel like a good person and more in control. Yeah, which was funny because it ended up making me more out of control than ever towards the end.

Reference 9: 0.45% coverage

But it made me feel, when I am really like planning my meals, and my clean eating like I felt really in control at the time. I felt like I was mastering everything.

[Files\\Participant 5 - Emily](#)

13 references coded, 21.36% coverage

Reference 1: 0.85% coverage

I was getting extremely uh obsessed about everything and with in addition to that with the all or nothing mentality.

Int: Mhmm

Emily: So in the sense that I was really being pristine in terms of you know, diet, everything that I was getting in my body, I was getting colonics to have a really good, you know, like, clean inside because mentally it was like, I can't you know, keep putting stuff in if it's not coming out

Reference 2: 1.66% coverage

I get annoyed at myself for doing something not right okay. So that's what I do, and for my diet and and my sports regime I get really like this as well to the point that it would you know gives me anxiety during the night if I went to a restaurant or said that, you know I had planned to go running in the morning and I didn't feel like it so I, I stayed in and then I'm gonna have a really bad day because of course because of this I'm like 'Okay, I didn't run so I may as well eat a lot of bad stuff and since I started I may as well do it all the time' and then at night I would feel really anxious and really, you know um, yeah bad about it and overthinking it and it would take me on really bad train of thoughts and um, yeah, so I think the biggest impact would be at night and it would stop me from sleeping a bit (.) that's not good ((laughs))

Reference 3: 0.57% coverage

I guess it, yeah, annihilates the good effects of what I do on the side and I'm really bad at moderating this is why I think I tend to go towards orthorexia if I grasp the meaning correctly because I, it's really like I have to be really perfect in order to be really good I can't moderate

Reference 4: 5.41% coverage

So I would (.), up until two years ago I think that was, I would just, um yeah, go 'okay I've been bad I've been going out, I've been going to a restaurant, I've been eating too much I've been feeling bad, I feel uh, I feel fat et cetera, so I'm going to go on' and I would follow my mum's footsteps in that and would go like on a, on the cleanse so I would, I know that to detox my body, again I felt like yeah, to to take all the bad stuff that I had to put in it and just get rid of this episode physically. So it would mean I would gradually come off the bad things so um, so I would stop drinking alcohol, I would stop eating meat, I would just uh switch to um fresh fruits and veg and then cooked fruits and veg and then juices and then I would go on a fast. So it was really, I've learned that it was you know not to shock your body into detox to go 'right, uh I was at McDonald's last day and now ((laughing)) I'm just drinking water' that's bad. So I would gradually go down and then uh, fast for you know proportionate period of time and then

gradually go back up, and (.) I would do that periodically, so it would be a really like a cycle of 'oh yeah so now I feel really good about my body so uh and myself and my mind I feel clean' so I would be more at ease in social situation et cetera so of course that would lead to more going out which relates to more restaurants ((laughs)) and more alcohol and and et cetera and then reading more on the this kind of you know, like behaviours I've learned that it was maybe the depri, the deprivation that was causing me to just go from one extreme to the next so I would try to, to moderate which I'm really bad at. So I always go back to 'okay this is it I'm going to be perfect from now on' and and it would be easy for me and I know it's good for my body and this is what I need to do and this is when I feel the best in my mind as well because it's not all like all about you know losing weight or anything and, and yeah, and I would go so the the cleansing colonics it's um it's part of this in a sense that when I really really try to moderate, I've noticed that some foods didn't really sit well with me. So I would have a lot of you know digestive issues and colonics are a great way to just get rid of them and they give you literally the sensation of being clean from the inside with mentally supports the whole you know like I'm going to be good from from now on because everything is clean I don't want you know, like when you you wash your floors you don't want to go and step with your dirty shoes on it. So it's kind of encouraging this, and I think it's also why I do it now, speaking to you about it, I think it's why I, I seek to do it more than the physical physical benefits I get from it

Reference 5: 0.70% coverage

Int: Okay, okay. Do you feel as though, um (.) your sense of self-worth and self-esteem is very tied into this?

Emily: Completely. Yes. I literally feel really bad and depressed for the past few days whereas whilst I was in quarantine, which is more of a stressful situation, for me because I was exercising and eating well, I felt super good.

Reference 6: 2.17% coverage

Int: And what is it that you are hoping or wanting from your posts?

Emily: So when people ask me that my go to answer, ((laughs)) cause I think, I can't like not be, uh I can't be dishonest with you. But I think it's, like the main point was to ((pause)) show that being healthy and being vegan was not something boring or, or not good and how that I was doing it by choice, and I think the reason I was doing it is mainly my need to convince myself of that. So it's not more of this yeah, trying to you know when my boyfriend asked me to why do I have Instagram and why people care about what I eat, I'm like 'no but this way I will try to inspire them and do this' whereas in all truth it's all about look my life is great, I'm eating good and this is it. Strangely enough when I kind of deviate from eating clean I also put it on uh, in my stories. So not in my page because I know that I could look back on it and then crave this food later

Int: Mmm

Emily: So I never do it, but in my stories to show that, I think, I'm still having fun and eating what I want and I'm not this you know diet obsessed person.

Reference 7: 1.52% coverage

Mmm ((pause)) I think I have the underlying feeling that it's, you know, like, it's not all true. Not when I post a picture of myself in my workout gear, and I'm like, 'Yeah, went for a run', and I put my run ((pause)) journey, like, you know, the thing on Strava, were you can see and always put a, like ((laughs)) an emoji or something on my time, because I don't want people to see that I ran really slow, I walked. And I'm like uh, you know, so it's kind of, again, uh hiding behind this. And I think I have a sense of uh, like, duplicity around this, that I'm playing a game. And I think by doing this, I'm thinking also it reassures me that people do it kind of, as

be doing the same, you know, I'm not, you know, anti-conformist as, as much so ((pause)) yeah.

Reference 8: 1.66% coverage

I don't get that many, I don't have that many followers, and it's more about, I, I look at who see, who saw it. So, I kind of, I guess it gives me control on how I project my life onto other people and how they see me, but I'm not craving like, um, I'm literally it's not working not not that I wanted to, but I have a private page. I don't, um you know, I'm not craving likes or running after them. If they happen, it's good. But sometimes I feel a bit bad. Like when it's one of my friends, who's, who you know, and I know, is struggling with her diet and stuff. And I'm like, and she she cheers and she's like, 'Oh, my g-d, well done. You did this'. And I'm like, 'g-d, if you knew that I'd stuffed ((laughing)) my face with stuff before' or that it's not actually that'. So I feel a bit bad as well. I'm a bit guilty because I overthink it

Reference 9: 2.24% coverage

Well, the problem is I never accomplish it. So no ((laughs)), but yes it gives me ((sighs)), like when I get a colonics, I'm like you know I'm on the right track, I'm doing good. And weirdly enough, is that I always feel like I've reached (.) uh, like an epiphany, and uh and I've been enlightened about like this time is the right, every time and now that I think about, that ((laughing)) happened like literally fifteen days ago. I was like 'I'm never gonna feel, you know I feel so good eating well, and not eating uh, fast food and stuff, I never going to be attracted to eating fast food again it's going to be like the meat I'm not going to', and for the last five days we've been eating only that. So it's, it's really, it's yeah. It gives me a sense of accomplishment where I guess maybe I'm, I'm running after this feeling of controlling and being you know actor of, of how I'm going to feel and and do something about an issue rather than actually knowing what it would feel like to, you know, be at my goal weight, never be putting on pounds well no matter what I eat, and being okay eating salad all the time

Reference 10: 0.50% coverage

And it feeds, I, I see that. I feel better and I felt better about my body since I have deleted her so I think in all honesty, if I didn't have Instagram, maybe I felt, I would feel better, but I'm also thinking that that was keeping me in check, you know.

Reference 11: 0.58% coverage

Emily: This is why I think I, I qualify as Orthorexic, like it needs to be perfect. It needs to be this in order for, it's really hard for me to dissociate happiness and and goals and, and achieving something without putting diet and workout and being really

Int: Mmm

Emily: Reproachless

Reference 12: 2.13% coverage

But it was mainly it started I think was really before and after my twenties really it was before until I was thinking like twenty-three was about really being healthy because I never had any weight problems and then, then I saw it as a way to correct the weight problems and I link it with, you know, how and I think that it is the whole like philosophy around how if your body is clean and you're not going to be overweight because being overweight or being fat is a sign of (.) inflammation or or bad eating or bad habits or organs not functioning well et cetera. So, so I you know colonics, so I'm going to get rid of all the toxins and then my, uh, the bowels are going to be able to um get rid of everything that is bad including the fat much more efficiently. And if I drink lots of water my kidneys are going to be functioning really well, so it's going to

be you know, and all ultimately if there's really like yeah, if I'm healthy, I'll be thin, if I'm thin I'll be healthy. It started for for you know, health and then it was, like became a tool to lose weight.

Reference 13: 1.36% coverage

Emily: Plus having to also project to people what you were doing because when before you would you know socialise and send pictures of, you know, visiting this castle or going to this restaurant and stuff, you were now exposed, doing nothing ((laughs)). So it was also again occupational to um, to have something to um, to do and to to I guess build a new self around
Int: Mmm.

Emily: A new self-identity Okay, I'm going to be that, yeah, I'm going to be that person who lost ten kilos during lockdown I'm going that person or invented all these vegan recipes. I'm going to you know, be glowing when I come out of it and get this as an enriching experience. All this ((laughs))

[Files\Participant 7 - Georgia](#)

5 references coded, 4.25% coverage

Reference 1: 1.24% coverage

And because I wanted to be super clean and super healthy and I went to the gym a lot, like I learned of how it's easier if you kind of like follow like a reasonably like structured kind of like style of eating like in a week and keep the meals the same. So it's easier to keep going, like to, it's easier just to have some structure, um rather than just like fall off the waggon ((inaudible)). So then I would decide on some meals I'd really like, I'd like made sure they were quite balanced nutrients and really high protein. And I would like have that at least that meal every day, or a variation of those types of meals in like a week.

Reference 2: 1.41% coverage

Because I would, and this as where like the orthorexia really, like came in the most is because I would be eating, that everyone I've ever met, like through uni would, would always say 'you eat so healthy, like I'm so healthy' or, and that's I'd go to the gym a lot and things like that as well and really liking sport, but it's also the types of food I always choose wherever I was, it would always be like, what people generally perceive as like the healthier option. Um my, but like, secretly, even though everyone else is saying that in my head, when there like 'oh you're so healthy', I'm thinking 'I'm not, I'm not so healthy because they don't know, just how much quantity of these healthy foods that I eat'.

Reference 3: 0.50% coverage

Oh, yeah, like, I think directly and indirectly, like it would um, it was really both upset me and like, I couldn't really express because I didn't want to be that person who's like, 'No, you don't understand'. I didn't necessarily want to tell them.

Reference 4: 0.32% coverage

And so because it's like what I'm interested in as well, I thought, 'Oh, maybe I can do this. And maybe this will help me like this, just this will also just help me'.

Reference 5: 0.78% coverage

Cause for a while, actually, I managed to be quite healthy about it. And I was getting somewhere with one goal, and wasn't changing too much because it was useful for accountability. People, my friends or other people that followed me were quite positive. Um.

There wasn't really anything too bad about it, I wasn't too obsessed, because it was going well, so I didn't need to worry too much.

[Files\\Participant 8 - Grace](#)

3 references coded, 3.46% coverage

Reference 1: 1.18% coverage

I guess I also just thought it would make me feel better in more of a sense of like...I don't know how you describe it, in more of a sense of being like... [6 second pause] being healthy but also like getting the right nutrition so I felt better inside, I don't know like. I suppose because I used to be really, really unhealthy so I thought it would just make me have a healthier body inside and a healthier mind.

Reference 2: 0.87% coverage

I would just like binge really processed foods all the time and I think the thought of like me having put that in my body, it like I felt like I needed to cleanse it all out, and all of the fat in my body that had been produced because of that, I felt like I needed to, I don't know, get rid of it I suppose.

Reference 3: 1.41% coverage

I think so, yeah, definitely at the peak of me having orthorexia, I was just about to do my A levels. And I was...I definitely had some kind of OCD with food and cleaning and everything, in my work, and it all just kind of came together and I was just this one big obsessive stressed person and I was just always... even if it came to food or work, will try and complete everything to like the best ability that I could. I just wanted to do my best and be almost like a perfect person I guess.

[Files\\Participant 6 - Ava \(No table\)](#)

10 references coded, 10.41% coverage

Reference 1: 1.80% coverage

To the point, I, I couldn't let anyone else cook a meal for me and the thought, the thought of meals that I loved before, like my dad cooking a roast dinner would give me anxiety, the thought of him putting loads of olive oil on or things I wasn't aware of going into meal. It, it just got a bit out of control it just, and I, I had to bury it, so it was me using, funnily enough, all my gut problems as an excuse for me not being able to eat these certain meals or, or get a takeaway it was because I would just use that as a reason. And yeah, that's when I just started cooking all these recipes, excluding loads of food groups. And yeah, just getting obsessed with it really and like, late at night looking at recipes online and planning food shops for a week in advance that just went a bit out of control from lockdown.

Reference 2: 1.33% coverage

Ava: I think, I don't, it's a good point, because I just think it's like a comfort blanket if I've got a list of foods I feel as I, I view as good and knowing I've cooked it and watched what's gone into it. Like thing, stupid things, like not not using like oil to cook in, using in the Frylight sprains or oven, oven cooking things and I just, I just feel because I've made it, it couldn't be bad but if someone else was to make it for me, I don't know what's gone in it, I don't know how they've cooked it even though it could be my favourite meal and it tastes amazing. I still feel like I've lost control.

Reference 3: 1.71% coverage

Ava: Oh a hundred, a hundred percent because I ((sighs)) you just overthink absolutely everything and if I'm going out for dinner now or, or even if I'm getting like a takeaway coffee or something, first thing I'm doing on my phone looking at the menu, see if I can get the nutrition info. I have in my head that I can only have a couple treats on the weekend so like I've instantly got restrictive mindset and then I'm constantly looking online for different ways to cut cut back if I know I'm going for like a meal out on a Saturday, I'll maybe the day before, I'll just eat so basic like chicken and rice or an egg on toast so I'm constantly, if I am eating out it's not spontaneous it's then having to be planned around that and looking at the menus and things like that.

Reference 4: 0.97% coverage

Ava: Yeah, definitely. And especially when you're not fuelling your body in the right way. It just connects so much more because I was just nearly or at extreme burn out at one point and and it was just a cycle I felt, even I felt awful do what I was doing, I felt it was my only way to survive what I was going through because I thought I couldn't imagine like not, it was more, even though it was damaging, it was a bit like a comfort blanket.

Reference 5: 0.86% coverage

Ava: I used to just think in my head, it's not worth eating what I want for a day, it's not worth doing that because I'm just gonna feel bad. So I've just keep doing what I'm doing and that's good for me. So I used to view the cleaning eating, as making my own food as what was actually benefitting me, and it was keeping me from being damaged, when in fact, it was doing the complete opposite.

Reference 6: 0.70% coverage

And, and that would make me think, like go 'What am I doing?' like 'No, you need to' and it would just be like a comfort blanket, so even though I hated it would just be like a comfort to fall back into it because I felt like I was keeping myself safe when I was actually just wrecking myself is what I can only describe as

Reference 7: 0.70% coverage

Ava: Because, because I was never happy with how I was looking, I just felt completely unworthy. And I was never striving to be content with my body, I was striving for perfection. And that isn't that an attainable goal, nor is it realistic. That was all I could see. It was all or nothing. That's how I viewed it.

Reference 8: 0.45% coverage

So I'd say it's constantly in my mind, I've got to be a high standard, a high achiever. I've got to be this productive do this and that. And then that just got completely projected onto exercise and food.

Reference 9: 0.79% coverage

I've wanted to be the best that to the extent, even if that would cause me to be burned out or get upset or stressed, I would do it. And that was where what happened with the food and the exercise. I wanted to be doing it at the best level and I wanted to be better than these people on Instagram, and I wanted to do this and that, so it just got so unattainable.

Reference 10: 1.09% coverage

Ava: I would then all of a sudden come up with like some stupid plan that I wanted to do like, two weeks Keto, and I wanted to do five kilometre run three times a week. And that was my comfort. If I ever felt I went off track, I would then look at doing a plan. Like if I was ever away on a holiday even if it was for a four day holiday, I'd be on my phone planning what I was going to do when I got back to counter, counteract anything I'd be doing in those four days I felt was not fully healthy or right.

Appendix T: An example of quotes for code 'Reinforcing Role of Instagram on Guilt'

[Files\\Participant 1 - Jane](#)

2 references coded, 1.48% coverage

Reference 1: 0.87% coverage

Int: Okay, okay. And when you then do end up having to do something like taking the gel? How does that affect you? emotionally and mentally?

Jane: Um, quite often because I bumped on the bike I'm really angry and annoyed myself anyway. Um.it's amazing, I straightaway feel like it's gone straight to my stomach.

Int: Okay.

Jane: And I'll feel, yeah, it just feels meh. And then I get the psychological, like stomach cramps and pains and things. And that's where, I mean, that can't happen in two minutes, I'm not stupid, but it does.

Reference 2: 0.61% coverage

Jane: And then somebody will eat and go 'Oh, I've eaten so bad this last week, and I need to go on a diet now'. And then I know what they've eaten is less than what I've eaten, but at the same time, they're inactive. So I know I have to eat more. But I'm a bit like, 'well, you eat your way more than uh, way less than I have so do I have to find a diet? And do I have to kind of be like, Oh?'

[Files\\Participant 2 - Sophie](#)

2 references coded, 2.25% coverage

Reference 1: 0.85% coverage

So if I was, if I wasn't running, I'll probably be fine, but I am. Which means I'm actually not fuelling my body properly. And then that caused me more like, mental stress because I'm like, I'm not being the healthiest, cleanest version of myself, because I'm not fuelling my body properly.

Reference 2: 1.40% coverage

Do you ever allow yourself to have a transgression of what you believe is unhealthy?

Sophie: Yeah, yes. And then I like, but I do, from time to time. And then it's like, there's like a lot of guilt around it. If that makes sense. It's very, very much like, Oh, my g-d, like, and that takes like, the enjoyability out of what I'm doing

Int: Mmm

Sophie: Because it's such like it feels like dirty, if I'm doing it, you know what I mean? And I'm like, nobody cares (laughs). But me. So, yeah.

[Files\\Participant 4 - Alice](#)

2 references coded, 1.75% coverage

Reference 1: 1.08% coverage

Int: And then what was it that was so overwhelming that you felt like it couldn't be in your body?

Alice: Like well guilt

Int: Mhmm Alice: And like uh, it's almost ((pause)) It was kind of it felt like I was at the time it felt like I done it as a form of like self-sabotage or self-abuse. So I'd eaten this cake to abuse myself but really looking back it was the throwing up which was the bad part

Reference 2: 0.67% coverage

And it definitely highlight, definitely accentuated my feelings of like guilt and stuff of if I did try and transgress and look at other, consume other foods. I think when you stare at the two hours a day of that food, does that makes sense?

[Files\\Participant 5 - Emily](#)

4 references coded, 4.60% coverage

Reference 1: 0.23% coverage

Well I would feel really so it was guilt I'm someone again by nature who feels overly guilty for a lot of things.

Reference 2: 1.66% coverage

I get annoyed at myself for doing something not right okay. So that's what I do, and for my diet and and my sports regime I get really like this as well to the point that it would you know gives me anxiety during the night if I went to a restaurant or said that, you know I had planned to go running in the morning and I didn't feel like it so I, I stayed in and then I'm gonna have a really bad day because of course because of this I'm like 'Okay, I didn't run so I may as well eat a lot of bad stuff and since I started I may as well do it all the time' and then at night I would feel really anxious and really, you know um, yeah bad about it and overthinking it and it would take me on really bad train of thoughts and um, yeah, so I think the biggest impact would be at night and it would stop me from sleeping a bit (.) that's not good ((laughs))

Reference 3: 1.01% coverage

I don't, um you know, I'm not craving likes or running after them. If they happen, it's good. But sometimes I feel a bit bad. Like when it's one of my friends, who's, who you know, and I know, is struggling with her diet and stuff. And I'm like, and she she cheers and she's like, 'Oh, my g-d, well done. You did this'. And I'm like, 'g-d, if you knew that I'd stuffed ((laughing)) my face with stuff before' or that it's not actually that'. So I feel a bit bad as well. I'm a bit guilty because I overthink it

Reference 4: 1.70% coverage

Emily: Mmm. Yeah, so I guess I can (.) feel bad for not being there yet. And being like also that timeline I guess is more present now as I age I'm like it's gonna be harder for me to. Before I literally went on a diet and lost ten kilos in two weeks and it was really easy. Now it's costing me more and I see a lot of younger people as well. So it's (.) there's a lot of that to like, not regret but kind of yeah annoyance at myself to not have started younger or smoked, well, that I have smoked. Or that I didn't you know started exercising when I was sixteen on a really regular basis like this because obviously that didn't exist back then. And had this whole yes thing. Yeah, so it's more, yeah, a bit of regret, anxiety around am I ever going to get there myself and ((pause)) depending on the date, either motivation or deflation, like detection.

[Files\\Participant 7 - Georgia \(No table\)](#)

2 references coded, 2.40% coverage

Reference 1: 1.28% coverage

I could never like look at a plate of food and not quickly do a calculation, even though if I, even if I when I made the calculation I'd tell myself like, 'Okay, well, that doesn't matter, because you decided you want this' uh just the fact that I would do it would like then at some

point, return to me and make me feel guilty. Um, because of all these earlier different goals I've had of like, 'oh, I want to be in a calorie deficit', or 'I want to be in a calorie surplus that's small, but like high protein', all of this. And if for whatever reason, it didn't fit that goal in some aspect, then I'd feel guilty, and it wouldn't feel normal to me anymore.

Reference 2: 1.12% coverage

Yes, I think I had a lot of time to review and decide on what I thought was healthy. What I, and what I've been doing for the past eight years. Um. At times it would be, uh I'd beat myself up about how I've been kind of essentially trying to do stuff for eight years and maybe not got very far in one way with it. Or I did get really far say like, like I said, when I was younger, I did lose quite a lot of weight, and I came to uni, quite slim. And this is when I'm the most confident. And then I kind of reviewed 'well, why did I ever stray away from that?' I had just time with thoughts

[Files\\Participant 8 - Grace \(No table\)](#)

1 reference coded, 1.24% coverage

Reference 1: 1.24% coverage

It definitely still makes me feel a bit... It makes me feel bad that I'm drinking it. I usually try and go for drinks that are, in my mind, seem healthier and like cleaner and have fewer calories, but I don't want to stop myself from drinking because it just kind of...it's just a part of like my social group and my friends, so it does still make me feel a bit bad but I'd say that I allow myself to do it now. Feel guilty for drinking

[Files\\Participant 6 - Ava \(No table\)](#)

7 references coded, 5.61% coverage

Reference 1: 1.17% coverage

Ava: I think, I think it's so bad online now how much it's portrayed as distinct good or bad foods, because that's probably been I never used to categorise food as good or bad. Obviously, I know, if I cooked a meal at home, it'd be more nutrient dense if I ordered something in from a takeaway, but (.) I, I just think the, the videos I was watching online, it was just getting into my head that that there was certain foods that I should be eating and then if I didn't eat those certain foods, it would just surface a lot of guilt.

Reference 2: 1.06% coverage

Ava: I don't know what it is, but I have a huge thing for, it's like a fear food of any think it's sort of like deep fried or processed. So I just feel, it's never a fear of that it's gonna make me ill or anything it's just a fear that it's just gonna make me feel I've lost progress and just counteract all the good meals I've eaten that week for the sake of one food that's probably my favourite food and highlight of the week, but I won't view it as that it will just be a weight of guilt

Reference 3: 0.42% coverage

But I still felt I had to because these people were promoting that they do this six times a week, or this, and I just would feel too guilty if I skipped that. Even though if I felt that awful.

Reference 4: 0.82% coverage

Ava: I think just the fear that I was gonna make me just like if I, if I, the thought of me having something like that I viewed as unhealthy, if had that meal would just make me think that's me

wrecked everything for the week, and my body is going to just completely change. And anything that I've done that week is just going to be wrecked from that one meal or something.

Reference 5: 0.46% coverage

Like ((pause)) ((blows lips)) if I hadn't done a certain amount of things by certain time in the morning, I wouldn't feel productive or wouldn't have achieved that, I would really beat myself up about it.

Reference 6: 1.09% coverage

Ava: I would then all of a sudden come up with like some stupid plan that I wanted to do like, two weeks Keto, and I wanted to do five kilometre run three times a week. And that was my comfort. If I ever felt I went off track, I would then look at doing a plan. Like if I was ever away on a holiday even if it was for a four day holiday, I'd be on my phone planning what I was going to do when I got back to counter, counteract anything I'd be doing in those four days I felt was not fully healthy or right.

Reference 7: 0.59% coverage

Ava: So if I'd eaten meals out for the week, if I, in my eyes binged a lot over a snacks and not done not done a workout or not walked enough then I would look for ways that I could like cut or get a bit leaner when I was back and look at all these other crazy ideas really.

Appendix U: Codebook for all codes

Name	Files	References
Regulating Self-Worth Symbolically		
Comparing to the Good Object	8	43
Idealising the Good Object	7	48
Mirroring the Good Object	8	46
Seeking & Achieving Perfection	8	53
Seeking to be an Idealised Object	8	53
Finding Meaning & Purpose		
Advising & Motivating	5	10
Needing Praise from Others	7	21
Striving for Meaning	8	46
Repeating Negative Cycles		
Confirmation of Negative Self-Belief	7	29
Reinforcing Role of Instagram on Guilt	8	36
Shame...Emergence & Coping	8	72
Negotiating a Different Relationship with Lifestyle		
Fear & Resistance around Change	7	21
Relief of Not Being Alone	5	11
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