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Towards the development of a screening tool for Anorexia Nervosa in Men

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Declaration

I declare that this thesis is my own, unaided work. It is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in the Department of Psychology, School of Human and Community Development, at the University of the Witwatersrand. It has not been submitted for any other degree or examination at this or any other institution.



Megan Moya Reeves

29 September 2022

Date

Abstract

Anorexia Nervosa (AN) in men is still not wholly understood and is often misdiagnosed. The primary aim of this tri-phasal exploratory, mixed methods study was to propose content domains and items that may be used to inform the development of future quantitative tests to screen for AN in men. It has been reported that there is currently no quantitative instrument available, which has been specifically designed to measure anorexic symptomatology in men (Darcy et al., 2012; Murray et al., 2012). The quantitative content domains and test items developed in this study may be used in future self-report screening measures to help improve the accurate recognition of AN symptoms in men. These items will help to counter the effects of gender biases evident in current AN screening tools and biases held by clinicians and psychiatrists that are reported when screening for AN in men. These test items and content domains were developed in the third phase of this study and were derived from the findings of the first two phases. In phase one, a comprehensive thematic list of symptoms reportedly experienced by men diagnosed with AN was developed from an integrative literature review of peer-reviewed journal articles published between July 2000 to July 2013 on PsychINFO, SA ePublications, and Google Scholar. The data from phase one were supplemented by a thematic analysis of 14 interviews with South African clinical psychologists and psychiatrists, conducted under phase two, which deconstructed their beliefs regarding AN in men. Ultimately, the study's three phases cumulatively showed how the symptoms reportedly experienced by men differed to those of women, deconstructed the beliefs held by a sample of South African clinical psychologists and psychiatrists, recommended a gender sensitive and identity based conceptualisation of AN that served to explicate theory, and finally proposed original test items that may be used in future research to develop a test to more validly and reliably screen for AN symptomatology in men.

Key Words: Anorexia Nervosa, masculinity, identity, gender bias, diagnosis, screening items, stigma, body image and symptomatology.

Acknowledgements

Before starting this PhD, I often read the acknowledgements sections of completed dissertations in my University's Library. I wanted to understand what the experience of writing a dissertation would be like. I initially thought that many of the PhD students were overly dramatic, in talking about the challenges and difficulties faced when trying to finish their dissertations. I was probably naïve because I found writing my master's dissertation really enjoyable. After many years of working on this project, I can safely say they were not being dramatic. I knew that doing a PhD would be challenging and developmental, but this experienced really stretched me. I have given 7.5 years of my life to complete this PhD. This has been the most difficult academic thing that I have done so far. I have learnt a lot about my limits and capabilities. Dr. Marco Valleriani, a colleague of mine, once likened doing a PhD to Virgil's' journey through hell. I am not sure he knew how accurate that comparison was for me. I have given my best through life's challenges to complete this report and I hope that I am able to pass so that I can help others to have a better journey by sharing what I have learnt.

I have innumerable people to thank for supporting me through this process:

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The Southern African Students' Psychology Conference Limpopo (June 2015)

Mixing Methods and Paradigms: An eclectic approach to research by Megan Moya Reeves.

Oral Paper Conference Presentations

The Southern African Students' Psychology Conference Johannesburg (Jun 2013)

Towards the Development of an Instrument to Measure Anorexia Nervosa in Males: A South African Pilot Study by Megan Moya Reeves.

19th Annual South African Psychology Congress Johannesburg (Sep 2013)

Anorexic symptomatology in men: New insights and developments by Reeves, M., & Laher, S.

20th Annual South African Psychology Congress Durban (Sep 2014).

Investigating South African clinical psychologists' constructions of anorexia nervosa in males by Reeves, M. & Laher, S.

Australia and New Zealand Academy for Eating Disorders Conference Surfers Paradise (Aug 2015)

A Discussion of the Development of an Instrument to Measure Anorexic Symptomatology in Men by M. M. Reeves.

21st Annual South African Psychology Congress Johannesburg (Sep 2015):

Symposium: Instrument Development and Adaptation in South Africa - *Measuring the symptoms of Anorexia Nervosa in men: An examination of items on the male Anorexia Nervosa screening instrument* by Reeves, M.

Symposium: Essential Tools for Research and Practice within the Practitioner Domain - *Using mixed methods for successful instrument development in the South African context* by Reeves, M.

22nd Annual South African Psychology Congress Johannesburg (Sep 2016)

Developing culturally valid but globally relevant psychometric tests: A discussion of the procedure for developing a screening tool for anorexia nervosa in men by Reeves, M.

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Chapter 1: Introduction and Background

Introduction

Anorexia Nervosa (AN) has been historically constructed as a disorder that primarily affects women (McVittie, Cavers & Hepworth, 2005). Nonetheless, there has been a rise in the number of men suffering with AN both globally (Bulik, Baucom & Kirby, 2012; Garner, 1997) and in South Africa (Freeman & Szabo, 2005). It has been argued that the number of men being diagnosed with AN has been increasing due to the growing attention being paid to men's bodies in the media (Wooldridge & Lytle, 2012). Indeed, men are being placed under increasing pressure to conform to certain extreme body ideals. The current psychological literature points to the need for a greater understanding of AN in men because there is relatively little known about the experiences of AN in this population, compared to women (Wooldridge & Lytle, 2012). This is especially true in the South African context where the number of studies on men is very limited and little is known about the prevalence of the disorder amongst men in the country (Szabo, 2019), further there have not been cross-cultural studies of AN in men in the South African context. Moreover, AN in men is often misdiagnosed because of the feminised way that the disorder has been constructed (Burns, 2003; Goodman, Blinder, Chaitin & Hagman, 1988; Szabo, 2019). Gender biases in the ways in which AN has been constructed have led to gaps in the theoretical understanding of AN, biases in practitioner perspectives, and misdiagnoses. Consequently, there is a need for an objective measure of AN that can help mitigate these biases. A gender sensitive and identity focused theoretical understanding of AN is needed to inform items for such a measure, to more accurately screen for AN symptomatology in cis-men. Thus, this study sought to create test items, based on an integrative literature review search and interviews with health practitioners that elucidated the experiences of cis-men with AN, which can be used in future research to create a screening tool which will assist both men and health practitioners and in recognising AN symptoms in cis-men.

Research Aim and Objectives

The primary aim of this exploratory study was to create test items and content domains that can accurately measure the levels of anorexic symptomatology in cis-men (in other words, persons who were labelled as being a man or male at birth by medical professionals and who ascribe to that same gender identity (Jacobson & Joel, 2019). It is believed that these test items will contribute to the development of a self-report screening test for AN in this population. This aim was achieved through the objectives embedded in the three phases of this research. The objective of phase one, was to develop a comprehensive index of AN symptoms experienced by men based on an integrative literature review of peer-reviewed journal articles from July 2000 to July 2013. This data was further supplemented by interviews with clinical psychologists and psychiatrists, under phase two. The objective of phase three was to use the findings of phases one and two to inform the development of questions that could be used to measure AN in men. The development and testing of a complete screening tool a self-report screening test for AN in cis-men, which includes these items, is a suggested focus for future research. In the process of achieving the primary goal of this research, namely the development of items and content domains for a screening instrument, this research also aimed to add to the growing body of literature on AN in men; to distinguish between the symptoms experienced by cis-men and cis-women diagnosed with AN; to expand on the limited information available regarding the practical knowledge of the symptoms experienced by cis-men

who suffer with AN held by psychiatrists and psychologists, particularly from within the South African context; to motivate for the establishment of a gender sensitive and identity focused theoretical understanding of AN; and to demonstrate the applicability of mixed methodology when developing items for a screening instrument, using dialectical reasoning.

Rationale

There is conflicting literature regarding the prevalence of AN in men (Caralat, Camargo & Hertzog, 1997; Hoek, 2006). According to Caralat, Camargo and Hertzog (1997) men with AN account for just 10% of all reported cases of AN. More recently, however, higher estimates of 25-30% for the incidence of AN in males have been published, although the lower ratio is still more commonly cited (Hudson et al., 2007). It has been argued that the reported incidence of AN in men is lower simply because until very recently it was widely believed that men generally did not experience AN (Freeman, 2005). In contrast to this, it has also been purported that the statistics capturing the prevalence of AN in men are inaccurate because they are mostly based on clinical samples (Hoek, 2006). By its very nature, clinical research is not representative of the general population and so it cannot account for men who are suffering from AN but who have not yet been diagnosed. There may, in fact, be a population of men who have not yet sought treatment for AN out of a fear of being stigmatised due to the popular belief that the disorder only occurs in women, or feminine and gay men (McVittie, Cavers & Hepworth, 2005; Nelson, Hughes, Katz & Searight, 1999). Further, psychologists and psychiatrists themselves have been found to be biased when diagnosing AN, as of the men who do seek treatment for the disorder, many are incorrectly diagnosed. The misdiagnosis of AN is not uncommon amongst men because of the feminised way that the disorder has been constructed (Burns, 2003; Goodman, Blinder, Chaitin & Hagman, 1988). Moreover, more research is needed on AN in men and the ways in which health professionals understand AN in men (Jones, Saedi, & Morgan, 2013). There is very limited data available on AN in men from a South African context (Szabo, 2019). In addition, there is a limited understanding of how different cultures in South Africa's population impact on the manifestation of AN in men (Marais, Wassenaar, & Kramers, 2003; Wassenaar et al., 2000). Further, there are currently no published articles on the views held by South African clinical psychologists and psychiatrists of AN in male.

Both the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) (American Psychiatric Association, 2013, which superseded the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM IV-TR) (American Psychiatric Association, 2000), and the International classification of diseases 10th edition (ICD-10 ; World Health Organisation, 1999), which has been replaced by the International classification of diseases (11th edition (ICD-11, World Health Organisation, 2019), are widely accepted diagnostic guides and are used by the majority of health professionals in the assessment of the occurrence and severity of AN in a client. The criterion of amenorrhea in the DSM IV-TR and the ICD-10 was often cited as problematic since it excluded men, children and even some women (who satisfied all other diagnostic criteria but who continued to menstruate) from being diagnosed with AN (Al-Adawi et al. 2013; Attia & Roberto, 2009; Goodman, Blinder, Chaitin & Hagman, 1988). Furthermore, such criteria perpetuated the construction of AN as a disorder which occurs solely in women. The American Psychiatric Association recognized the problems with the DSM-IV-TR (American Psychological Association, 2000) diagnostic criteria for AN and excluded amenorrhea as a core feature for diagnosis of AN in the DSM 5 (American Psychiatric Association, 2012; Attia & Roberto, 2009).

It can be argued that the diagnostic criteria for AN influenced the design of the different measures used to assess AN. Health professionals usually conduct various diagnostic tests and administer different diagnostic instruments in order to ascertain whether a client suffers from AN or not. Among these are numerous self-report instruments, which are beneficial because they can be used as screening measures, diagnostic aids and indicators of prognosis, as well as taking little time to administer (Anderson, Lundgren, Shapiro & Paulosky, 2004). The self-report instruments most commonly used include the Eating Disorders Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008), Eating Attitudes Test 26 or EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982), and the Eating Disorders Inventory or EDI-3 (Garner, 2004). However, these instruments are problematic because they were developed to assess the criteria listed above and were largely designed with the intention of measuring the levels of anorexic symptomatology in women. The gender biases which these instruments possess can be seen in the skewed results that are reported for male sample groups (Darcy, Doyle, Lock, Peebles, Doyle & Le Grange, 2012; Murray *et al.*, 2012; Siever, 1994; Freeman & Szabo, 2005). Further, research suggests that there are qualitative differences in the expression of symptoms for men and women, including the specific nature of body image dissatisfaction (Darcy *et al*., 2012; Murray *et al.*, 2012; Murray & Touyz, 2012). Given that there is a need to reduce gender bias in the case of AN, knowledge of the different experiences of males and females diagnosed with AN is imperative to ensure appropriate psychological treatment (Politi et al. 2013). Therefore, since the measures currently used to assess AN symptomatology in men are based on feminised understandings of the disorder, these measures are inappropriate for use amongst men (Darcy *et al*., 2012; Murray *et al.*, 2012). Consequently, a set of questions that can assess the level of anorexic symptoms present in men that are not gender biased, and which consider the impact of a person's identity on the expression of the disorder, are needed.

Summary of Methods

This study employed mixed methods research to develop a new test items to screen for AN in men. This research began with an integrative review of the literature available online from the Google Scholar, PychINFO, and SA ePublications portals between July 2000 and July 2013. The findings of this review were then combined with the findings of semi-structured interviews with South African clinical psychologists and psychiatrists in order to inform the development of item content for the new instrument. Chapter 4 provides a more detailed description of the study's methods and methodology.

Outline of Chapters

This dissertation consists of eight chapters. Chapters 1 to 3 give the research its theoretical grounding. This chapter, Chapter 1, includes an introduction and background to the study. Essentially, Chapter 1 sets out the research aims and objectives, clarifies the study's core problem and rationale. Next, Chapter 2 explores how AN has been constructed and how ideas about AN have changed over time. It explores the historical constructions of AN, the diagnostic views of AN, as well as various theoretical perspectives of AN. Moreover, Chapter 2 examines how gender and culture impact on the ways in which AN is constructed not just over time but amongst different people and in different contexts. This chapter highlights the importance of considering the role of gender when understanding AN and the limitations of some of the theoretical perspectives on AN. Chapter 3

reviews how AN has historically been measured and how some of the key measures of AN are informed by theory, diagnostic criteria, time, and context. This chapter also notes the short comings of these assessments and areas where there is room for improvement.

Chapter 4 functions as a bridge between the theory and the data. It gives a summary of the study's methodology, methods, sampling, and research design. Chapter 4 explains the reasons for using a mixed-methods approach and explains how the phases of the study are linked to each other, as well as, to the research questions. In addition, it outlines the impact of the researcher on the study, the challenges faced in conducting this research, and shows how the study changed over time.

Chapters 5 to 7 explain the study's methods and data in detail. These sections include explanations of how data were collected and analysed before they were reviewed and discussed in line with the literature. These sections address the study's research questions and demonstrate how the study's conclusions were reached. These chapters demonstrate the contributions to knowledge and practice made through the research. Chapter 5 describes the methods and findings for used for Phase One of the study, the Integrative Literature Review. Chapter 6 includes a discussion of the data collection and analysis techniques, as well as the results for Phase Two of the study, which focuses on the interviews with clinical psychologists and psychiatrists. In Chapter 7, the findings of Phases one and two are combined to inform Phase Three, the development of test items and content categories that may be used to develop a screening tool for AN in men.

Lastly, Chapter 8 includes the concluding comments for the research. It summarises the overall strengths and limitations of the study, makes recommendations for future research and highlights the key contributions the study has made by addressing its aims and research questions.

Conclusion

In conclusion, this research contributes to the theory of AN by adding to the growing body of research currently available on men who suffer from AN (Murray & Touyz, 2012; Robinson, Mountford & Sperlinger, 2012; Reas, Øveras & Øyvind, 2012; Wooldridge & Lytle, 2012), especially in SA (Freeman, 2005; Freeman & Szabo, 2005). Further, while there is a substantial amount of literature that testifies to the problems with the current instruments for assessing levels of AN symptomatology amongst men, there is a necessity for further research towards the development of a new instrument specifically designed for this target population (Darcy *et al*., 2012; Murray *et al.*, 2012; Reas, Øveras & Øyvind, 2012). This gap in the literature points to the need for new test items to be developed which address the limitations of the questions in current measures, especially for use amongst men who have largely been excluded from being diagnosed with and receiving treatment for AN (McVittie, Cavers & Hepworth, 1997; Murray & Touyz, 2012; Robinson, Mountford & Sperlinger, 2012; Wooldridge & Lytle, 2012). This research fulfills this practical need by developing items for a self-report screening instrument to measure the levels of anorexic symptomatology amongst men. Furthermore, in the process of designing the instrument, this research has built on the theoretical knowledge available about AN in men, and provided a much needed collation and review of literature. By examining the research on men diagnosed with AN, a deeper understanding of the experiences of men who suffer from AN has been achieved. Ultimately, by interrogating the available literature this research has served to challenge the ways in which AN has been constructed as a psychological disorder, and more generally in society. Therefore, this research is useful both

practically and theoretically to those who are engaged in psychological research and practice in the field of eating disorders, and AN more specifically.

Chapter 2: Constructions of AN

Introduction

While AN has been constructed as a psychological disorder that predominantly affects females, with reported prevalence rates of AN in males and females being a ten to one, female-to-male ratio (DSM 5; American Psychological Association, 2013) it has however, been acknowledged that the rates may be higher (Wooldridge & Lytle, 2012). The lower prevalence in males is may be attributed due to the missed diagnoses of AN in men, which is arguably linked to its feminised theoretical conception (ibid, 2012). The examination of AN in males has thus largely been absent from the literature until more recently, despite some the first recorded medical cases of the disorder having actually been seen in men (Andersen, 2014). The general absence of past research on AN in males served to construct AN as a female disorder, ultimately making it a gendered disorder despite it's being formally classified as a feeding and eating disorder in the DSM 5 (American Psychological Association, 2013) and ICD-10 (World Health Organisation, 1999). Further, it can be argued that not only would AN be better understood as a gendered disorder, but that it may actually be more prudent to view it as a masculine disorder since it is closely tied to historical social constructions of masculine traits, namely those of independence, power and control. AN is a psychological illness that is invariably tied to the body as a site for the expression of dissatisfaction with one's identity, and a place for the dissimulated establishment of power and control (Bruch, [1978] 2001). A deep understanding of the various conceptions of AN, and how it relates to gender and identity will enable the development means to measure the presence of AN.

Historical Constructions of AN

The core features of AN can be understood as a desire to lose weight which results in particular eating attitudes and behaviours that ultimately result in the person who is suffering from AN weighing 85% less than what is expected for their age and height (American Psychiatric Association, 2000; World Health Organisation, 1999). There are two sub-types of the disorder, namely a binging/purging type (which involves the use of vomiting and laxatives to expel consumed food) and a restricting type (American Psychiatric Association, 2000; World Health Organisation, 1999). There are numerous symptoms associated with AN but the most profound consequence of the disorder is the potential for death (Watson & Bulik, 2012). AN is often cited as having the highest mortality rate of all psychological disorders (Hoek, 2006). Despite the severity of AN, there is very little known about the best ways to understand, treat and measure the symptoms of this disorder and this is even more true in the case of men. Recently, there has been an increased focus on the need to understand AN in men because the disorder has historically been conceptualized as a disorder which primarily affects women (Andersen, 2014; McVittie, Cavers & Hepworth, 2005).

AN was not always considered a psychological disorder (Bemporad, 1996). Bemporad (1996) highlights that self-starvation was present in ancient civilizations whereby fasting was viewed as a means of purification and to prove devotion to religious figures. Prior to the dark ages, bodily needs began to be considered as a source of evil. During the medieval era women who were starving themselves were often considered to be possessed (Bemporad, 1996). This perception of women who chose not to eat may be understood in a context of disease and famine where it would have been difficult to conceive of someone willfully refusing food. This view of AN was replaced by one of AN as a holy practice in the early Renaissance period (Bemporad, 1996). During the Renaissance

there was a woman who starved herself to death in order to "liberate herself from the physical and social discomforts that afflict womankind; menstrual pains, childbirth, enforced sexual relations and domination by males" (Bemporad, 1996, p. 221). She was named Saint Liberta because she had vowed to be a virgin in service of God and she wanted to make herself less attractive to the male suitor her father wanted her to marry.

In the 17th and 18th centuries the church became suspicious of women claiming to be starving themselves in the name of God because it wanted to regain its power as the medium for communication with God (Bemporad, 1996). Nonetheless, women began to starve themselves in the public eye in exchange for money. The news of these women who appeared to survive without food began to spread and spark fascination, leading other women to follow suit (Bemporad, 1996). However, the women who denied themselves food without the intent of monetary gain began to be seen at this time as being medically ill. Thus the nineteenth century saw the increasing medicalisation of self-starving women and these cases appear to more closely conform to the current understandings of AN (Bemporad, 1996).

Habermas (1989) cautions that past incidences of self-starvation may not necessarily be AN because in these cases, fasting was largely founded in religious beliefs rather than a fear of becoming fat. Bemporad (1996) argues that our modern understanding of AN stemmed from the work of Marce, Gull and Lasegue. She argues that these doctors distinguished AN from other disorders which also included cases of fasting by highlighting that the sufferers adamantly denied any nourishment. Further they noted that the typical onset for the disorder occurred during adolescence and amenorrhea was commonly observed amongst women experiencing this AN. Following their work, AN became a recognized disease and the possible psychological roots for the disorder were recognized when no physiological cause could be found. In the 1960s the term "primary anorexia" emerged to distinguish AN from other psychological disorders in which a loss of appetite occurred (Bemporad, 1996). This is also the time when a fear of gaining weight began to emerge as an idea to be associated with AN (Habermas, 1989).

Andersen (2014) argues that Richard Morton was actually the first medical professional to give a detailed account of AN in 1690. Morton analysed two cases of AN, one in a woman and one in a man. Andersen concurs with Bemporad in saying that our current understandings of AN stem from the accounts given by Gull and Lasgue. Interestingly, Gull also examined the experiences of men who suffered from AN, however, his records for men are less detailed than they are for women. Nonetheless, despite these early records of men suffering from AN, it has been constructed as a female disorder. Andersen (2014, p.7) purports that one of the reasons that men's experiences of AN have been ignored until recently is because of the belief that AN was connected with "post-partum pituitary necrosis", a female-specific consequence of childbirth. Further, the enduring connection of AN with endocrinological hormone imbalances, specifically related to the occurrence of amenorrhea in women, meant that men were often excluded from being diagnosed with AN (Andersen, 2014). Until the 1960s, the popularity of psychoanalysis added to the alienation of men suffering from AN due to the theoretical construction of AN as being the physical expression of "a fear of oral impregnation" (Andersen, 2014, p.7), to be discussed in more detail under the theoretical constructions of AN. The clinical research of Arthur Crisp and his colleagues went some way towards bringing attention to the experiences of men who suffered with eating disorders (Andersen, 2014). In addition, the increasing focus on the men in the media emerging in the late

1980s meant that researchers and clinicians began to pay more attention to the male body (Andersen, 2014). The belief that AN was extremely rare in men had challenged when Woodside and colleagues determined that the prevalence of eating disorder symptoms in a community sample conformed to a ratio of females to males of between two and three to one (Andersen, 2014). The findings of Woodside and colleagues suggested that men who had been suffering from eating disorders had been ignored in research and clinical settings because of the erroneous belief that men did not suffer from eating disorders, and more specifically from AN, that had been founded on biased theoretical perspectives and diagnostic criteria.

Diagnostic Criteria for AN

The first appearance of AN as a distinct disorder in the Diagnostic and Statistical Manual was in 1952 (Dell'Osso *et al*., 2016). The striking absence of men in the discussion of the historical construction of AN as outlined above points to the predominant absence of men throughout the social and medical history of AN. The means of diagnosis most commonly used by practitioners at the time of the interviews were the DSM-IV-TR (American Psychological Association, 2000) and the ICD-10 (World Health Organisation, 1999). While the diagnostic criteria have since changed, to the DSM 5 (American Psychological Association, 2013) and to the ICD-11 (World Health Organisation, 2019), the ways in which AN is understood by practitioners are still grounded in and contingent upon its historical constructions.

DSM-IV-TR and DSM 5

The key criteria for diagnosis of AN in the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR) was "the refusal to maintain body weight at or above a minimally normal weight for age and height" where "body weight is less than 85% of that expected" (American Psychiatric Association, 2000, p. 263). The DSM-IV-TR criteria also included an "intense fear of gaining weight or becoming fat, even though underweight," a "disturbance in the way in which one's body weight or shape is experienced" and "in postmenarcheal females, amenorrhea" (American Psychiatric Association, 2000, p. 263).

The DSM 5 was released in May 2013 (American Psychological Association, 2013). The three key diagnostic features of the DSM 5 are similar to those from the DSM-IV-TR (American Psychological Association, 2000). The first criterion includes a "restriction of energy intake relative to requirements", which results in a "significantly low weight" (American Psychiatric Association, 2013, p. 338). The second criterion entails and "intense fear of gaining weight or becoming far, or persistent behavior that interferes with weight gain" (American Psychiatric Association, 2013, p. 338). The third criterion entails a "disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight" (American Psychiatric Association, 2013, p. 338). In the DSM 5 (American Psychological Association, 2013), reference is made to the ICD-10 (World Health Organisation, 1999), whereby it is acknowledged that there are two subtypes of AN, namely a restricting type, where there are no "episodes of binge eating or purging behavior" over the past 3 months, and a binge-eating/purging type, where there have been "recurrent episodes of binge eating or purging behavior" (American Psychiatric Association, 2013, p. 339).

ICD-10 and ICD-11

The DSM criteria are similar to, and aligned with, those listed in theICD-10; (World Health Organisation, 1999). The ICD-10 stipulates that the criteria for diagnosis of AN requires the presence of "self-induced weight loss" which leads "to a body weight of at least 15% below the normal or expected weight for age and height" (World Health Organisation, 1992, p. 138). The IDC-10 criteria also include a "self-perception of being too fat, with an intrusive dread of fatness" that results in a "self-imposed low weight threshold" (World Health Organisation, 1992, p. 139). Furthermore, in order for a person to be diagnosed with AN they should also possess a "widespread endocrine disorder involving the hypothalamic-pituitary-gonadal axis, manifest in the female as amenorrhoea and in the male as a loss of sexual interest and potency" (World Health Organisation, 1992, p. 139).

The ICD-11 (World Health Organisation, 2019) includes four key criteria for diagnosing AN and these are: "significantly low body weight for the individual's height, age, developmental stage, or weight history", "low body weight is not better accounted for by another medical condition or the unavailability of food", "a persistent pattern of restrictive eating or other behaviours aimed at establishing or maintaining abnormally low body weight, typically associated with extreme fear of weight gain", and lastly "excessive preoccupation with body weight or shape. Low body weight is overvalued and central to the person's self-evaluation, or the person's body weight or shape is inaccurately perceived to be normal or even excessive" (World Health Organisation, 2019, entry 6B80).[1]

The key criterion for AN, in both the ICD and the DSM, is extreme weight loss which is accompanied by what is commonly called a drive for thinness (American Psychiatric Association, 2012; World Health Organisation, 1999). It is these two symptoms which distinguish AN from other eating disorders and physiological illnesses.

While the DSM-IV-TR (American Psychological Association, 2000) does not specifically discuss male symptomatology, the ICD-10 does acknowledge that a decrease in testosterone and a diminished libido may occur in men (World Health Organisation, 1999). In this way the ICD-10 goes some way to providing an alternative to the amenorrhea criterion for men. Further, the DSM 5 (American Psychological Association, 2013) moves away from a feminised view of AN by placing less emphasis on amenorrhea as a core feature for diagnosis of AN (American Psychiatric Association, 2012; Attia & Roberto, 2009). This will mean that the DSM 5 (American Psychological Association, 2013) will join the ICD-10 in being less female-focused, since the ICD-10 considers hormonal responses in men which may be similar to those responsible for amenorrhea in women (World Health Organisation, 1999). This move towards the acknowledgement of AN in men marks a change in the theory underlying current understandings of AN.

Distinguishing Between AN, MDD and ON

Since AN in men may be experienced in different ways, and thus the clinical presentation of the disorder may not conform to the ways in which AN was traditionally constructed, it is necessary to distinguish between AN in men and other similar disorders namely Muscle Dysmorphic Disorder and Orthorexia Nervosa (ON).

[1] The ICD-11 had not yet been released when the data collection for this study took place.

Muscle Dysmorphic Disorder (MDD) encompasses "the excessive and pathological pursuit of muscularity and is thus located as a subtype of body dysmorphic disorder within the somatoform spectrum" (Pope, Gruber, Choi, Olivardia, & Phillips as cited in Murray, 2012, p.194). Body dysmorphic disorder (BDD) was defined by Veale (2003, p.67) as "a mental disorder characterized by preoccupation with an 'imagined' defect in one's appearance". Therefore, under this definition of BDD, MDD would consist of an obsession over one's musculature. Pope et al. (as cited in Murray 2012, p.193) note that muscle dysmorphia was first conceived of a "reverse form of anorexia nervosa" because AN and MDD share many similarities including body image dissatisfaction, however the focus of the disorders in terms of this characteristic is inversed. Those with MDD typically want to increase their body size, particularly their muscle tone, while those with AN usually desire to be smaller and thinner. Murray (2012, p.193) argues that:

> "the anorectic features identified in 'reverse anorexia' were manifested in the reverse direction to those typically seen in anorexia nervosa, such that the core body image distortion manifested as a belief in oneself appearing small and skinny, despite well-developed musculature, with such men harbouring a desire for larger and more muscular body types."

In addition to body dissatisfaction, persons with BDD and AN also share a tendency to engage in excessive exercise (Olivardia et al. as cited in Murray, 2012), to use substances to improve their appearances, to engage in body checking behaviours, and to avoid exposing their bodies to others (Murray, 2012). Furthermore, those with AN, BDD and even ON, all engage in extremely rigid eating behaviours (Murray, 2012).

While ON is not yet officially recognised as a separate disorder in the DSM 5 (American Psychological Association, 2013), it would arguably fall under the classification of "Other Specified Feeding or Eating Disorder" (OSFED). Despite its unofficial status, practitioners have argued for the clinical utility of constructing ON as a separate disorder in the literature (Zamora, Bonaechea, Sánchez, & Rial, 2005). ON is indicated when an individual displays a "pathological obsession for biologically pure food, which leads to important dietary restrictions" (Zamora et al., 2005, p. 66). These "biologically pure foods" include substances that have not been subjected to "pesticides, herbicides or any other artificial [chemicals].

There are many similarities between ON and AN, including an obsessive concern over food, and similar personality traits such as perfectionism and rigidity, as well as cognitive distortions around their bodies and a denial of their feelings (Zamora et al., 2005). Nonetheless, there remain distinct differences between these two constructions of disordered eating attitudes and behaviours. The key discerning factor between AN and ON is that those suffering with ON lack the intense fear of gaining weight that those with AN possess, instead individuals with ON are more focused on a fear of the perceived negative consequences of consuming foods that are considered impure and unhealthy (Zamora et al., 2005).

Theoretical Constructions of AN

As stated by Bruch (1982, p. 1531) "treatment in medicine is greatly influenced by the theoretical conceptions about the nature of an illness". Therefore, the ways in which AN is treated and understood are greatly influenced by psychological theory. The most commonly used theories for understanding the development of AN are the biological, the psychodynamic, cognitive-behavioural

and systemic theories. There is no general agreement on which theory may be used to best explain the origins of, treat, or understand AN (Wooldridge, 2016).

Psychodynamic Perspectives

The first psychological perspective to develop a theory for understanding and treating AN was psychoanalysis (Bemporad, 1996). Wooldridge (2016) noted that the broader psychodynamic theoretical framework includes three key ways to understand AN. These are the drive-conflict, object relations, and self-concept models. Bruch argued that according to psychoanalysis, AN was fundamentally considered a "drive disorder expressing the fear of sexuality and of oral impregnation fantasies" (1982, p.1533). This conceptualization of AN as a defense against oral impregnation inherently excluded cis-men (Wooldridge, 2016).

Nevertheless, later constructions of AN in terms of object relations and self-psychology were more inclusive. The work of Bruch (1982) was paramount to developing the psychoanalytic theory of AN. Bruch argued that those who suffer from AN often feel helpless and view the opportunity to manipulate their bodies through their appetite as a means to gain control. Bruch (1982) stated that persons who suffer from AN may also feel that they are unable to develop a separate identity from their mothers and lack confidence in their own abilities, despite being driven by their need for success. Williamson, Martin and Stewart (2004) also argue that the psychoanalytic theories speak to the development of an identity that is embedded in the disorder and that is often underpinned by relationship difficulties and motivated by a fear of developing adult physical and sexual characteristics. While researchers have shown that some men develop AN in order to suppress their sexual development and drives, particularly if they are in denial of a homosexual identity, others have found that gay men have also used AN to lose weight to be more sexually attractive to male partners Wooldridge, 2016).

Psychodynamic theories work to prioritise the unique experiences had by individuals and to enable them to adjust their internal psychological structures and to rebuild their interpersonal relationships (Wooldridge, 2016). A key tool of psychodynamic theories is the use of counter transference in the relationship between the therapist and their client (Wooldridge, 2016). Through the therapeutic process persons suffering with AN should be able to uncover subconscious motivations for and learn how to manage their relationships, as well as process their emotions in these respects.

CBT

Other psychological theories built on the psychoanalytic understanding of AN. The cognitive-behavioural therapies (CBT) focus on the "intense fear of weight gain" in patients with AN, as well as their "body image disturbances" (Williamson, Martin & Stewart, 2004, p.1075). Garner and Bemis (1982), who are credited with conceptualising cognitive behavioural treatments for AN, emphasise the roles played by beliefs and attitudes in both the development and maintenance of AN. Garner and Bemis (1982) also speak of the positive reinforcement for anorexic behavior through the initial approval for weight loss from friends and family and eventually from the sense of control and achievement that the person suffering from AN feels when they lose weight. CBT holds that rigid and interminable beliefs about and attitudes towards food and weight that serve to perpetuate the individual's commitment to their eating disorder. The treatment includes challenging abnormal

cognitions about body weight and shape, as well as deconstructing unrealistic beliefs and attitudes about food and eating behaviours (Wooldridge, 2016).

Because CBT lacks substantial empirical evidence for its efficacy in the treatment of AN, CBT-Enhanced (CBT-E) has been proposed by Fairburn as a more focused and effective treatment modality for eating disorders, and AN more specifically (Wooldridge, 2016). Another alternative treatment is Acceptance and Commitment Therapy (ACT), which is "a cognitive-behavioral [sic] treatment that targets experiential avoidance, or the unwillingness to accept negative thoughts, feeling, and emotions, and ineffective attempts to control these experiences" (Wooldridge, 2016, p.15). ACT thus purports that the suppression of negative feelings results in disordered behaviours such as AN. Nevertheless, both of these developments in CBT do not adequately account for the impact of culture and gender identity on the experiences of the disorder (Wooldridge, 2016).

Systems Theory and Family-Based Therapies

Systemic theory draws on the aspects of cognitive behavioural and psychoanalytical theories, which emphasise the role of the family. Moreover, systemic theorists view AN as a symptom of a dysfunctional family system whereby the family's focus on the distressed person disguises underlying conflicts and tensions (Fisher, Hetrick & Rushford, 2010; Wooldridge, 2016). The systemic technique for treating and understanding AN was advanced by Salvador Minuchin and his colleagues in the 1970s (Woodlridge, 2016). Based on Minuchin's research, it was determined that a person's vulnerability for developing AN was dependent on their biological susceptibility; familial attributes; and behavioural reinforcement (Minuchin et al., 1975; Wooldridge, 2016). The most important factors contributing to the development and maintenance of AN for family systems therapy are the inherent family characteristics and behaviours, as these are the sites for therapeutic intervention. The attributes can include: "enmeshment, overprotectiveness, rigidity, and a lack of conflict resolution" (Wooldridge, 2016, p.50). Further, according to this view, AN serves the purpose of maintaining balance in the family relationships, especially when the children in the family move into adolescence (Rhodes, 2003).

Family-based treatments (FBTs) are grounded in the therapeutic techniques developed by Dare and his colleagues at the Maudsley Hospital in the 1980s (Rhodes, 2003; Wooldridge, 2016).While the Maudsley approach to FBT is grounded in the work of Minuchin and Palazzol's systemic therapies, it is more closely linked to Hayley's approach (Rhodes, 2003). FBT has been found to be more effective in the treatment of younger individuals, namely those who are younger than eighteen and whose illness has not been present for longer than three years (Rhodes, 2003). The treatment empowers parents or guardians to assist their children in engaging in more positive behaviours and thoughts surrounding their weight and food (Wooldridge, 2016). FBT does not lay the blame for the person's development of an eating disorder solely on their family dynamics but instead acknowledges that there may be mechanisms operating within the family that may contribute towards psychological risk for any psychological disorder (Wooldridge, 2016). Under the Maudsley approach, the illness is externalized and thus is seen as separate from the individual suffering from AN (Rhodes, 2003). This enables families to focus their attentions on the illness rather than the adolescent and this means that parents can be critical of the AN without feeling guilty about being negative towards their child. However, this approach arguably focuses more on the family dynamics that lead to the initiation and

continuation of the disorder than the internal and social forces at play in the establishment and development of AN in men.

One of the key components of FBTs is cognitive remediation, which aims to adjust the ways that persons suffering with AN think about food and weight (Woodlridge, 2016). This intervention therefore seeks to challenge the rigid and limited focus of thoughts with which persons diagnosed with AN often struggle, such as their extreme focus on their calorie intake and restricted diet (Wooldridge, 2016). The main mechanisms through which cognitive remediation operates are the changing of thought processes through critical and guided self-reflection, as well as developmental activities (Woodlridge, 2016).

DBT

Dialectical Behaviour Therapy was first developed to treat Borderline Personality Disorder (Wooldridge, 2016). The therapy focuses on the relationship between one's acceptance of challenges and one's ability to then change (Wooldridge, 2016). The treatment involves providing clients with the coping mechanisms to be able to better manage their disorder, namely "mindfulness, distress tolerance, interpersonal effectiveness, and emotion regulation" (Wooldridge, 2016, p.14). BPD has some comorbidity with AN, whereby just over a third of individuals who suffer from an eating disorder being found to also struggle with BPD (Bankoff *et al*., 2012). With the incorporation of techniques to minimize eating disordered behaviours used by clients to regulate their emotions, and a focus on the promulgation of knowledge related to healthy eating habits, the therapy is a useful approach for the treatment of AN (Wooldridge, 2016). DBT's focus on emotion regulation rather than the impact of social factors I s a potential limitation of the theory. Further, Bankoff *et al*. (2012, p.209) note that while DBT has been shown to be beneficial to individuals in reducing ED symptoms and general psychopathology, the efficacy of DBT compared to other evidence-based treatments, such as CBT, is not yet well-established.

Humanism

Maslow's (1943) hierarchy of needs puts hunger at the base of the pyramid, as a primary need. Self-actualisation, on the other hand, is at the very top. While it may be possible to progress through the levels of the pyramid, satisfying higher-order needs while still having some basic needs unmet, it is possible that one might focus on the more primary needs in order to distract oneself from the higher-order ones. An anorectic person may choose to focus on hunger in order to distract themselves from the greater discomfort of trying to achieve self-actualisation. Humanist treatments focus on the individual and their experiences of the disorder, and aim to address the underlying beliefs about ineffectiveness and dissatisfaction with themselves that accompany the denial of their most basic need for satiety (Dittmar & Bates, 1987). Therefore, this approach affords therapists the ability to target individual factors that influence the development and maintenance of the disorder. However, the humanism does not emphasise the role of social values and their impact on those who have AN.

Biological Theory

In contrast, Williamson, Martin and Stewart (2004) argue that the biological theories examine the genetic and temperamental predisposition of individuals towards the development of AN. These

theories follow the view that genes which make an individual vulnerable to AN may be inherited. This view is supported by studies of twins that show AN has a clear genetic component due to increased risk for developing the disorder, further family linkage studies have shown that primary relatives are more likely to share genetic risk factors for AN (Bulik et al. 2007, Shih & Woodside, 2016). A greater understanding of genetic markers for AN, may enable practitioners to more accurately diagnose and treat individuals with AN, as well as better identify and support those at risk for developing the disorder. Nevertheless, it must be acknowledged that there are also environmental components to this disorder, since not all those who have similar genetic markers develop AN (Shih & Woodside, 2016). Environmental factors can include "age, gender, developmental-, physiological- and pathological- conditions, and behavioral factors such as the food and drug intake and physical activity" (Shih & Woodside, 2016, p. 7). Further, these environmental elements may be impacted by social expectations. For example, social expectations around exercise and dietary choices can influence individual actions. As such, biological and social factors should be taken into consideration when treating AN.

Pharmacotherapy and Nutritional Rehabilitation

Many individuals suffering with AN will receive drug treatments that act on serotonin and dopamine in order to restore appetite, or to treat comorbid disorders such as anxiety and depression (Wooldridge, 2016). Atypical anti-psychotic medications, such as olanzapine have been shown to increase levels of dopamine in those suffering with AN (Brambilla *et al*., 2007). While these pharmacological treatments can be effective in supporting the improvement of some specific emotional symptoms of AN, namely those related to depression, anxiety, obsessive–compulsive behaviours and aggressiveness, they do not treat other aspects of the disorder and therefore should not be used in isolation (Brambilla *et al*., 2007).

Nutritional rehabilitation is also often necessary to "[promote] restoration of the metabolic system, [address] medical complications, [promote] a level of cognitive functioning required for effective psychological work to take place" (Wooldridge, 2016, p. 15). It should be noted, however, that refeeding procedures have been invasive, and thus perceived as a hostile act by patients in the past. Thus, it is important that this process occur within a supportive environment and that it is accompanied by psychological management of the patient's emotions and conflicting feelings about the process of refeeding (Wooldridge, 2016). Thus, while these techniques ensure a patient is healthy enough to undergo treatment by means of weight restoration and the use of medication, it is widely acknowledged that these approaches are insufficient to act as treatments for AN independently, as they do not account for the social and emotional components of the disorder (Wooldridge, 2016).

Integrative Approach to Male AN

Pinsof's integrative problem-centered therapy considers the "familial, biological, cultural, and psychodynamic factors that contribute to the genesis and maintenance of male AN" (as cited in Wooldridge & Lytle, 2012, p.368). Pinsof's approach entails a metaframework of "six levels, each representing a particular domain of activity" (ibid, p.369). The components of the metaframework include family systems, biological, meaning (culture and gender), and psychodynamic facets. Therefore, this approach to understanding and treating AN in men brings several different theories together.

Wooldridge (2016) argues that while the experiences of men who suffer with AN are unlike those of females diagnosed with AN, it is not necessary to develop an entirely new approach to understanding male AN but rather to work with an integrative approach that is suited to the unique challenges inherent to male AN, namely the stigma and alienation. An integrative approach acknowledges the strengths and weaknesses of each approach and that alternative ways of understanding AN may resonate more with different therapists, depending on their training, as well as with different client's perspectives (Wooldridge, 2016). Psychologists working with an integrative approach may use a variety of techniques from different approaches, depending on what works best for their client and the theories with which they are familiar, depending on their training and experience. Further, therapists may work in collaborative teams, drawing on the knowledge and expertise of other psychologists who were trained in different modalities.

Identity Theory for Male AN

I argue that we need to move beyond and integrative approach, which combines the perspectives of existing theories and consider the need to also refer to a new theory. The experience of AN is so gendered due to its social and bodily ties that we need an identity focused theory that can be used to understand AN in men. This is because not only are the experiences of stigma and alienation unique to men suffering with AN (Wooldridge, 2016) but due to the gendered nature of the illness a needs to be developed which takes this into account. The current theories were developed with females in mind and while they consider the roles of family, biology, and internal psychology, as well as emotions in the development and maintenance of the disorder, they do not account for the impact of social constructions of gender and identity on the experiences of men with AN. A theory that understands social constructions of masculinity and how this impacts on AN as a disorder that is inherently tied to identity and control, with the male body as a last site of control for masculinity is therefore needed.

AN is so much more than just an eating disorder. Because gender identity is entwined with personality, AN may overlap the Eating Disorder and Personality Disorder diagnostic categories. This is evident in the way AN is often constructed as not only a disorder with which an individual may suffer but also as an identity that makes them distinct from others (Rich, 2006). Therapists often speak of their clients diagnosed with AN as having an "anorexic voice" or "anorexic self". Because AN is arguably seen by the person suffering with the disorder as a means to individuate themselves from an overbearing caregiver or as a way to overcome perceived shortcomings within themselves, the disorder becomes a part of their identity (Bruch, [1978] 2001). In this way AN fills or masks the gaps in their personalities (both those that truly exist and those that are imagined), affording them the ability to feel empowered and whole as individuals. Of course, the disorder is also harmful and pathological and thus goes beyond simply filling the cracks but continues to occupy more and more space, overwhelming cognitions, behaviours and other elements of the self.

Social Constructions of AN

Gergen (1985, p.266) argued that social constructionism is "principally concerned with explicating the processes by which people come to describe, explain, or otherwise account for the world (including themselves) in which they live." It also attempts to "articulate common forms of understanding as they now exist, as they existed in prior historical periods, and as they might exist should creative attention so be directed" (Gergen, 1985, p.266). McVittie, Cavers and Hepworth

(2005) purport that AN has historically been conceptualized by both healthcare professionals and the public as an illness which affects women. Indeed, from the writings of Bemporad (1996) and Bruch (1982) this trend can clearly be seen. McVittie, Cavers and Hepworth (2005, p.414) further state that "the gendered nature of AN arises not from individual experience but from its origins as a recognised disorder". Given the feminised conception of AN in the DSM-IV-TR (American Psychological Association, 2000) and the ICD-10 (World Health Organisation, 1999, their argument is convincing. McVittie, Cavers and Hepworth (2005) argue that this medical construction of AN as a feminine disorder has permeated common discourse.

Social Constructionism

While these theories have been paramount to developing a clinical understanding of the etiology of AN, they ignore the social and historical factors which have influenced the feminised ways in which the disorder has been understood and constructed, as well as the incidence of the disorder (McVittie, Cavers & Hepworth, 2005). Therefore, since this research was concerned with the ways in which AN has been presented, constructed and measured the most appropriate theoretical foundation for this study was that of social constructionism.

Culture and Anorexia Nervosa

The importance of social and cultural factors in the development and maintenance of AN are widely acknowledged (Miller & Pumariega, 2001). AN was first recognized as a disorder in Western society and while it is acknowledged that AN occurs across globally diverse population, it is clear that there are still higher prevalence rates in Westernised and industrustrialised societies (DSM 5; American Psychological Association, 2013). Gordon (2001), as well as Marais, Wassenaar, and Kramers, 2003, noted that the incidence of AN in societies that were developing increased with a rise in the influence of Western individualism, consumerism and beauty standards, as well as a derision for obesity, in these communities. Further, together with increased individualism, there emerged conflict between traditional gender norms more modern Western ideas about gender roles and expectations, as well as, appearances (Gordon, 2001; Marais, Wassenaar, & Kramers, 2003). Eating disorders have been connected to issues around identity and body image and the emergence of conflicting expectations for gender norms has been associated with increases in the prevalence of AN (Gordon, 2001). For example, in the 1960s, when Western women were expected to become more independent and assertive in the workplace, an increase in the incidence of AN was seen (Gordon, 2001). Similarly, a rise in feminism and challenges to traditional notions of masculinity may be having a similar impact on the prevalence of AN in men. Marais, Wassenaar, and Kramers (2003) argued that new social pressures in South Africa led to an increase in eating disorders amongst Black men. Therefore, traditional cultures may offer some protection against the development of AN because of differing body ideals that do not valorize thinness, achievement and performance (Miller & Pumariega, 2001). AN may offer a means for gaining power over one's identity through control over one's body, a physical manifestation of one's gender identity (Miller & Pumariega, 2001).

As noted by Murray et al (2012, p. 199), "there is no available data on cultural differences in eating, shape, and weight concerns among males", which makes it difficult to take cultural differences into account when developing instruments to measure AN symptoms amongst men. This statement may be because there are no conclusive findings, rather than there are no data at all, however that data are very limited (McCabe & Ricciardelli, 2004). Findings about body ideals seem to be similar across

cultural groups, where a muscular and mesomorphic body type is considered the ideal, particularly in Westernised settings. This means that men tend to place greater importance on their chests, stomachs and shoulders than their hips and thighs (McCabe & Ricciardelli, 2004). Men will also be focused on both losing weight and increasing muscle tone, unlike women, for whom the social body ideal is consistently slim across cultures (McCabe & Ricciardelli, 2004). Further, many men internalize this body ideal as a symbol of masculine identity and power (McCabe & Ricciardelli, 2004). Arguably, this places men who are not able to or who do not conform to this body image at a greater risk of developing eating disorders due to higher levels of body dissatisfaction.

Gender and Anorexia Nervosa

AN is a gendered disorder due to its embodied expression and the ways in which gender has been historically constructed as tied to the body. Before addressing the ways in which the disorder has been constructed as a female disorder, it is necessary to delineate exactly what is mean by gender and how it is utilised in this study. This study partly follows the same understanding of gender and gender identity as put forward by Wood and Eagly (2015, p. 461):

> "Gender consists of the meanings ascribed to male and female social categories within a culture. When people incorporate these cultural meanings into their own psyches, then gender becomes part of their identities. Through thee gender identities, individuals understand themselves in relation to the culturally feminine and masculine meanings attached to men and women, and they may think and act according to these gendered aspects of their selves".

It should be noted that this social construction of gender and gender identity are related to but separate from the concept of sex (Jacobson & Joel, 2019). Sex is often linked to biological and genetic factors that are used to place people into the categories of man, woman and intersex (Wood & Eagly, 2015). Similarly, sex and gender are linked to sexuality and sexual identity (Jacobson & Joel, 2019) in so far as understandings of sexual preferences are linked to the ways in which one identifies oneself and the individual to whom one is attracted, or with whom one engages in sexual intercourse. Commonly used categories for defining sexuality or sexual orientation include heterosexuality (sexual attraction to persons of the opposite sex and or/gender), homosexuality (sexual attraction to persons of the same sex and or/gender), asexuality (a lack of sexual attraction to persons of the same sex and or/gender), and bisexuality (sexual attraction to persons of both the same and opposite sex and or/gender) (Bogaert, 2006). While the use of labels and categories can be useful, it should be noted that the constructs of sex, gender, and sexuality can be understood as existing on continua or spectrum and therefore may be considered as not necessarily rigid but rather fluid constructs (Jacobson & Joel, 2019). These three constructs merge and mingle with other aspects of identity such as race and social class to give rise to self-concepts (Wood & Eagly, 2015).

Further, there are gender identities that exist outside of the binary construction of male and female, or masculine and feminine, which include non-binary gender identities. People may identify as transgender if they feel they do not conform to or identify with the gender to which they were assigned at birth (Jacobson & Joel, 2019). For example, a person who was designated by healthcare professionals as being male and a man due to the appearance of their external genitalia, their genetic and hormonal markers, or even the nature of their internal sex organs, may identify as a female and a woman, and would therefore have a transgender identity. Other persons may reject

the idea of a gender binary, taking on an identity outside of the categories of male and female, and instead self-identify as androgynous, non-binary, gender diverse, or gender queer (Jacobson & Joel, 2019; Wood & Eagly, 2015). In contrast, cisgender persons are individuals who identify with the gender to which they were assigned at birth (Jacobson & Joel, 2019). This study focuses on persons who are cisgender men (Jacobson & Joel, 2019).

Understanding what it means to be male or female is linked to culturally ascribed stereotypical traits that men and women are deemed to possess (Wood & Eagly, 2015). These are linked to Bem's (1974) ideas of typically gendered traits that men and women are believed to hold, such as assertiveness for men or empathy for women. Further, masculinity and femininity can be linked to differing socially prescribed interests and behaviours (Wood & Eagly, 2015). A person may self-identify or self-stereotype as male or female based on their relative sense of conforming to these socially constructed ideas (Wood & Eagly, 2015). It is also important to note that these social designations of ideal or typical male or female traits and behaviours may change over time and can become more flexible (Wood & Eagly, 2015). Therefore, it is important to note that what may be seen as typical of men at one time and in one place may change, further these constructions are made more complex by interactions with expectations around other social identity categories such as class, ethnicity, religion and or nationality because they are culturally dependent (Wood & Eagly, 2015).

Regardless of one's self-categorisation, however, Wood and Eagly, (2015) noted that individuals will tend to evaluate themselves against their conceptions their self-ascribed identity. In other words, a cis-man will evaluate his appearance, thoughts, and behaviours against what he believes are the ideal traits for a man in his society. A negative self-evaluation against this gender ideal, may result in a negative impact on one's mental health and self-esteem (Wood & Eagly, 2015). Further, when a person feels their gender identity is vulnerable or threatened then they may tend to be more dichotomizing and try to demonstrate a complete absence of any other gendered trait in their appearance, thoughts, and behaviours (Wood & Eagly, 2015). Ultimately, due to the fact that gender exists on a spectrum and it is typical of individuals to have some attitudes and behaviours that may socially be ascribed to another gender, this can be very difficult and present an effectual dilemma for the individual, producing a general sense of identity dissatisfaction.

Research conducted by McVittie, Cavers and Hepworth (2005) demonstrated the ways in which men account for the diagnosis of AN in other men by constructing those men as being feminine or weak in some way, or even homosexual. In fact, there is much debate regarding whether homosexuality is associated with a greater chance of developing AN in men. Some researchers have claimed that homosexuality and AN are related (Williamson & Spence, 2001), while other studies have challenged these findings (Boisvert & Harrell, 2009). The research participants in the study by McVittie, Cavers and Hepworth (2005) seemed to be attempting to distance men diagnosed with AN from men in the general population. McVittie, Cavers and Hepworth (2005) argued that their research participants were seeking to maintain hegemonic ideals of masculinity whereby men are able to avoid seeking help because they are 'strong enough' to fend off illness alone and moreover are rational and therefore unlikely to experience psychological dysfunction. This notion of hegemony is defined by Connell (2002, p. 60) as "a social ascendancy achieved in a play into the organization of private life and cultural processes" wherein there exists a social hierarchy which places their hegemonic masculinity at its pinnacle.

Connell (2002) argues that hegemonic masculinity is heteronormative, whereby the dominant ideal of masculinity is heterosexual. Jewkes and Morrell (2010) argue that South Africa is not only a patriarchal country, where men (as defined by sex) have historically had an advantage over women. South Africa is also a country where hegemonic understanding of heterosexual masculinity prevails, whereby heterosexual men are viewed as embodying a masculine ideal (Morrell, Jewkes & Lindegger, 2012). This is not to say that other types of masculinities do not exist. It does not preclude the idea that gendered hegemony exists in terms of race, occupation or even culture but it does highlight the fact that men whose behaviours and actions do not conform to strong masculine, heterosexual ideals are often stigmatised as being weak and feminine both globally and in South Africa (Morrell, Jewkes & Lindegger, 2012). Men who stand in opposition to the hegemonic social construction of heteronormative masculinity are often subjugated in order to limit the power that they would have to assert alternative ways of being a man (Foucault, 1976).

The labelling of those who challenge dominant constructions of reality as 'mentally ill' in order to control and subdue them has been present throughout history. Foucault (2006[1961]) has argued that denouncing someone as mad has acted as a means to discount their views, which may challenge the power of the majority. He further goes to say that reason defines itself in opposition to madness and while the existence of each construct is dependent on the other, reason seeks to reject the fact that madness is in fact a part of itself. In this sense the construction of mental illness as a problem of women, seeks to reinforce the dominance of men in society. Men in the study by McVittie, Cavers and Hepworth (2005), have defined themselves in opposition to women and feminised or homosexual men who must seek help for their psychological illnesses. Morgan (2002) argues that men are more closely linked with the mind while women are linked to the body in social discourse. However, male bodies are becoming the sites for research in terms of eating disorders, which challenges the position of men as powerful subjects of reason, the very notion upon which masculine power is built (Morgan, 2002). Ultimately, this construction of men needs to be challenged so that those men who do suffer from AN may receive the necessary help for their condition without being subjected to stigma and social ridicule. By changing the ways in which AN is understood, the methods for measurement, diagnosis and treatment of AN in men will be improved.

Therefore, social constructionism provides a means to challenge the ways in which AN is currently conceptualised as a psychological disorder, as well as in broader society. Through the interrogation of current understandings of AN it becomes possible to consider new means of measuring anorexic symptomatology in ways that are more sensitive to the experiences of men who suffer from the disorder. While social constructionism provides a theoretical lens that enables this new thinking, it must be acknowledged that to claim that an experience can be objectively defined and measured falls under the realm of post-positivism (Denzin & Lincoln, 2005). These two theoretical traditions have historically been viewed as incommensurable (Howe, 1988) given that social constructionism holds that there are many subjective realities (Gergen, 1985) and post-positivism stipulates that there is one true reality (Denzin & Lincoln, 2005). Nonetheless, it has been argued that these two seemingly different ways of knowing the world can be combined in order to provide new perspectives on current beliefs and in aid of answering particular research questions (Greene, 2008).

By holding a dialectical view one is able to recognise the differences between theoretical paradigms and purposefully match them in order for each perspective's limitations to be countered by the other's strengths (Greene, Kreider & Mayer, 2005). This is true of social constructionism and post-

positivism, because social constructionism allows the current measurement of AN to be critically examined in terms of gender biases that have emerged due to social and historical circumstances. The perspective afforded by social constructionism has already led to the recognition that new ways to measure the levels of AN symptoms in men need to be developed (Darcy *et al*., 2012; Murray *et al.*, 2012; Reas, Øveras & Øyvind, 2012). Nonetheless, the only way to measure anorexic symptomatology is by holding a post-positivist view that the symptoms experienced by men who suffer from AN can be quantified and measured because there are general laws which govern their levels of expression. Moreover, AN itself needs to be conceptualised as a real disorder, which exists externally to the men who suffer from it. In this way the two theoretical viewpoints complement one another and afford the development of new insights into anorexic symptomatology and new ways to measure the symptoms of AN in men (Greene, Kreider & Mayer, 2005).

The reported prevalence of AN amongst males is substantially lower than that amongst females, a commonly cited rate being one male to every ten females (Gueguen *et al*., 2012). It has been argued that this data is inherently flawed because it is largely based on clinical samples (Caralat, Camargo & Hertzog, 1997; Hoek, 2006). There are many reasons why data from clinical samples is unreliable including the fact that it is widely accepted that men are less likely to seek help for psychological disorders than women due to a fear of being stigmatised as weak or feminine (McVittie, Cavers & Hepworth, 2005; Nelson, Hughes, Katz & Searight, 1999). Further, of the men who do seek treatment for the disorder, many are misdiagnosed because of the feminised ways in which the disorder has been constructed (Burns, 2003; Goodman, Blinder, Chaitin & Hagman, 1988). Therefore, it is likely that there are men in the broader population currently suffering from AN who are not represented in these statistics because they remain undiagnosed.

Nevertheless, relatively recent research has indicated an increase in the number of men receiving treatment for AN, both globally (Bulik, Baucom & Kirby, 2012; Garner, 1997) and in South Africa (Freeman & Szabo, 2005). This may be due to the recent growing recognition of AN as a disorder which also affects men and the subsequent interest in the different experiences of male AN sufferers in the field of psychology. Current data shows that the while the clinical presentation of AN amongst males and females is largely similar, certain elements of the psychopathology of the disorder are qualitatively different for men (Darcy *et al.*, 2012; Strother, Lemberg, Stanford & Turberville, 2012). This means that the ways in which AN in men has been understood in the past, and consequently the ways of measuring anorexic symptomatology in this population, are inconsistent with the actual experiences of men.

Men are often concerned not only with thinness but also with muscularity (Darcy *et al.*, 2012; Murray & Touyz, 2012; Reas, Øveras & Øyvind, 2012; Strother *et al.*, 2012). While both men and women are reported to be equally concerned about their body image, men are cited as being more concerned with different areas of their bodies than women such as their arms and torsos rather than their buttocks and thighs (Murray & Touyz, 2012; Reas, Øveras & Øyvind, 2012). Men are often reported to have been overweight prior to developing AN (Darcy *et al.*, 2012). Being bullied for being overweight is argued to lead to the development of the disorder in men (Darcy *et al.*, 2012). Thus, men with anorexia may be more concerned about the perceptions that others have of their bodies rather than about their own dissatisfaction. Men are more likely to use substances and exercise excessively in order to control their weight than women (Darcy *et al.*, 2012; Murray *et al.*, 2012; Reas, Øveras & Øyvind, 2012; Strother *et al*., 2012). Nonetheless, men and women are reported to

experience similar levels of perfectionism and of a need for control (Darcy *et al.*, 2012; Murray *et al.*, 2012; Reas, Øveras & Øyvind, 2012). Men, like women, diagnosed with AN typically possess an intense fear of gaining weight and are severely malnourished for their expected age and height (Darcy *et al.*, 2012 Murray *et al.*, 2012; Murray & Touyz, 2012; Reas, Øveras & Øyvind, 2012).

Some have argued that since the expression of symptoms in men is different from those seen in females, especially regarding body image dissatisfaction, that men may be experiencing a different disorder altogether, namely a form of body dysmorphic disorder (Murray *et al.*, 2012). Nonetheless, the core diagnostic features of AN, being a drive for thinness and being below 15% of one's expected weight (American Psychiatric Association, 2000; World Health Organisation, 1992), are still present in men who suffer from AN. This would suggest that men who experience these symptoms do suffer from AN and not another disorder. Nonetheless, while the core features of AN amongst men and women are the same, the specific ways in which those symptoms are experienced and expressed by men appear to be different.

Conclusion

AN has historically been constructed as a female disorder, due to higher incidence rates for the disorder in women. This construction of AN as a female disorder led to gender biases in diagnostic criteria and theoretical constructions of AN. This can also be seen in the use of feminine pronouns across the literature being use synonymously with mentions of AN. Because of this, healthcare professionals and the general public often view AN as a feminine disorder, despite growing recognition that AN may be more prevalent in men then previously thought and that its incidence is increasing. There has been increasing interest in men's experiences of AN, although little is known about this disorder amongst men compared to women. This may be because of a lack of help-seeking behavior amongst men and stigma around the feminization of the disorder. There is a need for a better understanding of AN in men. The DSM 5 (American Psychological Association, 2013) and ICD-11 (World Health Organisation, 2019) have increasingly sought to minimize biases in diagnostic criteria, by removing the amenorrhea criterion and providing mention of male gender specific issues such as decreased testosterone levels and a diminished libido in men. These changes in diagnostic criteria point to the growing recognition that the disorder is prevalent amongst men and that there are gender specific aspects to men's experiences of the disorder which need to be better understood and assessed in order to minimize misdiagnoses.

Chapter 3: Measures of AN

Introduction

Darcy *et al*. (2012, p. 111) argue that the instruments currently used to assess AN in males possess inherent gender biases because they "were developed and normed for female samples." These instruments commonly include the Eating Disorders Inventory version 3 or EDI-3 (Garner, 2004) and the Eating Attitudes Test 26 or EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982), but may also include the Eating Disorders Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008) (see Darcy & Lin, 2012; Darcy *et al*., 2012; Freeman & Szabo, 2005; Murray *et al.*, 2012; Reas, Øveras, Øyvind, 2012; Seiver, 1994). Currently, the most often used self-report quantitative measures for AN in men are the EDE-Q (Fairburn & Beglin, 2008), the EDI-3 (Garner, 2004), adapted versions of these measures, or more recently the Eating Disorder Assessment for Men (EDAM; Stanford & Lemberg, 2012). Less commonly known and used quantitative measures available include the Goldberg Anorexic Attitude Scale (GAAS) (Goldberg et al., 1980) and the Anorexia Nervosa Inventory for Self-Rating (ANIS) (Fitcher & Keeser, 1980). In addition, the Anorexia Nervosa in Males Questionnaire (AANMQ and AMAN) developed by Crosscope-Happel (1999) is a potentially useful qualitative measure designed to screen for AN in men but it is not widely recognised. The majority of measures that have been used to assess AN were developed and normed using female samples, unlike the EDAM (Stanford & Lemberg, 2012. This has led to the unreliable assessment of AN in men, who often score much lower than women on their levels of anorexic symptomatology. This means that much of the research on the prevalence of AN in men, which has been based on these instruments, is inaccurate. Further, the shame, denial, and stigma men may face concerning AN, means that not only might the measures be unreliable, but men themselves may also under-report their symptoms. This inaccurate assessment and lack of help-seeking for AN among men, may have led to the misdiagnoses of men who suffer with AN. In order to minimise the chances of misdiagnosis, a deeper understanding of, and a better way to assess male experiences of AN is required.

Screening Tools

A screening tool aims to identify persons who exhibit signs and symptoms of disorders, who need to undergo further assessment. A key distinguishing feature of screening measures is that they "can be administered by non-specialists", unlike diagnostic instruments (Roodt et al., 2013, p.242). While diagnostic tests are supposed to determine whether a person is suffering with a mental disorder and what the severity of the problem is, a screening tool need only determine if there is cause to be concerned that a person may be struggling with a disorder and should seek further support. Screening tools are usually brief and inexpensive which makes them more easily accessible (Roodt et al., 2013). Further, screening measures are usually categorical and serve to provide an overview of a person's condition rather than a detailed and holistic review of their status (Roodt et al., 2013).

Test developers have an obligation to either ensure that test items are not biased towards certain groups or to clearly state amongst which groups a test may suitable by used (Foxcroft, Roodt & Abrahams, 2013). Further, when these instruments are adapted in ways that are deemed to be sensitive to male needs (most commonly by reversing items regarding body image) they are not psychometrically evaluated (Darcy *et al*.,2012; Murray *et al.*, 2012). These changes to items on existing questionnaires have been haphazardly applied and are largely based on individual researcher's perspectives rather than empirical data. The poor reliability and validity of the

instruments used to assess the level of anorexic symptomatology amongst men point to the disjuncture between the constructs measured by the instruments and the symptoms reported by men (Darcy *et al.*, 2012; Siever, 1994). This has far reaching implications for both research and clinical practice in that the existing data on males with AN, which has been largely based on assessments with these unreliable instruments, may be inaccurate.

More recently the Eating Disorder Assessment for Men (EDAM) has been developed by Stanford and Lemberg (2012). Darcy and Lin (21012) also highlight further assessments which tap into other aspects of disordered eating attitudes and behaviours including the Drive for Muscularity Scale, Male body image Concerns Scale, Male Body Checking Questionnaire, Body Change Inventory, Obligatory Exercise Questionnaire, and the Appearance and Performance Enhancing Drug Use Schedule. One of the key challenges with these measures is that they do not provide a clear indication of specific risk, that is to say they give an indication of the general presence of disordered eating attitudes and behaviours, yet they are not specific enough to determine which eating disorder a man may be experiencing. This is problematic because men tend to be misdiagnosed and often fall into the category of Eating Disorder Not Otherwise Specified (EDNOS). Research has argued that in order to improve the treatment of men who suffer from eating disorders, more targeted care is necessary, wherein men who suffer from AN should be diagnosed and treated for AN rather than being misdiagnosed and receiving inappropriate or insufficient support from healthcare professionals. Therefore, there is a need for disorder-specific instruments to be developed.

It has been reported that there is no instrument currently available which has been specifically designed to measure anorexic symptomatology in men (Darcy *et al*., 2012; Murray *et al.*, 2012). The poor reliability and validity of the instruments used to assess the level of eating disorder symptomatology amongst men points to the disjuncture between the constructs measured by the instruments and the symptoms reported by men (Darcy *et al.*, 2012; Siever, 1994). Therefore, research into the differences between male anorexic psychopathology and that of females should be used to inform the development of a measure which better assesses the levels of anorexic symptomatology in men. A new instrument that can reliably measure levels of anorexic psychopathology in men will both improve research data and enable a more accurate diagnosis of AN in males, further ensuring that these men receive the necessary psychological support. Therefore there is a need for a better understanding and measurement of the symptoms experienced by men who suffer from AN both globally (Darcy *et al*.,2012; McVittie, Cavers & Hepworth, 2005; Murray *et al.*, 2012; Murray & Touyz, 2005; Reas, Øveras, Øyvind, 2012; Robinson, Mountford & Sperlinger, 2012; Strother *et al*., 2012)and in SA (Freeman, 2005; Freeman & Szabo, 2005). This is especially important given that AN has the highest mortality rate of all the psychological disorders (Hoek, 2006).

As discussed previously, there is much debate in the literature regarding the prevalence of AN amongst men of different sexualities. There are those who argue that homosexual men are more likely to experience AN (Williamson & Spence, 2001) while others argue that sexuality is not related to the experience of anorexic symptoms (Boisvert & Harrell, 2009). There is also contention in the literature regarding the prevalence of AN amongst different racial groups (Edwards & Moldan, 2004). In a study by Delport and Szabo (2008), however, no differences in anorexic symptomatology were found between the white and black females admitted to psychiatric hospitals in South Africa. It is important for instruments to be sensitive to cultural differences (Health Professions Council of

South Africa, 2010; International Test Commission, 2012) and so race is an important variable to consider when developing an instrument. There is also debate in the literature as to whether persons from higher socio-economic statuses are more likely to be diagnosed with AN (Gard & Freeman, 1996). Further, persons who ascribe to religions that practice fasting tend to exhibit behaviors that are similar to the starvation and purging practices of those who suffer from AN (Edwards & Moldan, 2004; Joughin, Crisp, Halek & Humphrey, 1992). Therefore, the differences in scores on the new instrument for men of different sexual orientations, socio-economic statuses, and religions should be examined so that they may be ruled out as factors which may influence test scores.

Goldberg Anorexic Attitude Scale (GAAS) (Goldberg et al., 1980)

The Goldberg Anorexic Attitude Scale (GAAS) aimed to assess the attitudes commonly expressed by persons diagnosed with AN (Goldberg et al., 1980). The self-report measure was originally validated on 44 patients and later re-evaluated using a full sample of 81 cases. The test was developed with 9 scales in mind. These scales were developed based on the author's personal experiences in working with ED clients. These hypothesized sub-scales were: "(1) Denial or minimization [sic] of the severity of one's illness", "(2) Loss of appetite", (3) "Manipulativeness", "(4) Relations with parents", "(5) Fear of becoming fat and thin body ideal", "(6) Achievement", "(7) Hobby cooking", "(8) Heterosexual disinterest", and "(9) Hypothermia".

There are arguably two main flaws with this assessment. Firstly, the authors were clearly gender biased. Despite saying that the test could be used to diagnose AN in **patients**, they clearly meant in **female patients** as many of their descriptions of the indicators utilized feminine pronouns such as "she" and "her". For example, in the description for "Manipulativeness", the authors state that "since **she** is there against **her** will, the attitude easily forms that **she** is being held prisoner…" (Goldberg et al., 1980, p. 240; my emphasis). Further, the measure was validated on a female sample and the experiences of AN in males were not considered. Secondly, while the test has proven clinical utility and has some internal consistency, developing an instrument based on personal perceptions of the experiences of others, which is largely based on anecdotal evidence, means that the items are inherently subjective. This is arguably seen in the difficulty of obtaining consistent factor loadings across studies, in other words the experiences of the participants do not seem consistent with those imagined by the test developer. Nonetheless, it must not be ignored that these differences may be due to the lack of insight that patients with AN are reported to exhibit. Further, the judgement of the test developers was based on years of experience working with clients, and this expertise is useful as a theoretical foundation for item development. Ultimately, further testing would be necessary with male populations, and a possible refinement of test items and constructs to better capture the attitudes of persons diagnosed with AN. Moreover, it is as valuable to screen drastic changes in body weight, as well as, other factors that signal may a diagnosis such as cognitive concerns, personality aspects, and beliefs related to the disorder (Goldberg et al., 1980).

Anorexia Nervosa Inventory for Self-Rating (ANIS) (Fitcher & Keeser, 1980)

The Anorexia Nervosa Inventory for Self-Rating (ANIS), developed by Fitcher and Keeser (1980) was one of the first screening tools used to assess for eating disorder symptoms (Rathnew & Rumpold, 1994). The test was first developed in German and so is commonly used in German-speaking territories. While, English translations do exist, the ANIS is less commonly used in English-speaking countries. Rathnew and Rumpold (1994) speculate that the relatively lower levels of popularity for

the ANIS amongst English speakers is because there are many other options for test users in this language, such as the Eating Disorders Inventory (EDI) or Eating Attitudes Test (EAT). The ANIS, like the EDI, was developed to assess "both the specific and general psychopathology found in ED patients" (Rathnew & Rumpold, 1994, p.382). The ANIS has been used to support the diagnoses of EDs and to measure the impact of psychotherapy (Rathnew & Rumpold, 1994). The tool has thirty-one items that fall under nine factors, namely: "Figure Consciousness, Bulimia, Adverse Effects of Meals, Feelings of Inadequacy, Obsessive-Compulsive Traits, and Sexual Anxieties" (Rathnew & Rumpold, 1994, p.383). The test has a 0-5 rating scale (Rathnew & Rumpold, 1994). Research has shown that subscales for the ANIS have less construct validity with men than with women (Rathnew & Rumpold, 1994). This is not unexpected, because men were specifically not considered in the development of the ANIS items (Rathnew & Rumpold, 1994).

Eating Attitudes Test (EAT-26) (Garner, Olmsted, Bohr, & Garfinkel, 1982)

The Eating Attitudes Test (EAT) has had two iterations thus far. The first version of the EAT had 40-items with a 6-point rating response format ranging from "always" to "never" (Garner & Garfinkel, 1979; Garfinkel & Newman, 2000). The test development was informed by a review of the literature on the symptoms of EDs. The test historically has high levels of internal reliability amongst female samples (Garfinkel & Newman, 2000). The EAT has seven subscales, which are "food preoccupation, body image for thinness, vomiting and laxative abuse, slow eating, clandestine eating, and perceived pressure to gain weight" (Garfinkel & Newman, 2000, p.1). The EAT-26 (Garner, Olmsted, Bohr, & Garfinkel, 1982) is a shortened version of this original measure, which was developed from a factor analysis of the original questions. This new version of the test has just three factors, namely: "dietary (related to an avoidance of fattening foods and a preoccupation with being thinner); bulimia and food preoccupation (related to reflecting thoughts about food and bulimia); oral control (related to self-control about eating and the perceived pressure from others to gain weight)" (Garfinkel & Newman, 2000, p.1). The two versions of the test are highly correlated with one another (Garfinkel & Newman, 2000). Generally, the EAT is reported to have strong psychometric properties and to be able to accurately differentiate between those with and without EDs across cultural groups (Garfinkel & Newman, 2000). Nevertheless, the instrument is not able to distinguish between eating disorders and is only a measure of general feeding and eating disorder pathology.

Eating Disorders Inventory-3 (EDI-3) (Garner, 2004)

The Eating Disorders Inventory (EDI) has three versions, the oldest of which was developed in 1974 by Garner, Olmstead and Polivy and consisted of 64 items (Garner, Olmstead & Polivy, 1983). The most recent EDI-3, which was developed in 2004, consists of 91 items and assesses three eating disorder specific scales (drive for thinness, bulimia, and body dissatisfaction), as well as eight general psychological scales (Garner, 2004; Stanford & Lemberg, 2012). The EDI is a self-report instrument made to measure disordered eating and attitudes and behaviours (Rathnew & Rumpold, 1994). The EDI has been widely used in research and clinical settings to assess ED pathology (Rathnew & Rumpold, 1994).

While the reliability and validity of the EDI-3 for use amongst women is generally very strong, this is not the always case amongst men (Stanford & Lemberg, 2012). There are usually differences in mean scores between men and women, with men scoring much lower on the subscales measuring body dissatisfaction, drive for thinness and bulimia on the EDI-3 (Stanford & Lemberg, 2012). The lack of item endorsement amongst men is a potential indicator that the content is less reliable and valid for

use amongst men because the test was developed with women in mind (Stanford & Lemberg, 2012). In terms of body dissatisfaction, men may not relate to concerns about the thinness of their thighs and bums, but rather focus on their torso and musculature (Stanford & Lemberg, 2012). Further, men may engage in different behavior to compensate for calorie intake such as excessive exercise rather than vomiting (Stanford & Lemberg, 2012).

EDE-Questionnaire (EDE-Q; Fairburn & Beglin, 2008)

The Eating Disorders Examination Questionnaire (EDE-Q; Fairburn & Beglin, 2008) is based on the EDE Interview (Fairburn & Cooper, 1993), which is considered to be the gold standard in the assessment of eating disorders symptoms (Darcy & Lin, 2012). The EDE-Q is reportedly less reliable when used with men than women because men tend not to respond strongly to items (Reas, Øveras & Øyvind, 2012). The EDE-Q has twenty eight items that assess general eating disorder symptoms that may be self-administered (Reas, Øveras & Øyvind, 2012). This may be due to differences in body ideals across genders and the phrasing of question items, whereby the simultaneous drive for muscularity and thinness often reported in men are not considered (Reas, Øveras & Øyvind, 2012).

Modifications to the EDE-Q in order to make the measure more appropriate for use amongst males have been argued for in the literature. These arguments focus on the need to change these items to reflect gendered norms around behaviours and body standards. For example, Murray et al. (2012) argued that questions about a fear of weight gain should be altered to focus on muscularity or even concern for weight loss. Nevertheless, these changes have not been validated, despite having good reliability amongst research samples and "research is needed to develop psychometrically sound measures of eating disorder pathology that are deemed sensitive to male eating and body image concerns" (Murray et al., 2012, p. 199). This supports one of the key arguments for this dissertation, namely, that there is a need to develop measure, specifically designed to assess AN in males.

Eating Disorders Assessment for Men (EDAM) (Stanford & Lemberg, 2012)

The main weakness of the EDE-Q (Fairburn & Beglin, 2008) and the EDI is that they were predominantly developed with female populations in mind and their reliability and validity for use in male populations is still under investigation. Many research studies have attempted to appropriate the EDI and the EDE-Q (Fairburn & Beglin, 2008) for use amongst a male sample. While most of the adaptations that have made are deemed to be more sensitive to male needs, they are often not adequately psychometrically evaluated. The changes to items on existing questionnaires (most commonly by reversing items regarding body image) are commonly haphazardly applied and are largely based on individual researcher's perspectives rather than empirical data, often resulting in a mismatch between the constructs actually measured by the adapted instruments and the symptoms they are trying to assess.

On the other hand, the EDAM was developed to assess "male specific issues related to body dissatisfaction, eating disorder symptoms, and muscle dysmorphia" (Stanford & Lemberg, 2012, p. 428). Much like the current study, the creators of the EDAM recognized the need for an instrument specifically designed to measure eating disorder symptoms in men because the available instruments had been "developed, normed and validated on women" (Stanford & Lemberg, 2012, p. 428). Further, similarly to the current research the instrument items were developed based on extensive literature reviews and the views of experts in the field. The EDAM has been found to correctly distinguish between men with EDs and men without (Stanford & Lemberg, 2012).

The measure consists of “five dimensions on which men with eating disorders showed particular concern”, namely: “Weight Concerns, Food Issues, Exercise Issues, Body Image/Appearance Concerns and Disordered Eating Habits” (Stanford & Lemberg, 2012, p. 428). Also in line with the present dissertation, the researchers targeted concerns that differentiated males from females, which included the presence of both “a drive for thinness and a drive for muscularity” amongst men; “gender differences in body dissatisfaction” such as preoccupations with different body parts and preferences for body size and shapes; “differences in compensatory methods”, namely the tendency for men to be more likely to use excessive exercise and less likely to utilize laxatives (Stanford & Lemberg, 2012, p. 429). The test items were scored similarly to those proposed in this research, that is, using a “%-point Likert scale, ranging from 0 (never) to 4 (always)” (Stanford & Lemberg, 2012, p. 429). The final test consisted of 50 items, with 10 falling under each of the aforementioned dimensions. Notably, “half of the items were picked to be reverse scored so that each item was not going in the same direction to avoid response bias” (Stanford & Lemberg, 2012, p. 429).

The key difference between the questions from the EDAM and the items proposed in this study is that the questions on the EDAM are based on general screening criteria for eating disorders in men, in general, and not AN specifically. Further, many of the factors listed in the items proposed in this research relate to issues around identity, power and control, which the EDAM does not consider.

New Measure for AN in men

The main weakness of the EDE-Q (Fairburn & Beglin, 2008) and the EDI-3 (Garner, 2004) is that they were predominantly developed with female populations in mind and their reliability and validity for use in male populations is still under investigation. Many research studies have attempted to appropriate the EDI -3 (Garner, 2004) and the EDE-Q (Fairburn & Beglin, 2008) for use amongst a male sample. While most of the adaptations that have been made are deemed to be more sensitive to male needs, they are often not adequately psychometrically evaluated. The changes to items on existing questionnaires (most commonly by reversing items regarding body image) are commonly haphazardly applied and are largely based on individual researcher’s perspectives rather than empirical data, often resulting in a mismatch between the constructs actually measured by the adapted instruments and the symptoms they are trying to assess. The EDAM is unlike these adaptations, however, as it was developed specifically with the male population of eating disorder sufferers in mind and thus addresses many of the shortcomings of these other instruments and their adapted versions.

One of the key challenges with the EDE-Q (Fairburn & Beglin, 2008), EDI-3 (Garner, 2004) and the EDAM , however, is that they do not provide a clear indication of the specific risk for AN in men, that is to say they only give an indication of the general presence of disordered eating attitudes and behaviours. This is problematic because men tend to be misdiagnosed and often fall into the category of Eating Disorder Not Otherwise Specified (if they are diagnosed with an eating disorder at all). It can therefore be argued that in order to improve the treatment of men who suffer from eating disorders, more targeted care is necessary, wherein men who suffer from AN should be diagnosed and treated for AN, rather than being misdiagnosed and receiving inappropriate/insufficient support from healthcare professionals. Thus, there is a need for a disorder-specific instrument to be developed to assess anorexic symptomatology in men.

Darcy and Lin (2012) argue that mixed methods research should be used to develop male-specific assessments which take into account the perspectives of men who have been diagnosed with eating disorders, as well as the views of their clinicians. Furthermore, new measures need to give careful consideration to language use, which should aim to minimize shame and stigma through the use of gender-neutral/ [appropriate] terminology. Men are often socialised to believe that help-seeking is feminine and, more significantly, men also largely believe that AN is a female disorder due to social stereotyping. Thus, men may find poorly worded questions to be threatening to their sense of masculinity.

While some research claims that there is no difference in anorexic symptom expression across genders, other studies argue that there are marked differences in the experiences of men. Commonly found dissimilarities include differences in preferred compensatory behaviours, in the incidence of co-morbidity, in weight histories, and in the body shape ideals of males as compared to females. Men themselves also do not have a uniform body ideal. Men as a group tend to be inconsistent in terms of their levels of endorsement for muscular and slender builds. These varying ideals could be linked to cultural and societal norms for male body types. Thus, items need to be able to capture the diverse range of male body ideals present in society. Further, the picture of male eating disorders is often complicated by the use of anabolic steroids, which must be taken into account. Moreover, there is much debate in the literature as to whether homosexual men are more likely to suffer with AN. A review of recent literature suggests that men with AN may be more likely to struggle with their sexual identities rather than being homosexual per say.

As mentioned previously, men are more likely to be diagnosed with another psychological disorder, over and above AN. This may make it more difficult for clinicians to distinguish between AN and another disorder (particularly when it is still considered to be so rare). Psychologists will more likely diagnose a male patient with another psychological disorder before AN. There is a need for a new instrument to screen specifically for anorexic symptomatology in men. This new measure will improve the likelihood of men who suffer with AN being correctly diagnosed and receiving the proper treatment. A more accurate assessment and diagnosis of AN in men means that the research conducted on male samples will be more valid and reliable, leading to a greater understanding of AN in men.

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Conclusion

In conclusion, statistics reporting the prevalence of AN amongst males are potentially under representative and unreliable due to the fact that they are largely based on clinical samples (Caralat, Camargo & Hertzog, 1997; Hoek, 2006) and do not account for men who suffer from AN but have not been diagnosed (Burns, 2003; Goodman, Blinder, Chaitin & Hagman, 1988) or men who have failed to seek treatment (McVittie *et al*., 2005; Nelson, Hughes, Katz & Searight, 1999). In order to ensure that those men who are suffering from AN in the general population receive treatment for their disorder, the methods of diagnosing AN need to be adapted. Furthermore, the changes to the

DSM-5 diagnostic criteria for AN (Attia & Roberto, 2009) point to a growing recognition for this need to be met. Therefore, it has been argued that the inherent gender biases in the current measures for assessing the presence of AN in men need to be addressed through the development of a new instrument which specifically measures AN in males (Darcy *et al.*, 2012). Ultimately, this research addressed the shortcomings of the instruments currently available to assess anorexic symptomatology amongst men by developing test items that may be used to create a new screening measure specifically designed for use amongst this population. In the process of developing a new measure this study also served to develop a comprehensive source for literature around AN symptomatology in males which can be used to inform psychological practice and theory. By integrating and critically engaging with information from various articles and supplementing this literature with interviews with clinical psychologists and psychiatrists, this research further developed and challenged the knowledge around anorexic symptomatology in men. Moreover, this research was critical of the ways the disorder has been constructed both in the field of psychology and socially. Therefore, this research was intended to speak to both psychological researchers and clinical practitioners. The purpose of this research was to ensure that clinical researchers and psychologists are informed about the experiences of anorexic symptomatology in men, as well as, the new ways to measure and understand such symptoms in light of the manner in which AN has been constructed.

Chapter 4: Overall Methods and Research Design

Introduction

This chapter gives an overview of the research questions that needed to be answered to achieve the aims of this study. It also outlines the research design and methods that were employed to address the research questions under the different phases. In addition, the rationale, and dialectical arguments for using a tri-phasal, sequential, exploratory mixed methods design are discussed. Thus, the ways in which the different phases of this study served to complement one another and fit into the overarching design are described.

Research Questions

The overarching questions for this study were linked to its aims and guided the methodological choices made by the researcher. These are:

1. What anorexic symptoms should be examined in a self-assessment tool to screen for AN in cis-men?
2. How should the items for a self-assessment tool to screen for AN be constructed in order to acknowledge the sex and gender biases that impact on the experiences of AN for cis-men?

These are broken into sub-questions, which are split by phase.

Phases One and Two

The following sub-questions were explored by conducting an integrative literature review of articles published between July 2000 and July 2013, as well as reviewing the perspectives of clinical psychologists and psychiatrists in phases one and two of this study, respectively:

1. What are the differences and similarities in symptoms most commonly reported as experienced by cis-men and cis-women diagnosed with AN in the literature?
2. What are the beliefs that psychiatrists and psychologists, particularly from within the South African context, hold about the symptoms experienced by cis-men and women diagnosed with AN?
3. What are the tools most commonly used to assist with the diagnosis of AN in cis-men?
4. What kinds of considerations (e.g. stigma and stereotypes) need to be taken into account when understanding the lived experiences of cis-men with AN?

Questions one and two required an understanding of how AN in men has been constructed in the literature and by healthcare professionals. This allowed the achievement of the study's first aim, namely, to understand historical and current considerations concerning AN in men.

Questions one to three called for the development of an index of symptoms experienced by men, as reported in the literature, used in testing, and recognized by healthcare professionals, which served to establish a better understanding of the reported differences between men and women in their symptom expression. This will serve to expand the literature on AN in men, inform the development of the content for the test items, and help practitioners and researchers to distinguish between AN and other psychological disorders in the male population.

Question four compelled the researcher to understand how AN in men was recognised and the challenges faced in reaching that diagnosis. Ultimately, by responding to the questions under phases one and two this study allowed for the development of the screening instrument items, and the growth of knowledge on AN in men. Furthermore, insight into the beliefs held by, and challenges faced by, clinical psychologists and psychiatrists in South Africa regarding AN in men were established.

Lastly, by addressing all of these questions, the findings inadvertently allowed the researcher to contribute to the development of theory and a gendered understanding of AN.

Phase Three

Phase three involved the development of items, based on the answers to the questions one to four, and examined the following questions:

5. What items for a screening tool can be developed that use supportive and inclusive language, which captures the male experience of AN in a way that men can recognize in themselves a need for help?

Thus, question five expedited the achievement of the study's primary aim, which was to develop items for use in an instrument to screen for anorexic symptoms in men, and the clear demonstration of the practical utility of mixed methods research when developing psychological test items. The achievement of this aim will make the creation of a test to measure AN symptoms in men specifically possible. This will be done by including questions around symptoms that men can identify themselves, which will enable self-screening, as well as aid in help-seeking and support diagnosis. Therefore, this research will serve to minimise the gender bias for diagnosing and recognising AN in men. Nonetheless, the limitations of these items as being particular to a specific context and culture must be acknowledged.

Methodology

Methodology concerns the philosophical beliefs in which a research study is grounded, whereas methods are the procedures followed in executing the project (Creswell, 2011; Creswell, & Plano Clark, 2007). The field of mixed methods research is still developing, especially in South Africa (Barnes, 2012), and there is much debate as to whether mixed methods research should have their own worldview and methodology or whether they simply involve the combination of both qualitative and quantitative methods (Creswell, 2011; Greene, 2008, Tashakkori & Teddlie, 1998). This debate becomes superficial if one prioritises the objectives of the research, whereby the methods and worldview that are most appropriate to answering the research questions are employed (Bryman, 2007). Ultimately, mixed methods research involves the combination of both qualitative and quantitative methods in a study, however the degree and form of mixing is usually determined by the research design.

According to Greene, Caracelli and Graham (1989, p. 256) mixed method designs "include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm". This was a tri-phasal mixed methods study with three phases. This study utilised both qualitative and quantitative methods at every stage of the research, however the first two phases

were predominantly qualitative while the third phases was primarily quantitative. Furthermore, none of the methods used were exclusively linked to a particular paradigm but the social constructionism and post-positivism were applied to the different methods in a complementary manner (Creswell, 2011).

The complexity of blending qualitative and quantitative approaches highlights one of the central concerns of mixed methods research, namely whether or not one can combine qualitative and quantitative methods, and consequently mix the philosophical frameworks under which they traditionally fall (Greene, 2008). The perspective which holds that qualitative and quantitative methods cannot be combined because they are only compatible with particular paradigms, namely the interpretivist and positivist paradigms respectively, conforms to the incompatibility thesis (Howe, 1988). In contrast, Greene (2008) argues that while paradigms are useful for understanding the world in different ways, they are not inviolate. In addition, Howe (1988) even went so far as to say that the different paradigms and methods can be complimentary.

There is in fact far more use in mixing methods and in applying different philosophical frameworks to these methods than conforming to an arbitrary schema of the philosophy of research. The value of using mixed methods to afford practitioners new and innovative insights into social and psychological problems far outweighs the challenges of reconciling philosophical assumptions (Greene, 2008). In fact, when the purpose of an investigation is to gain insights that would not be apparent from using one method alone, then mixed methods can afford researchers the ability to obtain “better results” with both a deep and broad understanding of the constructs being investigated (Greene, 2008, p.17). By using the points of disagreement and agreement for different worldviews when making make sense of data, valuable insights into the problems posed by the research questions can be reached in a way that would not be possible if a single perspective were used (Shannon-Baker, 2016). The specific methods and paradigms to be used in mixed methods research should be guided by the needs of the research questions, and not simply adhered to for the sake of conformity or a political agenda (Shannon-Baker, 2016).

While some researchers ascribe to the view that mixed methods research should always be situated in a pragmatic paradigm due to its eclecticism (Onwuegbuzie & Johnson, 2006), others argue that taking a dialectical stance allows for the integration of complementary strengths and the minimising of their oppositional weaknesses (Shannon-Baker, 2016). Thus, the integration and the commensuration of two seemingly opposed paradigms, namely post-positivism and social constructionism in this case, allows for the study’s aims to be met in a way that is best suited to addressing the research questions (Shannon-Baker, 2016). Mixed methods research that ascribes to a dialectical position provides a framework for how to approach key research questions and gives a means to use multiple perspectives in collaboration (Shannon-Baker, 2016). In this way the researcher is able to combine two worldviews and thus not only mix methods but also paradigms in order to achieve a broader perspective of the topic under investigation. Ultimately, Shannon-Baker asserts (2016, p.332) that it is the legitimacy and applicability of the paradigm(s) used in a mixed methods study that determine “whether researchers chose the ‘best’ paradigm” for their project.

Further, taking a dialectic stance means that the methods employed can be guided by paradigms that are complimentary to them in such a way as to ensure that the research questions are addressed satisfactorily. As argued by Tashakkori and Teddlie (1998), all mixed methods research

should be guided by the needs of the research questions. Therefore, this research will build on the dialectical notion that each method can be used to counter the shortcomings of the other (Greene, Caracelli & Graham, 1989), in order to achieve a more reliable and valid means to measure anorexic symptomatology in men. Thus, for the purposes of this research, mixed methods were used with a dialectical stance for combing the philosophical assumptions of social constructionism and post-positivism (Greene, 2008).

The application of a dialectical logic was undertaken in order to commensurate the different philosophical stances needed to achieve the aim of the research. A dialectical stance allows for the differences between paradigms to be acknowledged in such a way that they are used to account for each other's inadequacies, whereby one way of thinking continues on where the other falls short (Greene, Kreider & Mayer, 2005). In order to design questions for an instrument one needs to hold a positivist view that a reality exists wherein it is possible to measure and quantify certain constructs (Denzin & Lincoln, 2005). However, in order to measure these constructs they need to be operationally defined and ascribed values (Foxcroft, 2001). It has been argued in the literature review that the ways in which different constructs are defined is dependent on a meaning-making process that is situated within a particular social and historical context. This means that there exist multiple ways for both defining and measuring that construct. This is not to say that "anything goes" because constructs can only exist if they are founded in a shared "knowledge system" (Gergen, 1985, p.273). Rather, social constructionism advocates for the recognition that because constructs are understood in relation to particular socio-historical circumstances, they are therefore not fixed elements of one objective reality but are open to change and critique (Gergen, 1985).

Thus, it is possible to measure a shared understanding of anorexic symptoms in men but it must be acknowledged that the ways in which these symptoms are conceptualised and measured are dependent on a particular understanding, within a particular social and historical context. Put more simply, before a construct can be measured it needs to be defined but the ways in which it is developed will be limited to a specific socio-historical context and therefore it will need to be amenable to change should new understandings of that concept arise, or different meanings exist across cultures. The ways in which anorexic symptoms have been understood and measured are open for change because of new knowledge which has come about. Consequently, this research sought to develop new items for an instrument to assess the levels of anorexic symptoms in men.

Since the aim of the study was to develop items for a research instrument, the rationale for using mixed methods was to ensure "instrument fidelity" and to make certain that the questions for the measure would be valid and appropriate for use amongst the proposed population at a later stage (Collins, Onwuegbuzie & Sutton, 2006, p.77). In order to achieve this aim, the study followed a design strategy with a developmental purpose, where the results from one method helped to inform the next (Greene, Caracelli & Graham, 1989), namely the literature review and interviews aided in the design of the instrument items. Each phase may thus be understood as a contained piece of research that connects to the other parts of the study and that build on one another to achieve the final aim of the investigation.

Research Design

This study followed a balanced sequential exploratory developmental mixed methods design (Barnes, 2012; Creswell, 2011; Green, Caracelli & Graham, 1989; Hanson, Creswell, Plano Clark,

Petska & Creswell, 2005). This design was a sequential exploratory design because the qualitative data were collected and interpreted first, followed by quantitative data (Hanson, Creswell, Plano Clark, Petska & Creswell, 2005). In addition, because the qualitative and quantitative phases were given equal priority due to them both being necessary for achieving the aims of the investigation. In other words, the qualitative and quantitative sections were not included merely to supplement or critique each other's findings but rather both contributed to the development of the test items (Hanson, Creswell, Plano Clark, Petska & Creswell, 2005). Further, the findings were integrated in the discussion sections of the report and the data interpretation phase. These designs are useful for "refining and testing an emerging theory, developing new psychological test/assessment instruments based on an initial qualitative analysis, and generalizing qualitative findings to a specific population", which suited the purpose of this study (Hanson, Creswell, Plano Clark, Petska & Creswell, 2005, p. 229). In addition, the purpose of the mixing was development, namely the construction of instrument items (Green, Caracelli & Graham, 1989), with a rationale for mixing based on "instrument fidelity" to enhance the quality of research and psychological instruments (Collins, Onwuegbuzie, & Sutton, 2006).

The research was conducted in three phases. Phase one, was an integrative literature review of articles which examined AN in men. Phase two consisted of interviews with clinical psychologists and psychiatrists who worked in the field of eating disorders. Phase three, consisted of the development of items that may be used in future to create an instrument to screen for anorexic symptomatology in men. The first two phases of the study were used to inform the third phase; however, there was flexibility in the movement between the first two phases of the study so that each method could be used to corroborate the findings of the other (Greene, Caracelli & Graham, 1989). In this way, all three phases of the research contributed to establishing the validity of the items (Lynn, 1986).

Phases one and two were predominantly qualitative but utilised some quantitative methods. Phase three was primarily quantitative with the use of some qualitative methods, thus there was mixing at every stage of the research. While qualitative research typically does not follow an inherent research design, quantitative research does and so for the purposes of clarity phase three followed an exploratory, non-experimental, cross-sectional design (Babbie & Mouton, 2001). The development of the questions for a measure in phase three would not have been possible without the information obtained from the literature review and interviews in phases one and two. In this way, the findings of phases one and two and informed phase three, as is the case in a sequential design (Greene, Caracelli & Graham, 1989). Further, no stage was given priority and the design was balanced in that both methods were afforded equal status in the project (Barnes, 2012; Greene, Caracelli & Graham, 1989). Figure 1, on the following page outlines the sequence of the study.

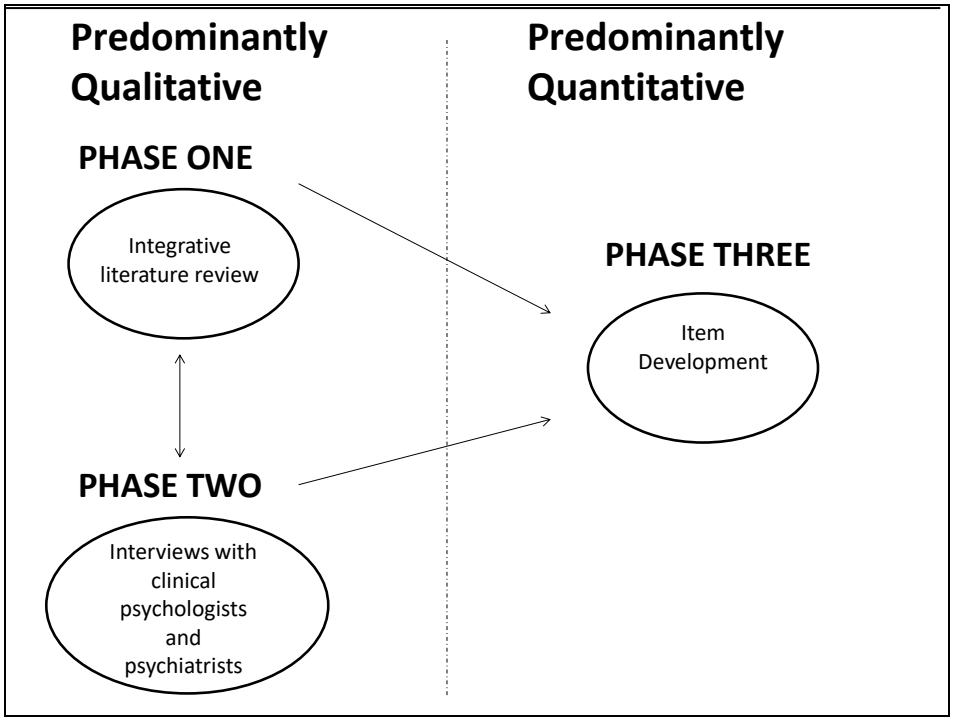


Figure 1: Research Design

The diagram of the design in Figure 1 was loosely based on the guidelines of Ivankova, Creswell and Stick (2006) with arrows depicting the sequence of the phases of the research process and the lack of all-capitalisation of the text signifying that neither method was given dominance in the study. While exploratory sequential mixed methods designs usually include only two phases, the additional qualitative phase served to enhance the validity of the qualitative data to be used to inform the item development in phase two. It should also be noted that the number of phases in mixed methods research has not been explicitly limited as this would contravene a key component of this methodological paradigm, which is that the design should fit the requirements of the study's aims (Creswell, 2011). After all, the aim of a graphic presentation of the study's process is to clarify and facilitate the reader's comprehension of the overarching design (IIvankova, Creswell, & Stick, 2006). Further, the focus of each phase in terms of the data generated was indicated in Figure 1. The specific data analysis techniques were, however not included so as not to over-complicate the visual representation of the design. Further, although the place of integration of the data across phases is not explicitly detailed in the image above, it should be intuitive for the reader to discern that this took place in phase three when the items were developed.

Outline of Methods for Each Phase

Below is an outline for the study's overall research methods. The purpose of this section therefore, is to give the reader a sense of how the different phases worked together to address the primary aim of the study. The methods specific to each phase will be discussed in more detail, under each phase in chapters 5 to 7, which follow on from this section.

Samples

Following Onwuegbuzie and Collins' (2007, p.282) "typology of [mixed methods] sampling designs", this study utilised non-random sampling designs for all phases of the study (Type 4), which is

considered acceptable for analytic generalisations, namely the application of the study's findings to the development of theoretical test items. Phases one, two and three all used non-probability samples because the articles and participants selected did not have a known chance of inclusion (Babbie & Mouton, 2001; Huck, 2009). Rather, the researcher used purposive or judgmental sampling strategies for these phases, whereby the articles and healthcare professionals included in the study were chosen based on particular, named attributes (Huck, 2009; Onwuegbuzie & Collins, 2007). The specific characteristics necessary for the articles that were selected under phase one were based on inclusion and exclusion criteria, that were developed prior to the literature search but were refined as the review progressed. The inclusion criteria for the articles were determined, based on their ability to satisfy the aims of the study, as well as their accessibility to the researcher (Babbie & Mouton, 2001). The actual inclusion criteria for the articles are discussed in chapter 6, under phase one.

Phase one ultimately included 87 peer-reviewed journal articles published between July 2000 and July 2013. This is because July 2000 and July 2013 covers the period of time between the release of the DSM-IV-TR and the release of the new DSM 5, which captured the latest developments in psychological theory and treatment at the start of this study. These articles were retrieved from PsycINFO, SA ePublications and Google Scholar. The papers included in the review covered the ways in which AN had been conceptualised in the literature between the release of the DSM-IV-TR and the DSM 5, and demonstrated the ways in which our understandings of AN in men have changed over time. Further, these publications were focused on the symptoms of AN that have been reported in men, which men themselves would be able to identify and therefore testify to in self-report.

Phase two utilised a specific, hybrid form of judgmental sampling, namely: purposive snowball sampling (Huck, 2009). Healthcare professionals were initially recruited based on their possession of specified characteristics, and then they were asked to share the contact details of other practitioners with whom they were acquainted and who also met the inclusion criteria (Babbie & Mouton, 2001; Onwuegbuzie & Collins, 2007). The healthcare professionals invited to take part in the study were selected based on their registration with the Healthcare Professionals Council of South Africa as either clinical psychologists or psychiatrists, and their geographic locations. The use of a purposive snowball sample in this instance was directed by the accessibility of the participants to the researcher, as well as the participants' abilities to offer informed views on the subject matter due to their psychological training (Babbie & Mouton, 2001; Davis, 1992; Lynn, 1986; Onwuegbuzie & Collins, 2007; Zamanzadeh et al., 2014). While it must be noted that purposive samples have limited generalisability, due to the specific features of the chosen participants, this weakness is balanced by the benefit of specificity and knowing exactly to whom, or to what, the findings may be applied (Huck 2009; Onwuegbuzie & Collins, 2007).

Thus, in phase two, 14 South African-based clinical psychologists and psychiatrists participated in research interviews. These psychologists and psychiatrists were all based in Johannesburg, Gauteng. The number of participants exceeded the recommended minimum 12 participants that should be sampled for interview data to be adequate to reach a point of saturation (Guest, Bunce, & Johnson, 2006; Onwuegbuzie & Collins, 2007). There were three psychiatrists and eleven clinical psychologists who agreed to take part in this study, all with varied years of experience and levels of personal exposure to AN in men. The healthcare professionals who took part in the study were recruited through online clinic databases and referrals.

Phase three, utilised the data collected in phases one and two to inform the development of items for inclusion in an instrument. The specific sampling strategies and criteria used for phase one, two and three will be discussed further in the chapters to follow.

Measures

Each phase used different measures to collect data for this study. Phase one utilised an integrative literature review (Torracco, 2005; Whittmore & Knafl, 2005). An integrative review allowed the researcher to examine all forms of journal articles, in other words both qualitative and quantitative, as well as other review articles (Torracco, 2005; Whittmore & Knafl, 2005). An integrative review goes beyond amalgamating statistics or constructing an ad hoc narrative of a field of study over time. This particular type of review allows for the development of an understanding of the ways in which AN has been constructed across methodological paradigms (Whittmore & Knafl, 2005), as well as for the elucidation of an index of symptoms experienced by men.

In phase two semi-structured interviews were conducted face-to-face with clinical psychologists and psychiatrists. Semi-structured interviews were used because they allowed for the beliefs held by the psychologists and psychiatrists about AN in men to be explored in a way that was sensitive to their intended meanings (Barriball & While, 1994; Fylan, 2005). Further, semi-structured interviews allowed for flexibility in the form and structure of questions that was necessitated by the heterogeneous nature of the sample in terms of their levels of experience, educational histories, and scopes of practice, without compromising the preconceived meanings of the questions asked (Barriball & While, 1994).

In phase three the findings of the integrative review and interviews were combined to develop instrument items to assess the levels of anorexic symptomatology in men. The measures used in each phase will be described in detail in the chapters to follow.

Procedure

The procedures discussed in this section give an overview of the steps followed in the process of conducting this research. The specific steps followed in each phase of this study are further explained in the subsequent chapters. The study focused on the development of test items, as the first step in the psychological test development process (see Foxcroft, 2001; DeVon et al., 2007; HPCSA, 2010; ITC, 2012; Lynn, 1986; Onwuegbuzie, Bustamante, & Nelson's, 2010; Zamanzadeh et al., 2014). Thus, it is recommended that future research aim to determine the reliability and construct validity of the measure.

This study followed the steps that must be adhered to in order for content validity to be determined and evaluated, according to Lynn (1986). The first stage is the "developmental stage" which involves the first three steps and includes the conceptualisation of items (Lynn, 1986, p. 382-383). The first step requires a review of the published literature to determine the content domains for the test. It should be noted that other authors also recommend interviewing experts for their opinions on the construct of interest and its factors to supplement the review (DeVon et al., 2007). In the second step, items are developed for the measure's subscales, as determined by the content of the literature review. The third step requires that items are refined and placed in a logical sequence, resulting in a preliminary instrument.

These steps for establishing content validity compliment the first two phases for the development of a psychological instrument, as outlined by Foxcroft (2013). These phases and steps for instrument construction are given in Figure 2 on the next page. As can be seen in Figure 2, taken from Foxcroft (2013, p.70), this study only completed the "planning" phase and the first step in the "item writing" phase. The integrative review provides a "rational method" to operationally define the content domains to be assessed (Foxcroft, 2013, p.71).

PHASE	SPECIFIC STEPS
Planning	• Specify the aim of the measure • Define the content of the measure • Develop the test plan
Item writing	• Write the items • Review the items
Assembling and pretesting the experimental version of the measure	• Arrange the items • Finalise length • Answer protocols • Develop administration instructions • Pre-test the experimental version of the measure
Item analysis	• Determine item difficulty values • Determine item discrimination values • Investigate item bias • Identify items for final pool
Revising and standardising the final version of the measure	• Revise test and item content • Select the items for the standardisation version • Revise and standardise administration and scoring procedures • Compile the final version • Administer the final version to a representative sample of the target population
Technical evaluation and establishing norms	• Establish validity and reliability • Devise norm tables, setting performance standards or cut-points
Publishing and ongoing refinement	• Compile the test manual • Submit the measure for classification • Publish and market the measure • Refine and update continuously

Figure 2: Table of phases and steps involved in the development of a psychological measure (Foxcroft, 2013, p. 70)

These steps also fit with the first three phases of the ten phases included in Onwuegbuzie, Bustamante and Nelson's (2010, p.60) "Instrument Development and Construct Validation (IDCV)" process for constructing valid quantitative measurement tools using mixed methods. Phase one entails "[conceptualizing] the construct of interest" (Onwuegbuzie, Bustamante, & Nelson, 2010, p.60), which is usually accomplished through a review of the literature and consultation with experts. This first phase also includes reflection on the part of the researcher concerning their chosen worldviews and philosophies for the investigation. Under phase two of the IDCV, the behaviours that underpin the construct must be identified and described. Phase three entails the construction of the initial test and later it's evaluation by key experts. While Onwuegbuzie, Bustamante, and Nelson (2010) also recommend the inclusion of key informants from the population that the test will be administered to, this is not required as either source is deemed adequate for the purposes of reviewing the test items for validity.

The actual process for conducting the study was however, more iterative and less linear than planned. After the proposal for the study was approved and ethical clearance was obtained, data collection for phase one began in October 2013. A preliminary literature search was conducted for articles on Google Scholar and SA ePublications using very specific search terms. The findings of the first literature review were limited to 8 articles and so a larger search with more search terms, as well as an additional database (PsychINFO), was recommended by the research supervisor. Following the initial literature search, interviews with clinical psychologists and psychiatrists began. Thus, the data collection times for phases one and two overlapped somewhat.

The initial findings of phases one and two for the review and the interviews were used to develop preliminary test items in phase three. These findings were reviewed and evaluated by the research supervisor and it was recommended, over and above the expansion of the literature review, that the themes generated from the initial analysis of the interviews be re-worked and refined to include more sub-themes. The secondary literature review was much more comprehensive, and the updated thematic analysis of the interview data were more detailed. These enhanced findings afforded the researcher the ability to generate a more complete collection of items and content domains for a screening tool to assess levels of anorexic symptoms in men. Therefore the procedure followed in phase one and two of this study satisfied steps one and two of Lynn's (1986) development stage, the first two elements Foxcroft's (2013) planning phase, as per Figure 2 on the previous page, and the first two phases of Onwuegbuzie, Bustamante and Nelson's (2010) IDCV.

Data Analyses

Each stage of this study used and elicited different types of data but all phases used thematic content analysis to delineate the research findings. Thematic content analysis can be understood as an analysis which utilizes the methods employed in a traditional thematic analysis but which also includes a quantitative element of content analysis. "Content analysis produces - a relatively systematic and comprehensive – summary or overview of the data set as a whole, sometimes incorporating a quantitative element" (Wilkinson, 2004, p. 182). Content analysis "is based on an examination of the data for recurrent instances of some kind; these instances are then systematically identified across the data set, and grouped together by means of a coding system" (Wilkinson, 2004, p. 183). The first step in the content analysis was deciding on a particular unit for analysis, which in the case of this research was a word or phrase. Once the unit of analysis was

determined, the researcher began to develop a coding system for content which was applied across the transcripts and the texts (Wilkinson, 2004). The codes were further grouped into larger categories. Once the data was coded, these codes were counted and their frequency provided a useful summary of the dataset (Wilkinson, 2004).

Content analysis is quite similar to thematic analysis. In fact, Wilkinson (2004) argues that if there is no quantification of the data, as in qualitative content analysis, then the technique could even be termed thematic analysis. Indeed, the specific phases of thematic analysis outlined by Braun and Clarke (2006) are quite similar to the steps suggested for content analysis. These phases include: "familiarizing yourself with the data", "generating initial codes", "searching for themes", reviewing themes", defining and naming themes" and lastly "producing the report" (Braun & Clarke, 2006, p. 87). There are different types of thematic analysis which are more or less amenable to certain paradigms. In other words, while the analysis itself was not rooted in any particular paradigm, different worldviews could be applied in the execution of this data analysis technique. Since the qualitative aspects of this study were complementary to a social constructionist approach and so the analysis was deductive and sought to understand the latent content of the data or the underlying assumptions embedded in the data (Braun & Clarke, 2006). Therefore, guided by social constructionism, the researcher actively tried to investigate the assumptions that underpinned the data rather than simply examining the terms used without due consideration for their meaning in the particular study contexts (Braun & Clarke, 2006).

Thematic analysis, like content analysis, allowed the researcher to find patterns within the data but it went further to "minimally [organize the] data set in [rich] detail" (Braun & Clarke, 2006, p.79). A contrast between thematic and content analysis is that content analysis is open to the use of frequencies in order to further summarise the data (Wilkinson, 2004). While a potential difference between thematic analysis and content analysis is in the richness and depth of the data, by combing the two methods for data analysis, the data in fact became more detailed. The same type of thematic content analysis was applied to the three phases of the research.

Phase one used textual data in order to develop themes concerning categories of symptoms for AN. In phase one the thematic content analysis of the data was a function of the data analytic procedure (as in the integrative literature review) and the pertinent research questions (Onwuegbuzie, Leech, & Collins, 2012). The interview data in phase two was also examined for particular categories of symptoms, as well as constructions of AN. The themes elicited in phases one and two were used to construct and define items for the later inclusion in an instrument in phase three, which may be piloted in future research.

Thematic content analysis was appropriate to addressing the research questions for phases one and two because it elicited information about what the symptoms of anorexia cited in the literature are and how often they are utilised. It was also an appropriate method of analysis for phase three because it helped the researcher to understand which items were most often referred to as problematic as well as what factors were affecting their utility. The content areas which were identified in phases one and two were used to inform the development of the items for the instrument Further, thematic content analysis was an appropriate method to examine the data collected in all phases of the study because it lends itself to both the qualitative and quantitative

paradigms of thought, and thus is an appropriate data analysis technique to use in mixed methods research (Greene, Caracelli & Graham, 1989).

It should be noted that while thematic content analysis has many advantages, it also has some disadvantages. Content analysis may be guilty of leading readers to believe that the frequency of content is the most important aspect of a theme but this not true, as a concept that occurs only once in a data set may yield more valuable information required to address the aims of a study than a theme that is repeated in the data (Braun & Clarke, 2006; Javadi & Zarea, 2016). Thus, openness concerning the process followed in determining themes was necessary to establish the dependability of the findings and to ensure that both the researcher and the reader would not succumb to this misnomer (Guba & Lincoln, 1985; Maxwell, 1992; Thomas & Macgilvy, 2011). Thematic analysis is largely descriptive and cannot determine underlying meanings without the aid of a theoretical interpretations (Braun & Clarke, 2006). Further thematic analysis cannot account for "language use or the fine-grained functionality of talk", nor can it give an indication of the "contradictions and consistencies" within or across interviews (Braun & Clarke, 2006, p. 97). Nonetheless, the technique is suitable for determining concepts that occur as central ideas in the data (Braun and Clarke, 2006), which are necessary for establishing content domains for test item construction. It is true that other techniques may also yield similar information and are often credited with being more sophisticated. Nonetheless, the main task of any form of analysis is to address the given research questions (Braun & Clarke, 2006), and this technique for interpreting the data is suited to answering the central questions guiding this report.

In order to ensure the study's overall quality, each phase of the investigation was evaluated using the techniques for assessing validity that were specific to the individual methods used (Onwuegbuzie & Johnson, 2006). The trustworthiness of the qualitative components of the study were evaluated using Maxwell's (1992), as well as Lincoln and Guba's (1985) criteria. These include the establishment of a study's "credibility", "transferability", "dependability", and "confirmability" (Lincoln & Guba, 1985, p.301-319) or "descriptive validity", "generalizability" "interpretive validity", "theoretical validity" and "interpretive validity" (Maxwell, 1992, p. 285-295). On the other hand, the quality of the quantitative components of the study were assessed using the applicable principles underlying external and internal validity (Stangor, 2014). Moreover, the literature review was evaluated using additional methodological criteria established by Onwuegbuzie, Leech and Collins (2012). It should be noted that the assessment of the validity of the findings of the study, was only possible through candid reflection and openness about the research process on the part of the researcher (Onwuegbuzie, Leech and Collins (2012). Ultimately, the legitimation of the overarching mixed methods design was evaluated at the end of the study, in chapter 8, in accordance with the relevant criteria stipulated by Onwuegbuzie and Johnson (2006), Onwuegbuzie, Bustamante and Nelson (2010), as well as Onwuegbuzie and Collins (2007). Therefore, the research used justified and appropriate methods, included detailed descriptions of the research samples and limitations concerning context (Shenton, 2004). Further detailed information about how the data were collected and analysed for all phases of the study was given (Shenton, 2004). Previous research findings were discussed in relation to those found in this report and reflexivity, as well as a critical reflection on the study's limitations were included (Shenton, 2004).

Reflexivity

While the concept of reflexivity is traditionally associated with qualitative research, there is a need for researchers to be clear about their theoretical positions, as well as their decisions regarding the analysis and interpretation of data when developing an instrument (Foxcroft, 2001). Moreover, both integrative literature reviews and thematic content analyses require this transparency for validity (Braun & Clarke, 2006; Torraco, 2005; Whittmore & Knafl, 2006). Reflexivity in mixed methods research is also necessary to ensure that the quantitative methods used do not supersede the qualitative methods and the values associated with them (Giddings & Grant, 2007; Creswell, 2011). In addition, it should be noted that reflexivity is not entirely outside of the post-positivist position. Post-positivism accepts the fact that researcher is not entirely objective and does hold some influence over their interpretations of the data, as well as their choices over what to study or on what to focus (Walker, Read & Priest, 2011; Tashakkori & Teddlie, 1998; Zhou & Hall, 2016). Where it is acknowledged that the researcher may have an impact on their data, it is necessary for them to openly reflect upon it so that readers are able to discern the influence of their positionality on the findings of the study (Onwuegbuzie & Collins, 2007; Onwuegbuzie, Bustamante, & Nelson, 2010; Zhou & Hall, 2016). It may be argued that including first-person reflections conveys a diminished level of objectivity. Conversely, writing in the third person may be perceived to demonstrate a loss of accountability for a researcher's unavoidable subjectivity. Therefore, it must be acknowledged that neither social constructionism nor post-positivism claim to go beyond interpretive (Creswell, 2011; Walker, 2011). In this sense the quantitative researcher is never truly detached, and the qualitative researcher is unwilling to concede that research may be conducted without a necessary bracketing of their views in order to prioritise those of the participants' and the unique insights afforded by the data itself. Further, Onwuegbuzie, Bustamante, and Nelson (2010) recommend that, when constructing items using mixed methods, researchers should consider their philosophical beliefs, as well as their decisions when conducting the study because they may influence the study's findings.

Self-reflection is often used when interviews are conducted as a way of noting the potential impact of the interactive effects between the interviewer and interviewees on the data (Walker, 2011). Reflexivity is also useful when conducting literature reviews because, as explicated by Zhou and Hall (2016, p. 9),

> "Even if the author refers to countless other different established theorists and scholars publishing on a topic of interest, it is still the author who selected them, who extracted excerpts, who arranged them together, and who made sense of the words. There is still one voice, the author's, even in a piece which references enumerable citations."

Further, reflexivity allows for a clear understanding of the steps followed in conducting an investigation, and as such gives the reader the ability to audit the research more closely (Walker, 2011). In addition, post-positivist quantitative research denounces absolute certainty in the truth of statistical findings and so clarifications about meaning and specificity are useful in this regard (Harré, 2004).

Moreover, a large part of reflexivity is voice, and the way that the researcher situates themselves and their views in the study. In mixed methods research there is the need for a "dualistic positioning" or a "split-consciousness" (Zhou & Hall, 2016, p. 11). The author thus needs to embody the subjective first-person viewpoint, common in qualitative research, and the objective third-person positionality, which is associated with quantitative research (Creswell, 2011; Onwuegbuzie &

Johnson, 2006). Ultimately, the two styles of writing need to be combined in a way that is well balanced and results in the blending of two divergent perspectives (Zhou & Hall, 2016). Therefore, in order to ensure that this paper reads cohesively and cogently, I decided to write the sections of the report concerning the design and results in the third person, and then add sections of personal reflection to each results' chapter. In this way, the elements of quantitative and qualitative research spoke to one another and were balanced by my reflections and personal input. This style of writing and switching between perspectives speaks to the complementary and dialectic stances taken by this study in that it allowed for the limitations of the post-positivist viewpoint to be strengthened by those of the social constructionist, and vice versa, through an active dialogue (Greene, 1989; Shannon-Baker, 2016). Therefore, I interrogated the findings and decisions taken by me in the project by pointing to and accounting for potential limitations, and thus I used the tensions between the two perspectives to make both methods stronger (Creswell, 2011; Zhou & Hall, 2016).

I chose to do a mixed methods study for many reasons, the first reason was because this design gave me a framework to follow in the development of research items and helped me to see how the different pieces of the project would fit together (Creswell, 2011). In this way the mixed methods design was suited to address the primary aim of this study, which was the development of valid items for a self-report instrument to screen for anorexic symptomatology in men. Further, I wanted to challenge myself to see if I could bring qualitative and quantitative methods together in one study and in the process of mixing them, grow my skillset as a researcher. I have personally found switching between qualitative and quantitative thinking intuitive and logical when it is required in order to address different research questions. I think there is value in using both perspectives when conducting research. I believe that each method brings unique insights that are suited to answering different types of questions.

In my undergraduate and honours studies I was primarily taught quantitative methods but in my master's degree I was exposed to more qualitative techniques and was also introduced to the possibilities afforded by mixed methods research. I also did a post-positive quantitative study for my honours research, followed by a narrative qualitative study for my master's research. Having experience in both modalities and ways of thinking helped to smooth over my transition into the field of mixed methods research and meant that the transitions required by mixed methods research were easier to make (Onwuegbuzie & Collins, 2007).

The topics for my honours and masters research reports also helped to shape my interest in developing an instrument to screen for AN in men. My honours research, entitled "The Pursuit of Perfection: An Investigation into the Relationships between Gender Role Orientation, Body Image Perceptions, and Anorexic Attitudes and Behaviours amongst South African Male Students", was focused on what variables were associated with men having higher levels of anorexic eating attitudes and behaviours. In the process of conducting this research I found that the instrument I used (the first version of the Eating Disorder Inventory) produced skewed responses and that the men were uncomfortable answering certain questions on the test. Many of the men would not just complete the rating scale but also added comments in the margins. For example, one of the questions was around how the participants' felt about their buttocks, to which quite a few of the participants responded negatively, saying that it wasn't something they thought about, or that they tired of being asked that question. This led me to believe that there must be something about the ways in which the items were worded, or their focus that made the men feel uneasy about

answering those questions, or even that the items were simply not perceived as relevant for them. Further research led me to understand that the tests available at that time (2010), were gender biased and that new or adapted measures were needed to assess anorexic symptomatology in men. My master's research took a slight departure from this topic and moved on to look at the ways men felt about their bodies, and the relationship between their gender identities, sexual orientations, and their bodies. The project was called "Male Ballet Dancers' Gender Identity Constructions: Sexuality and Body" (Reeves, 2012) and it gave me insights into the social constructionist perspective and the multiple understandings of gender identity that were possible, and how gender was linked to the body. In this way, both of these studies contributed to my interest in this research topic.

Developing my research skills for this project has been challenging but I am grateful to have gained a deeper understanding of a wider variety of techniques and theories for conducting investigations. I did not do a psychometrics course as part of my prior learning and so all of my knowledge concerning test development has been self-taught and supported by the expertise of my supervisor. Further, I had not learnt about the different types of literature reviews in the course of my studies and thus I had to teach myself the procedures and the techniques for conducting an integrative review through a close reading of the texts on the subject. I also was not familiar with the design terminology present in mixed methods research and so I had to familiarise myself with these by engaging with the available literature. I also had to scale down my initial project from a pilot study to merely developing and reviewing the items due to time constraints around my length of enrolment, as well as part-time, and subsequently full-time, work. This is why my study's initial participant information sheets and consent forms make reference to a pilot study (see Appendices A, B, C, and G). Nonetheless, despite being a novice mixed methods researcher and item developer at the beginning of this study, I believe that I have demonstrated a sufficient level of understanding where these topics were concerned to have made a valuable contribution to psychological knowledge and practice concerning AN in men. I also believe that my lack of experience with certain elements of this research meant that I made careful and thoughtful choices in my execution of this project, that a more seasoned researcher may not have taken the time to reflect on, thus giving my readers more insight into the thinking behind the project.

The last point on which I would like to reflect is how my identity has impacted on my choice of topic and limited the scope of my research. I am a cis-gendered, heterosexual, white female from South Africa who grew up in an Urban, Westernised cultural environment. This meant that my experiences of the world would be decidedly different to those of the men whose experiences I was trying to understand. Further, while I can speak two languages, namely Afrikaans and English, I only feel proficient in the latter. Thus, my limited experience of and exposure to other cultures means that my questions and the items I developed were guided by this positioning. Consequently, I was limited in the kinds of knowledge I could access, and I was not able to explore other ways of constructing and understanding AN in different. Thus, more research will need to be conducted into the experiences of men from different cultures and how well the concepts found in my study speak to their experiences. I am also a registered research psychologist and not a clinical psychologist or psychiatrist. Consequently, while I am familiar with the psychological terminology and theory around AN, I am not privy to the subtleties to be found in the therapeutic space. In addition, my role as a research psychologist meant that I chose to focus on the constructions of AN in men that were related to the field of psychology, and not necessarily the medical or biological fields. Nonetheless, my participants were kind enough to share their experiences and these insights were invaluable to

my study, and to assisting me in making practical and theoretical contributions to the field of eating disorders.

Ethical Considerations

Prior to the commencement of the study ethical clearance from the University of the Witwatersrand's Human Research Ethics Committee (Medical) was obtained[2]. There were many ethical considerations which were pertinent to this study, particularly for phases two and three where human participants were involved. In phase two, special care was taken so as to not violate the confidentiality between the researcher and the healthcare professionals by ensuring the secure storage of the data and that the participants' identities were kept secret in the reporting of the study's findings. The ethical considerations for each phase of the study are further discussed in chapters 5 to 7.

Conclusion

Therefore, this chapter shows how the parts of this project fit together to satisfy the primary goal of the study. A mixed methods design was chosen as it supported instrument fidelity and afforded a framework that the researcher could use to integrate the qualitative and quantitative phases of the study to achieve the valid development of test items. Further, the complimentary strength of combining the post-positivist and social constructionist paradigms was argued for in order to achieve a deeper understanding of anorexic symptoms in men, and to reach a more sensitive understanding of how items for a screening test for men should be constructed to avoid gender bias. The aims of the study were captured in the overarching questions pertaining to each phase of the study. The integrative review and the interviews provided an understanding of how AN in men has been constructed and what symptoms are reported, as well as how the expression of these may differ from those seen in women. The findings of phases one and two were used in combination to develop items for the screening tool. The methods sections of the chapters for each phase that follow give a more detailed account of how each one answers the relevant research questions. The methods specific to each phase are therefore be elaborated on in chapters 5 to 7.

[2] See Appendix I and Appendix J

Chapter 5: Phase One - Integrative Literature Review

Introduction

"The general classification of 'literature review' has three varieties: narrative review, qualitative systematic review, and quantitative systematic review" (Green, Johnson & Adams, 2006), p.102). The aim of a literature review is to impartially summarise and report on the present state of knowledge regarding a particular subject (Green, Johnson & Adams, 2006). As a design, a literature review seeks to provide new insight and inference based on cumulative knowledge (Green, Johnson & Adams, 2006). One of the main strengths of a literature review is that is allows clinicians to read one article in order to find a comprehensive answer to a clinical problem, rather than needing to read the whole of the literature on a topic (Green, Johnson & Adams, 2006). In addition, literature reviews may be used to inform future research and develop health care policies.

An integrative literature review is a special type of qualitative systematic literature review. This is because the definitions given about a qualitative systematic review and those of an integrative literature review are mostly the same. Like an integrative review, a qualitative systematic review involves a comprehensive search of the literature, following standardised and structured methods that are openly communicated (Green, Johnson & Adams, 2006). Further both reviews centre on a key question or purpose that is to be addressed and this focus determines clear inclusion and exclusion criteria for studies to be included in the reviews (Green, Johnson & Adams, 2006). Both a systematic qualitative review and an integrative review seek to find common themes reported in the literature rather than combine statistics from multiple studies (Green, Johnson & Adams, 2006). However, as Whittemore and Knafl (2005) state, an integrative review differs from a qualitative systematic review (and other types of reviews) in that it will consider data from diverse types of studies rather than one modality (that is, combining findings from quantitative, qualitative and mixed methods papers). The integrative review style in this dissertation incorporates elements of the thematic synthesis wherein data were inductively categorised into themes through constant comparison and then further analysed into conceptual categories that summarise the trends in the data, allowing for a critical review and discussion of the findings.

There are increasingly more types of literature reviews to choose from that synthesise the content of qualitative studies, which can lead to a lack of clarity over terms and what the similarities and differences are between approaches (Barnett-Page & Thomas, 2009). Nevertheless, one's method must be chosen on the basis of one's intended purpose (Barnett-Page & Thomas, 2009). The integrative literature review was considered the most appropriate means to investigate which symptoms are most commonly reported in both qualitative, quantitative and mixed-method studies as those which are shared and those which differ amongst men and women. This style of review was conceptualised for the sole purpose of stimulating growth and development of current theory by not only summarizing current data but analysing and critiquing it before recommending a new way forward (Torracco, 2005; Whittmore & Knafl, 2005).

Design and Methodology

While there are some commonalities shared between literature reviews, integrative reviews and meta-analyses, they are not the same things. A narrative-style literature review is usually very limited in scope, wherein articles are selected haphazardly by a researcher in order to provide the

basis for his or her ideas (Beyea & Nicoll, 1998). On the other hand, an integrative review synthesises and evaluates information from all studies that are relevant to a particular research question, using strict criteria and scientifically replicable procedures (Beyea & Nicoll, 1998). Furthermore, the possible biases that may result from personal biases in the research-driven search for articles are minimised through transparency in the selection and analysis of the studies reviewed (Beyea & Nicoll, 1998). A meta – analysis, is arguably more objective since it involves the application of secondary statistical analyses on the findings of selected studies (Barnett-Page & Thomas, 2009; Beyea & Nicoll, 1998). Ultimately, however, not all subjects under investigation are amenable to meta-analysis because they lack adequate sample sizes or there simply are too few quantitative studies on the given topic and an integrative review provides a better alternative (Beyea & Nicoll, 1998).

Sample

In phase one, specific articles were purposively chosen from selective databases that contained predetermined key words in their titles. The selection of sources for inclusion in the literature review was of paramount importance in determining the quality of the review. If the information included in the review was not representative of the current data available, then it would become redundant (Torraco, 2005; Whittmore & Knafl, 2005) since its purpose was to provide a clear account of all the necessary information available on the topic of AN in men. Setting clear inclusion and exclusion criteria for literature reviews is important for establishing the validity of the searches (Page et al., 2020). Greene, Adams & Johnson (2006) advise that at minimum, the search terms, databases and time period should be noted, in addition to the criteria for determining a study's inclusion and exclusion in the review. The most important criterion for evaluating the adequacy of the sample and methods sections for a review are whether another person could replicate the searches conducted (Greene, Adams & Johnson, 2006). In addition to setting clear inclusion and exclusion criteria, the research topic must be "interesting, well-defined and appropriately narrow" (Beyea & Nicoll (1998, p.877). This means that the topic should be an area where an integrative review would yield new insights, would be large enough to yield a sufficient number of articles on the topic to be informative but not so many that they are difficult to analyse. While the review must be comprehensive, "it is not reasonable to review every single paper that has even the most minute relation to the topic of study" (Green, Johnson & Adams, 2006, p.108). The search parameters and criteria need to be broad enough that all pertinent studies are reviewed but limited enough to help the researcher to target their work (Green, Johnson & Adams, 2006).

Inclusion and Exclusion Criteria

Study Characteristics

Only studies published between July 2000 and July 2013 were considered eligible for inclusion in this study. This period of time between the release of the DSM-IV-TR and the release of the new DSM 5, captured the latest developments in psychological theory and treatment at the start of this research. Only works published in journals were considered for inclusion in this study. These do include clinical writings, reviews, editorials and letters to the editor, as well as journal articles. This meant that while the sources in this review were limited to those published, there was room for a reasonably broad consideration of literature, as recommended by Beyea and Nicoll (1998). Peer-reviewed journal articles were considered to be reliable sources of information, because they serve to keep professionals informed about changes in their field. Peer-reviewed journal articles also incorporate

the most relevant and recent data on AN. Sources that were excluded from the review were any unpublished research including dissertations, abstracts and books. Articles that did not satisfy the criteria for methodological quality, as specified in the data analysis section, were also not considered. While it is acknowledged that other grey literature, such as theses and books, may contain information not captured by articles, these texts are unlikely to have had as great an impact on psychological theory or policy given that they are less widely accessible and are often published without formal review.

Studies were included regardless of design. This was possible since the research was seeking to summarise the symptoms reported in men suffering from AN, as was found across the literature rather than effect sizes. Studies which focused solely on medical or biological symptoms of AN were excluded since the instrument to be designed based on this review will be a self-report measure and so the symptoms discussed should only be those which are recognisable to participants themselves, in other words, psychological and behavioral characteristics. Only articles compiled in English were considered for review, given that the researcher was only able to communicate proficiently in English.

At least two electronic databases should be examined in order to provide an adequate amount of depth and breadth of research on a particular topic (Green, Johnson & Adams, 2006). The specific journal articles to be included in the literature review were sourced using the Google Scholar, PsychINFO and SABINET (specifically the SA e-publications) search engines. Google Scholar is a widely-used search engine as it “offers an easy-to-use, familiar interface and relevance ranking, making simple searching for a few good articles much easier” (Bramer, Giustini, Kramer & Anderson, 2013, p. 5). Nonetheless, Bramer et al. (2013) argue that it is difficult to replicate search results on Google Scholar and that Google Scholar lacks a controlled vocabulary. Thus, the reliability of the search engine is greatly reduced in comparison to searches on formal journal databases. Further, the results of singular searches that utilise Google Scholar or alternative databases independently, often do not produce results that encompass all of the available literature on selected topics. Therefore, Bramer et al. (2013) recommend that researchers performing any kind of systematic review use Google Scholar in conjunction with other databases to ensure greater coverage and precision of findings.

Articles were selected by searching for the following keywords: “anorexia nervosa in a man”, “anorexia nervosa in men,” “anorexia nervosa in a male”, “anorexia nervosa in males”, “man with anorexia nervosa”, “men with anorexia nervosa”, “male with anorexia nervosa", "males with anorexia nervosa”, “anorectic man”, “anorectic men”, “anorectic male”, “anorectic males”, “anorexic man”, “anorexic men”, “anorexic male”, “anorexic males”, “male anorexia nervosa”, “man diagnosed with anorexia nervosa”, “men diagnosed with anorexia nervosa”, “male diagnosed with anorexia nervosa”, “males diagnosed with anorexia nervosa”, “man suffering with anorexia nervosa”, “men suffering with anorexia nervosa”, “male suffering with anorexia nervosa”, and “males suffering with anorexia nervosa”. These key words were intended to capture articles whose content conformed to the aim of the integrative literature review in this study, which was to compile a comprehensive list of symptoms and thematic categories that captured the experiences of men who suffer from AN as reported in the literature, as well as to examine the main instruments used to assess these symptoms. Further, articles which did not include a sample of males who had been

diagnosed with AN or an article in which the symptoms of AN in men could not be differentiated from those of comparative groups were excluded.

Moreover, while no particular countries were excluded from investigation, it was noted that the majority of the literature stemmed from the United States of America and Australia. This may have been due to the fact that searches were conducted on Google Scholar, using the University of the Witwatersrand as a preference so that the researcher could access as many full text articles as were available to her. The researcher did, however, follow links to any related articles recommended by the search engine which conformed to the inclusion criteria. Further, since the study was to be conducted in South Africa, the researcher also sourced articles published online in SA epublications, off of the SABINET online database. All of the searches were restricted to the first 100 results, sorted by relevance. The researcher continued searching under the search terms given above, or synonyms thereof (what were the synonyms), until the data became redundant.

While SA e-publications was used as a database for the study, it should be acknowledged that none of the data included in the analysis came from this database. Further, the majority of the cited literature in this study stem from a Western perspective. Thus, "other cultural notions of self-starvation practices from non-western countries" have been largely excluded (Botha, 2010, p.4).

Below the population and outcomes of interest are discussed, in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines (Page *et al*., 2021) The guidelines stipulate that the population of interest, intervention and treatment outcomes should be clearly defined for a systematic review. The characteristics of the samples that were included or excluded are discussed below, with the applicable population in mind, in other words, cis-men with AN. Because no specific intervention was targeted for this study, but rather reported symptoms, no intervention was specified. This criterion is better suited to reviews of clinical trials or experimental studies, however, it is noted in the guidelines that a review does not necessarily need to include a review of a specific intervention. Lastly, the outcomes or things to be measured are noted below, which include the types of symptoms on which the review focused. Further, the breakdown of the search terms and the studies included or excluded are given in Tables 1 (below), 6 (see Appendix K), and 7 (see Appendix L). Table 1 shows the number of sources initially retrieved ad excluded due to duplication both within and across databases, as well as the final number of sources included. Table 6 shows the number of sources excluded from the search and the reasons why per database. Table 7 summarises the articles included in the review. A summary PRISMA flow diagram of the search process is also included in Figure 3 (see Appendix M).

Populations

Furthermore, since this research aimed to develop items for a screening instrument to measure AN in men the studies included in this analysis had to have a male anorexic sample. This criterion did not preclude studies which made additional use of female participants. The investigation was not limited to men who had been diagnosed with AN, it also included community samples. Sportsmen were not considered to be part of this study as they represent only a small percentage of the general population who possess distinguishing characteristics which are not generalisable. In addition, research samples were not limited by sexuality. The age of participants was restricted to those over

18 years of age, since this is the population for which the new test items were developed, that is adult cis men. The samples were not restricted to particular races or socio-economic statuses (SES), since the instrument aims to capture differences between men with AN and those without regardless of SES or ethnicity.

Table 1: Summary of frequencies for retrieved sources

Database Findings	Initial Retrieved		Replicated Within		Replicated Across		Retrieved for Review		Included in review	
Google Scholar	f	%	f	%	f	%	f	%	f	%
AN_in_a_man	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
AN_in_men	58	7.00	16	7.51	2	7.69	38	7.14	2	3.45
AN_in_a_male	16	1.93	1	0.47	1	3.85	12	2.26	2	3.45
AN_in_males	195	23.52	15	7.04	7	26.92	144	27.07	29	50.00
man_with_AN	51	6.15	9	4.23	1	3.85	40	7.52	1	1.72
men_with_AN	80	9.65	33	15.49	3	11.54	42	7.89	2	3.45
male_with_AN	25	3.02	6	2.82	1	3.85	18	3.38	0	0.00
males_with_AN	118	14.23	43	20.19	1	3.85	70	13.16	4	6.90
anorectic_man	2	0.24	0	0.00	0	0.00	2	0.38	0	0.00
anorectic_men	18	2.17	3	1.41	0	0.00	13	2.44	2	3.45
anorectic_male	6	0.72	0	0.00	3	11.54	3	0.56	0	0.00
anorectic_males	8	0.97	1	0.47	0	0.00	7	1.32	0	0.00
anorexic_man	12	1.45	2	0.94	0	0.00	8	1.50	2	3.45
anorexic_men	37	4.46	15	7.04	0	0.00	20	3.76	2	3.45
anorexic_male	15	1.81	2	0.94	0	0.00	13	2.44	0	0.00
anorexic_males	75	9.05	29	13.62	5	19.23	32	6.02	9	15.52
male_AN	98	11.82	32	15.02	2	7.69	61	11.47	3	5.17
man_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
men_diagnosed_with_AN	6	0.72	3	1.41	0	0.00	3	0.56	0	0.00
male_diagnosed_with_AN	3	0.36	0	0.00	0	0.00	3	0.56	0	0.00
males_diagnosed_with_AN	6	0.72	3	1.41	0	0.00	3	0.56	0	0.00
man_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
men_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
male_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
males_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total [a]	829	35.40	213	14.58	26	96.30	532	69.36	58	66.67
Database Findings	Initial Retrieved		Replicated Within		Replicated Across		Retrieved for Review		Included in review	
PsychINFO	f	%	f	%	f	%	f	%	f	%
AN_in_a_man	27	9.06	7	3.07	0	0.00	13	30.23	7	26.92
AN_in_men	22	7.38	22	9.65	0	0.00	0	0.00	0	0.00
AN_in_a_male	44	14.77	1	0.44	1	100.00	26	60.47	16	61.54
AN_in_males	34	11.41	34	14.91	0	0.00	0	0.00	0	0.00
man_with_AN	22	7.38	22	9.65	0	0.00	0	0.00	0	0.00
men_with_AN	22	7.38	22	9.65	0	0.00	0	0.00	0	0.00

male_with_AN	34	11.41	34	14.91	0	0.00	0	0.00	0	0.00
males_with_AN	34	11.41	34	14.91	0	0.00	0	0.00	0	0.00
anorectic_man	2	0.67	1	0.44	0	0.00	0	0.00	1	3.85
anorectic_men	2	0.67	2	0.88	0	0.00	0	0.00	0	0.00
anorectic_male	3	1.01	3	1.32	0	0.00	0	0.00	0	0.00
anorectic_males	3	1.01	3	1.32	0	0.00	0	0.00	0	0.00
anorexic_man	2	0.67	1	0.44	0	0.00	1	2.33	0	0.00
anorexic_men	2	0.67	2	0.88	0	0.00	0	0.00	0	0.00
anorexic_male	5	1.68	0	0.00	0	0.00	3	6.98	2	7.69
anorexic_males	5	1.68	5	2.19	0	0.00	0	0.00	0	0.00
male_AN	23	7.72	23	10.09	0	0.00	0	0.00	0	0.00
man_diagnosed_with_AN	1	0.34	1	0.44	0	0.00	0	0.00	0	0.00
men_diagnosed_with_AN	1	0.34	1	0.44	0	0.00	0	0.00	0	0.00
male_diagnosed_with_AN	4	1.34	4	1.75	0	0.00	0	0.00	0	0.00
males_diagnosed_with_AN	4	1.34	4	1.75	0	0.00	0	0.00	0	0.00
man_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
men_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
male_suffering_with_AN	1	0.34	1	0.44	0	0.00	0	0.00	0	0.00
males_suffering_with_AN	1	0.34	1	0.44	0	0.00	0	0.00	0	0.00
Total [a]	298	12.72	228	15.61	1	3.70	43	5.61	26	29.89

Database Findings	Initial Retrieved		Replicated Within		Replicated Across		Retrieved for Review		Included in review	
SAePublications	f	%	f	%	f	%	f	%	f	%
AN_in_a_man	44	3.62	30	2.94	0	0.00	14	7.29	0	0.00
AN_in_men	74	6.09	59	5.78	0	0.00	15	7.81	0	0.00
AN_in_a_male	81	6.67	81	7.94	0	0.00	0	0.00	0	0.00
AN_in_males	81	6.67	81	7.94	0	0.00	0	0.00	0	0.00
man_with_AN	44	3.62	44	4.31	0	0.00	0	0.00	0	0.00
men_with_AN	74	6.09	74	7.25	0	0.00	0	0.00	0	0.00
male_with_AN	81	6.67	81	7.94	0	0.00	0	0.00	0	0.00
males_with_AN	81	6.67	81	7.94	0	0.00	0	0.00	0	0.00
anorectic_man	14	1.15	9	0.88	0	0.00	5	2.60	0	0.00
anorectic_men	34	2.80	23	2.25	0	0.00	11	5.73	0	0.00
anorectic_male	45	3.70	1	0.10	0	0.00	43	22.40	1	33.33
anorectic_males	45	3.70	45	4.41	0	0.00	0	0.00	0	0.00
anorexic_man	23	1.89	16	1.57	0	0.00	7	3.65	0	0.00
anorexic_men	26	2.14	22	2.16	0	0.00	4	2.08	0	0.00
anorexic_male	36	2.96	16	1.57	0	0.00	20	10.42	0	0.00
anorexic_males	36	2.96	36	3.53	0	0.00	0	0.00	0	0.00
male_AN	81	6.67	6	0.59	0	0.00	73	38.02	2	66.67
man_diagnosed_with_AN	23	1.89	23	2.25	0	0.00	0	0.00	0	0.00
men_diagnosed_with_AN	36	2.96	36	3.53	0	0.00	0	0.00	0	0.00
male_diagnosed_with_AN	43	3.54	43	4.22	0	0.00	0	0.00	0	0.00
males_diagnosed_with_AN	43	3.54	43	4.22	0	0.00	0	0.00	0	0.00
man_suffering_with_AN	33	2.72	33	3.24	0	0.00	0	0.00	0	0.00

men_suffering_with_AN	43	3.54	43	4.22	0	0.00	0	0.00	0	0.00
male_suffering_with_AN	47	3.87	47	4.61	0	0.00	0	0.00	0	0.00
males_suffering_with_AN	47	3.87	47	4.61	0	0.00	0	0.00	0	0.00
Total [a]	1215	51.88	1020	69.82	0	0.00	192	25.03	3	3.45
Grand Total[b]	2342	100.00	1461	62.38	27	1.15	767	32.75	87	3.71

a – the percentages shown in this row denote the percentage for each database column total of the column grand total

b – the percentages shown in this row are the percentages for each column grand total of the initially retrieved grand total

Using the search terms listed under database findings in column one of Table 1 on the previous page, it can be seen that an initial grand total of 2 342 sources were retrieved from the three databases. Of this grand total 1 215 (51.88%) of the sources were retrieved from SA ePublications, 298 (12.72%) sources were retrieved from PsychINFO, and 829 (35.40%) were retrieved from Google Scholar. The retrieved sources were reviewed for duplications within each database, as well as across all databases. This evaluation resulted in 1 461 (62.38%) of the sources being removed due to duplication within databases, and 27 (1.15%) of the sources initially found being removed for repetition across databases, as is shown in Table 1. This resulted in 767 (32.75%) of the sources being retrieved for review of their format, date of publication, focus (as discerned by their titles, abstracts and findings), samples, and reporting of findings. Of the sources retrieved for review, only 87 were retained. Therefore, as can be discerned from Table 1, 3.71% of the articles initially listed in the search results from the three selected databases were retained for thematic content analysis.

It should be noted that Google Scholar had fewer duplicates across search terms with only 25.69% of the sources being repeated within the database findings, as seen in Table 1. This is in contrast to SA ePublications and PsychINFO where 83.95% and 76.51% of the sources were respectively found to be duplicated within these databases. Appendix J further demonstrates the relative performance of the databases included in the study. As appendix J elucidates, the majority of sources (93.33% of 15) which were only abstracts were found via SA ePublications, as these were mostly abstracts for conference paper presentations. Based on these findings it is possible to conjecture that author's from Africa are having difficulty in getting their work published and may find it easier to disseminate their research findings at conferences. Further, as can be seen in Appendix J, SA ePublications had the highest number of sources (63.77% of 207) that were about topics other than AN in men, but rather mentioned anorexia in passing as being potentially related to the actual subject of the paper, with topics such as osteoporosis, heart conditions and lung infections, to name a few. On the other hand, SA ePublications was the only database to produce sources that were not excluded on the basis of being not peer-reviewed. In contrast, Appendix J demonstrates that the Google Scholar searches retrieved many sources that were not peer-reviewed, for example opinion pieces, magazine articles, letters and blogs. Google Scholar also retrieved all of the sources that were not journal articles but instead were books (121), and unpublished theses (68). Moreover, the 17 sources that were retrieved which fell outside of the specified timeline were found using Google Scholar. It is speculated that this may be due to the fact that dates concerning the acceptance of these publications by journals were read incorrectly as dates of publication by the search engine. The majority of the papers found (68.87% of 151) using Google Scholar were focused on the incorrect sample, namely adolescents, females only or community samples (i.e. men who had not formally been diagnosed with AN), as evidenced in Appendix J. This may have been because there were very few limits that could be applied to the searches in terms of samples for Google Scholar,

unlike for the other two databases that allowed the specification of populations to be searched for. Lastly, there is little to note from Appendix J on the part of PsychINFO, which was the most reliable database for retrieving sources that adhered to the inclusion criteria, except to say that by far the fewest number of sources retrieved came from this database (12.72% of 2342). Nonetheless, it should be conceded that the retention rate of the articles assessed from PsychINFO was 8.72% of the 298 retrieved, as can be viewed in Table 1. This rate was similar to that of Google Scholar (10.50% of 829) and far exceeded the retention of sources found using SA ePublications (0.25% of 1215).

Outcomes

The review focused on the findings of studies which discussed the symptoms experienced by men suffering from AN. The findings were considered appropriate for inclusion if they were the result of statistically appropriate and significant tests, or were reported by the participants of a qualitative study or were considered for inclusion in a review of the literature on male anorexic symptomatology. Therefore, only data from the findings sections of reports were included in this review and only if it met the evaluation criteria specific to each discipline (reliable and valid for quantitative and review studies).

Method

Phase one of this study utilised an integrative literature review of peer-reviewed journal articles to inform the development of the instrument. This study followed the complimentary procedures for conducting an integrative literature review outlined by Torraco (2005), Whittemore and Knafl (2005). An integrative literature review is “a form of research that reviews, critiques, and synthesizes representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated” (Torraco, 2005, p.356). Two types of research topics are typically investigated by means of an integrative review, namely a mature topic or a new topic. Torraco (2005, p. 357) argues that an integrative literature review of a mature topic should be conducted when there is a “need for a review, critique, and the potential re-conceptualisation of the expanding and more diversified knowledge base of the topic as it continues to develop”. Since there has been a large amount of research done on the symptoms of AN it could be considered a mature topic, however, there has been a growing critique of the feminised construction of the disorder and the underwhelming amount of literature available on the experiences of men who are diagnosed with the disorder. Therefore, this study sought to review a mature topic in order to critically assess and to broaden the knowledge we have of AN, especially in terms of its presentation in men. Ultimately the purpose of this review was to ascertain the symptoms of AN that are most commonly experienced by men. More specifically the research was interested in symptoms which differ from those reportedly found in women, reported between July 2000 and 2013.

The integrative literature review is a unique method of obtaining data. This type of review is distinct from other means to synthesise literature on a particular topic, namely a meta-analysis, a systematic review and a meta-synthesis. A meta-analysis typically works with quantitative studies that follow similar research designs and hold complimentary hypotheses (Cowell, 2012). Typically, a statement may be made about relationships across many variables based on effect sizes (Whittemore & Knafl, 2005). A systematic review often includes a statistical analysis of effect size, however, studies may be discussed narratively or by using other descriptive statistical measures. The objective of a systematic review is to develop an answer to a clearly defined practical problem (Whittemore &

Knafl, 2005). A meta-synthesis (sometimes referred to as meta-ethnography) typically works with qualitative studies, in an effort to integrate the findings of individual projects into a more generalisable framework (Whittemore & Knafl, 2005). The meta-analysis, a systematic review and a meta-synthesis therefore traditionally only include data from primary studies conducted with similar methods (Cowell, 2012).

The integrative literature review method, unlike the systematic review, meta-analysis or meta-synthesis, can accommodate for the inclusion of studies that stem from diverse methodological traditions (namely, qualitative, quantitative and mixed-method studies), which allows for a more holistic understanding of a phenomenon (Whittemore & Knafl, 2005). The key objective of an integrative review is not to merely summarise and synthesise what is already known about a specific topic, but to move beyond current understandings by critiquing the data and pointing to contradictions which demand further attention, suggesting possible ways forward for future research and practice (Cooper, 1982; Whittemore & Knafl, 2005). The integrative review points to relationships that have not yet been examined; this is what distinguishes an integrative review from other literature reviews (Toracco, 2005). However, the strength of the integrative review, its ability to accommodate diverse types of research into its analysis, is also its weak point. When combining studies which use different methodologies it is difficult to ensure that the information being analysed is of a high quality. Therefore, the studies included in this review will be evaluated in accordance with each specific study's methodological assumptions, as recommended by Whittemore and Knafl (2005). Likewise, it is challenging to fully integrate the data that emerges from the primary sources since the different studies use different approaches for ensuring rigour (Whittemore & Knafl, 2005). Thus, in order to accommodate for the potential challenges involved when combining different methodologies it was necessary to ensure that the processes for selecting and analysing the sources were clearly indicated and that the researcher was completely transparent about the decision-making processes. Consequently, the researcher included details about the steps she followed and the choices she made when analysing the sampling and procedures sections for this report (Torraco, 2005; Whittemore & Knafl, 2005).

The techniques for conducting the search and reviewing the findings should be overtly disclosed to readers, so that replication of the study is possible and the validity of the study can be established (Green, Johnson, & Adams, 2008).

Procedure

Before the study began, permission to conduct this research was obtained from the Human Research Ethics Committee (Medical) at the University of the Witwatersrand (Protocol number M130752 and M180797; see Appendix I and Appendix J). The procedure for conducting the integrative literature review followed the guidelines established by Torraco (2005), as well as Whittmore and Knafl (2005). Cooper (1982, p.291) originally argued that "the integrative review as a research process containing five stages: (1) problem formulation; (2) data collection; (3) evaluation of data points; (4) data analysis and interpretation; and (5) presentation of results". Whittemore and Knafl (2005, p.549) suggest similar stages for the review: "problem identification, "literature search", data evaluation", "data analysis" and "presentation".

The problem identification stage requires the reviewer to specify the area of interest and the variables under consideration, in this case anorexic symptomatology in men (Whittmore & Knafl,

2005). Toracco (2005) argues that an integrative review should start with the identification of a broad topic in need of review. Further, he argues that the review should be structured around a particular theoretical perspective, in this case social constructionism. The literature search stage includes a carefully recorded process that involves the specification of search terms, databases, and inclusion and exclusion criteria, which may be considered a purposive sampling strategy (Whittmore & Knafl, 2005). Cooper (1982) suggests that the use of online computer-based data bases is the most efficient way of obtaining articles, and as such the researcher utilised Google Scholar and SA e-publications as online search engines to source articles for the review. The process for selecting the literature, as discussed under the sample section, and the analytic procedure, in this case thematic content analysis (as discussed under the analysis section), should be included (Toracco, 2005). The data evaluation stage requires the researcher to examine the articles retrieved and determine their appropriateness for inclusion in the study based on the research design and the quality of the data (Whittmore & Knafl, 2005).

The search terms should be based on the key ideas that the study aims to investigate (Green, Johnson, & Adams, 2008). It is important that the appropriate search terms are used to ensure pertinent information is included in the analysis. The search terms should be general enough to yield multiple search outcomes but sufficiently precise so as to ensure that the data included are relevant to the chosen topic (Green, Johnson, & Adams, 2008). On the other hand, the exclusion criteria should be carefully considered to ensure that the studies removed from the search results are not relevant to the topic. The clear specification of both the search terms and inclusion criteria may be used to evaluate the quality of the review (Green, Johnson, & Adams, 2008).

The data analysis stage involves a process of data reduction and comparison. Toracco (2005), as well as Whittmeore and Knafl (2005) suggest the use of qualitative analysis strategies. This study utilised thematic content analysis. Following the analysis of the data, the findings should be presented in such a way that the study is replicable. Since the ultimate objective of an integrative review is to drive future research, the discussion of the articles should point to areas for further development or make connections between concepts that have not yet been considered (Whittmore & Knafl, 2005). An outline of the ways in which the main themes and ideas were generated should be included. Toracco (2005, p.362) suggests that a critique of the literature may be achieved through a careful review of the main ideas and relationships around a particular issue, as well as by identifying “any deficiencies, omissions, inaccuracies, and other problematic aspects of the literature”. The process of synthesis may be driven by the research questions and must suggest areas for new developments.

The journal articles for inclusion in the integrative review were accessed using the sampling procedure outlined in the sample section above. Only the journal articles which met the sampling criteria for inclusion were considered for review. After the literature had been selected, the articles were classified according to the methods used in each study and time of publication. The specific content of the articles was coded into themes and then the data was captured in a table summarising each articles’ information. This display of data was then used to examine the patterns of themes and relationships between articles. Further, the frequency of the appearance of each theme that appeared under each category was also noted. These observations under each category were integrated in order to make conclusions about the topic under investigation, namely reported anorexic symptomatology in men between July 2000 and 2013. Records of all decision-making processes were kept in a journal and were included in the reflexivity section of this chapter. The

integrative review was used to inform the development of items for inclusion in the instrument to measure levels of anorexic symptomatology in men.

Data Analysis

Beyea and Nicoll (1998) recommend that data be organized in a systematic manner using a table that allows for a short summary of the information to be stored and easily evaluated. The critical analysis of not only the methodological components of the articles but also the content, is an essential part of the review. Further, and this fits with a social constructionist lens, when interpreting the data from the articles, the historical context must be taken into account so that the data can be interpreted correctly (Beyea & Nicoll, 1998). The literature search is deemed to be complete when the data are saturated, that is when sources are replicated across databases and a clear trend has emerged in the information reported across sources (Beyea & Nicoll, 1998). The review should not merely summarise the findings of the different sources but integrate information across pertinent thematic categories that all link to, and address, the given topic (Beyea & Nicoll, 1998).

Green, Johnson, and Adams (2008) recommend that researchers read all of the articles retrieved in the review before beginning the data analysis. However, with so many articles, this was not possible. Instead all abstracts were read and the articles were skimmed for evidence of exclusion criteria.

Phase one involved an integrative literature review (Torraco, 2005; Whittemore & Knafl, 2005) of journal articles on anorexic symptomatology amongst men. Once the data was collected, the quality of the sources was evaluated in accordance with each specific study's methodological assumptions. Thereby, a quantitative study was evaluated in terms of its internal and external validity (Denzin & Lincoln, 2005; Onwuegbuzie & Johnson, 2006). A qualitative study was examined in terms of its transferability, trustworthiness, credibility and confirmability (Denzin & Lincoln, 2005; Guba & Lincoln, 1985). For example, if a qualitative study did not have a use generally well-recognised methods, detailed description of the research participants and context or how the data were collected and analysed, did not have a reflection on previous research findings, an element of reflexivity or a critical reflection on the study's limitations then it was excluded (Shenton, 2004). If a study did not meet the relevant quality criteria, it was excluded from the research.

After the literature for inclusion in the review was selected and evaluated, the articles were classified according to the methods used in each study. This method of categorization afforded the researcher a means to manage the data sources in a logical and systematic fashion (Whittmore & Knafl, 2005). These categories were also further divided according to the time of their publication. It was important that the analysis of the articles entailed an examination of the subject area over time because particular understandings of the topic are dependent on their historical circumstances. This type of analysis is useful for examining "taken for granted knowledge" which can serve to develop a greater understanding of the concepts under investigation (Torraco, 2005, p. 362).

The specific content of the articles was coded into themes and then the data was captured in a table summarising the articles' authors, titles, years of publication, countries of origin, journals, methods and content themes. The specific method of thematic analysis followed the procedure as outlined by Braun and Clarke (2006). Further, the frequency of the appearance of the different themes under each category was noted. This display of data made it easier to compare information across categories so that the data could be synthesized into an overall conclusion about the pattern of

themes which emerged across the articles under review (Whittmore & Knafl, 2005). The process by means of which decisions were made to include certain content under each theme was carefully recorded, as was the decision to include or exclude certain types of data. This assisted the researcher in accounting for the limitations of the review process, which was an integrative part of the analysis (Torraco, 2005; Whittmore & Knafl, 2005).

Thomas and Harden (2008) call this style of analysis, wherein thematic analysis is applied to the review of articles to collate the findings of individual studies, a thematic synthesis. They note that "thematic synthesis has three stages: the coding of text 'line-by-line'; the development of 'descriptive themes'; and the generation of 'analytical themes'" (Thomas & Harden, 2008, p. 1). The first two stages are similar to a typical thematic analysis, yielding a set of "descriptive themes" that are derived from the data (ibid, p.8). These first steps are applied to individual articles, and a constant comparison technique is used when generating codes across studies. The third stage entails moving beyond mere descriptions of content to construct overarching "analytical themes" that are embedded in theory and address the guiding research questions for the review (ibid, p.8). In many ways, this technique borrows some aspects of a grounded theory approach to conducting a systematic review, since it is partly inductive, at least in so far as initial codes are generated, uses constant comparison techniques to generate themes that capture similar ideas across articles (Barnett-Page & Thomas, 2009).

The overall analysis was guided by social constructionism; therefore, the type of information that was included was also limited by the researcher's theoretical orientation. As recommended by Torraco (2005) a theory will serve to guide the researcher in examining the topic as it will give the analysis a specific focus. Therefore, the theory of social constructionism allowed the researcher to critique the available literature from a social constructionist perspective and assisted in highlighting the strengths, weaknesses and omissions present in the current understandings of AN symptoms experienced by men. As argued by Torracco (2005), a critical engagement with the themes uncovered in the data analysis is what will afford the development of new knowledge from a review of the already available literature on a mature topic, such as anorexic symptomatology. The conclusions drawn from the synthesis of the literature review must integrate the "existing ideas with new ideas to create a new formulation of the topic" (Torraco, 2005). Thus in accordance with the goal of an integrative literature review as stated by Torraco (2005), the objective of this analysis was to develop a comprehensive understanding of AN symptoms experienced by men that are reported in the literature that could be used to inform the development of a new instrument to assess them.

Reflexivity

The integrative literature review is a useful method for analyzing a large amount of data from various methodologies (Torraco 2005; Whittmore & Knafl, 2005), however, there are many problems with integrating data from divergent sources in that each source will have its own limitations in terms of its representivity and degree of legitimation (Onwuegbuzie & Johnson, 2006).Torraco (2005), Whittmore and Knafl (2005) therefore emphasise the importance of transparency regarding one's decisions to include or exclude particular sources in a literature review (including quality related exclusion criteria), as well as one's reasoning in constructing themes and categories which will be used to synthesize the multiple sources of data. Therefore, the researcher needed to remain reflexive throughout the review process and record in a journal, as well as the final report, all analytic decisions that were made.

The researcher began by searching for the following terms in google scholar and on SA epublications, anorexia nervosa in men" and "anorexia nervosa in males." The first ten pages of search results were considered. Initially the review yielded 22 studies which conformed to the initial selection criteria outlines under the sample section. Of these 22 studies, only eight have been included in the final review. The reasons for the exclusion of the remaining 14 studies are as follows:

- The studies included an examination of men with other eating disorders and it was not possible to distinguish the results which pertained only to those men who had AN from those suffering from other eating disorders.
- The studies discussed levels of anorexic symptomatology in men who were not formally diagnosed as anorexic, and thus may not have represented men who suffer from the disorder.
- The samples were highly specified, for example male athletes, which indicated that the studies' findings would not be applicable to other groups of men who suffer from AN
- The age of the sample was too young to be considered appropriate for a measure to assess levels of AN symptomatology in men, namely less than 16 years of age.

The remaining eight studies were categorised into the broad types of studies (review and non-experimental. The analysis of the studies was guided by the research question and thus was "research agenda" focused (Toracco, 2005, p. 362). Thus, the reviewer focused on determining what anorexic symptoms in men were commonly reported and how these differed from those in women. Therefore, the reviewer focused on the discussion and conclusion sections of the articles and moreover read for mentions of symptoms. The symptoms that emerged across the data sets were clustered into similar categories and then the actual themes were developed. For example, any mention of teasing or bullying as a risk for AN seemed to appear in conjunction with a history of obesity and so the two categories were merged. While teasing or bullying was mentioned in relation to homosexuality, this was considered to be as separate theme as the two ideas were not consistently mentioned in relation to one another across all articles. Further, the use of a social constructionist gaze, as a theoretical lens, enabled the researcher to critically examine the literature and suggest ways forward as advocated by Torracco (2005).

"The literature review needs to be exhaustive" (Beyea & Nicoll, 1998, p.879) is an intimidating statement for any researcher in the current research climate. The pressure to read everything written on the topic and include it in your analysis is overwhelming, especially when doing the research alone.

The literature review findings should be written up objectively in order to prioritise the meaning of the data and not the perspectives of the researcher (Green, Johnson, & Adams, 2008). This is why this section of the report has been written in the third person. The positionality of the researcher has been acknowledged and disclosed but there was no need for the researcher to insert herself into the findings of this section.

Ethical Considerations

The integrative literature review used data from secondary sources which were freely available on the internet and were open to public review. Therefore, the only ethical concern that needed to be addressed was related to the authenticity of the reported data. Therefore, the results of the

integrative literature review were supported by extracts from the data sources in order to ensure that the researcher's interpretations of the studies were as close as possible to those intended by the original author's (Fossey, Harvey, McDermott & Davidson, 2002).

Findings and Discussion

The integrative literature review yielded some interesting findings. Table 2 below summarises the findings of the integrative literature review. Only the article findings which pertained to symptomatology were included, in other words, findings which supported the claims made in support of this study (that is, that the prevalence of AN in men is often underreported, misdiagnosed and that little information exists) were included in the literature review of this thesis rather than in its analysis. The descriptive details of the articles included in the review are also summarized in the table. The 'Reference' contains the authors' details, the article title, the details of the journal in which the article was published and the page numbers upon which the article may be found. 'Country' stipulates the region in which the study took place. The 'Method' indicates whether the study was qualitative, quantitative or of mixed methods ad well as the method of data collection (for example: semi-structured interviews, self-report questionnaire or systematic review). 'Participants' describes the sample of the study. These demographic variables also helped to determine those sample characteristics which were also important for inclusion in the study, and for understanding the prevalence of the different symptoms. Lastly, 'Findings' stipulate which symptoms were reported in the article as being either statistically significant or commonly significant to participants in the research. Furthermore, differences that emerged between the different sub-types of AN were noted. Sampling of journal articles continued until the data became saturated and no new information emerged from further article searches.

The categories, and the frequencies with which they emerged across the data set are given and below, in Table 2.

Table 2: Summary of categories from Integrative Literature Review

Category	Frequency
History of Obesity and Bullying	11
Sports and Health	10
Excessive Exercise	18
Masculinity and Control	20
Sexuality	14
Family Dynamics	13
Body Ideals	29
Biological Symptoms	20
Co-morbidity	29

Based on the findings presented in Table 2, the most commonly reported factor that contributes to the development of AN in men is the presence of an unrealistic body ideal. This component is followed by a history of obesity and bullying, and the incidence of homosexuality or asexuality. Excessive exercise and the occurrence of other disorders is also prevalent in men suffering from AN. Excessive exercise, may be linked to the reported drive to be healthy and lose weight for the purpose of enhancing sports performances in men who suffer from AN. Men may report that they

are excercising for sport or to be healthier because these are socially accepted reasons for men to lose weight (Strother et al, 2012; Wooldridge & Lytle, 2012). The least commonly cited risk for developing AN was cited as the need to be masculine and have control over oneself and one's life, however this may be linked to the ideas of portraying ideal masculinity through the body (Crosscope-Happel et al., 2000; Freeman, 2005; Guegen, J. et al.,2012; Harvey & Robinson, 2003; Strother et al, 2012; Weltzin et al., 2005; Wooldridge & Lytle, 2012) and exerting independence after being brought up in an enmeshed familial environment (Crisp & Collaborators, 2006; Crosscope-Happel et al., 2000; Freeman, 2005; Harvey & Robinson, 2003; Wooldridge & Lytle, 2012). Table 7 describes each article that was included in the review, the type of article and the sample to which the article applies (See Appendix L). The articles are numbered in Table 7, and these numbers are used to show the articles that were found to link to each of the ideas under the themes discussed below by listing them in brackets after any other references that did not meet the inclusion criteria from the literature. The specific aspects of each of the categories that are in the table are discussed in accordance with the literature below.

History of Obesity and Bullying

A history of obesity is mentioned frequently across the literature as a factor that may make men more susceptible to developing AN (Guegen, J. et al., 2012; Strother et al., 2012; 1; 2; 6; 8; 10; 11; 16; 17; 20; 27; 35; 38; 42; 50). "AN in men typically begins when overweight teenagers perceive that they are fat" (Harvey & Robinson, 2003, p.300). The rationale for this is that while women often begin dieting in order to counteract *feelings of 'fatness'*, men diet because they have *actually been overweight* at an earlier point in their history (44; 50) [my emphasis]. Men tend to have a higher Body Mass Index prior to developing anorexic symptoms (Guegen, J. et al., 2012; 11; 44). Men who are overweight are often subjected to teasing, since they do not conform to a masculine body ideal (1; 2; 11; 12; 20). Men with AN are likely to have experienced ridicule from peers in regard to their physical appearance at a young age (11; 50). Interestingly, while homosexuality and childhood victimization are associated with an increased propensity to develop AN, men who are homosexual report a higher incidence of teasing and bullying because of their physical appearance as children (11). Men who were subjected to bullying as children may attempt to lose weight in an effort to become more masculine, in defense against potential victimization (Strother et al., 2012).

The bullying of men who appear to be overweight may be a way to subjugate men who do not conform to the masculine body ideal of a hard and muscular physique (Strother et al., 2012; 20). Softness, and obesity by association, are considered to be feminine qualities. Therefore, men who exhibit fatness are possibly subjugated because they are not conforming to the socially expected male appearance, and thus fall outside of the norm (Strother et al., 2012; 20). Bullying and teasing are common ways to "punish" those who step outside of the bounds of what is expected by society. This teasing and degradation may result in men overcompensating by attempting to ensure that they have 0% body fat, eliminating the possibility of being ostracized for this particular quality. This may be understood in the context of anorexic symptomatology whereby men exhibit a fear of fatness rather than a drive for thinness. While it may be that men who suffer from AN may not be driven by a desire to become thin, they also do not want to be associated with the femininity and softness that fat may bring (Forth, 2012; Trautner, Kwan & Savage, 2013). In this way, men lose weight in order to appear hard and masculine. This fear of fatness should be measured in such a way as to demonstrate an understanding that men, rather than desiring to be thin, desire not to be fat.

Sports and Health

Men are more likely than women to diet because they aim to achieve sports-related goals or to prevent sports-related injuries (1; 2; 11; 19; 21; 27; 29; 33; 35; 37; 50). Men also strive to lose weight in order to be able to compete in certain sports or in order to enhance their athletic abilities (Strother et al., 2012; 11). Men who suffer from AN reportedly exercise in order to prevent the possibility of developing medical ailments whereas women tend to use exercise primarily as a means to lose weight (Strother et al., 2012). Men who develop AN may also be more likely to engage in professional sports where it is advantageous to be more slender (1; 11; 33).

Unlike women who primarily exercise in order to lose weight, men reportedly also engage in exercise in order to improve their athletic performances (Strother et al., 2012; 11). Men also make reference to restricting certain foods from their diet in order to be healthier (50). While women may also diet for health reasons, men may be more willing to admit to limiting their consumption of food if they can use their health as reason for engaging in the behaviour. In today's society, we promote exercise and dieting for the purposes of becoming more healthy and fit. Because dieting in order to lose weight is commonly viewed as a female pursuit, men may more readily admit to engaging in food restriction and excessive exercise under the pretence of enhancing their sports career or health. Therefore, in order to obtain an accurate picture of men's engagement in activities such as excessive exercise and dieting, measures of AN in men need to account for the ways in which dieting and exercise are constructed in society so as not to illicit socially desirable response biases.

Excessive Exercise

Men who are unhappy with their appearance, in that they believe they are overweight or need to develop more muscle, are susceptible to the development of AN (20). In order to address such body image dissatisfaction, men commonly resort to "excessive exercise" (Weltzin et al, 2005, p.189). Excessive exercise is "an activity in which people report intense anxiety if they are unable to engage in the exercise daily" (Weltzin et al, 2005, p.189; 2). Men also often use excessive exercise as a means to control their weight, more commonly than females (1; 2; 5; 6; 10; 12; 13; 16; 17; 19; 21; 22; 25; 27; 29; 31; 32; 35; 50). Men use excessive exercise to burn off calories that have been consumed or to burn off calories they may have consumed if they do eat (Strother et al., 2012; 20). Men who engage in excessive exercise typically structure their day around their exercise regime, which inhibits other aspects of their professional and social functioning (20).

While men with eating disorders may engage in excessive exercise in order to combat their body dissatisfaction, the exercise may also increase as a consequence of starvation (20). Men engage in the same food restriction behaviours that women do (28). It is reported that increased activity is associated with diminished levels of caloric intake (20). In this way excessive exercise may become "addictive" for a man who suffers from AN, a phenomenon known as "Anorexia Athleticism" (Strother et al., 2012, p.349). Nonetheless this may be considered both a sign and symptom of AN, since it is both associated with the physiological consequences of AN, a diminished level of nutrition and weight loss, and it is a means to combat psychological dissatisfaction (20). Men may engage in excessive weightlifting in order to increase their muscle tone; however the views that men have of their bodies are often inaccurate reflections of their true size and stature (44). Engagement in weightlifting amongst men with eating disorders is often compulsive, hindering their social relationships and diminishing their productivity at work (44).

Furthermore, men use excessive exercise as a way to lose weight more so than women do because it is considered more socially acceptable for men (42; 44). Engaging in exercise is widely promoted amongst men and in the media, as a way for men to lose weight. Therefore, rather than engaging in laxative abuse or purging in order to lose weight, men are more likely to use exercise in conjunction with anabolic steroid and weight loss supplement use (Strother et al., 2012; 28; 44). Men may combine the use of steroids with exercise in order to increase muscle size, while at the same time reducing overall body fat (20). In this way the signs of an eating disorder may be different in men and women, given that women are not likely to be engaging in the use of steroids (44). Apart from over exercising, men are also more likely to engage in purging behaviours (1; 6; 16; 19; 22; 25; 29; 31; 35; 42). Women on the other hand are more prone to the use of laxatives than men are (Strother et al., 2012; 1; 12; 16; 18; 22; 28; 32; 42).

It is commonly cited in the literature that men who suffer from are more likely to revert to excessive exercise and the use of substances to control their weight than women (Darcy *et al.*, 2012; Murray *et al.*, 2012; Reas, Øveras & Øyvind, 2012; Strother *et al*., 2012; 2; 4; 6; 9; 10; 16; 18; 20; 25; 28; 29; 31; 33; 35; 42; 44; 50). As suggested above, this may be linked to the social construction of exercise and sport as being 'healthy' and 'masculine' pursuits. Further, the use of steroids and other substances may be associated with the desire to improve sports performances. Therefore, there appears to be a link between the use of excessive exercise, sports health and even the use of steroids (20; 44). Of course, the use of steroids is necessitated by the construction of the ideal body image which promotes not only a lean form but a toned one (Darcy *et al.*, 2012; Murray & Touyz, 2012; Reas, Øveras & Øyvind, 2012; Strother *et al.*, 2012; 11; 20; 50). Thus, any measure of anorexic symptomatology in men needs to account for the incidence of over exercise and the possible accompanying use of steroids.

Masculinity and Control

Men believe that diet and exercise will help them to feel more in control of their bodies and will result in respect from peers (50). Like women, men with AN are often perfectionists who attempt to counteract their low self-esteem with the appearance of control of their bodies (11; 50). Men with AN are often "success- and achievement- oriented" (Wooldridge & Lytle, 2012, p.373). Often men develop AN when they feel that although they are not in control of other aspects of their lives, such as their work or family dynamics, they can exert power over their bodies and thereby feel more masculine (1; 2; 3; 6; 8; 11; 12; 13; 14; 16; 17; 19; 20; 25; 27; 29; 30; 31; 32; 34).

Men may resort to AN in order to gain control over their bodies (Bruch, 1982, Garner & Bemis, 1982; 11; 50). Masculinity and control are associated ideas. Men who appear to be in control of their bodies and their lives are admired by society, which stems from the historical construction of men as rational beings (Connell, 2002). When men do not feel that they are able to assert their independence, especially within the family system, as is the case with an overly involved or punitive mother, they may assert their individuality by controlling their bodies (Bruch, 1982, Garner & Bemis, 1982; 11; 28; 42; 50). Therefore, the idea of control may be linked with the family dynamics and a strong need to gain independence, as well as encompassing a masculine role.

Sexuality

There is a higher reported incidence of homosexuality and gender identity confusion in men with AN (1; 2; 11; 12 16; 17; 19; 20 25; 29; 31; 32; 33; 34; 50). It has been suggested that homosexual men may be more likely to develop an eating disorder because of an increased level of femininity (Strother et al., 2012; 20; 44). Previous studies have reported that persons who were more feminine were more prone to develop psychological disorders (Strother et al., 2012; 44). Nonetheless, this may be due to the fact that mental illness has historically been feminised, especially eating disorders, and so practitioners may be more willing to acknowledge the presence of anorexic symptoms in men who are perceived as more feminine (3). It is important to note, however, that homosexual and heterosexual men have been found to exhibit similar levels of femininity (1; 19; 35; 44).

Harvey and Robinson (2003, p.298) suggest that another possible reason for AN to be more common in homosexual men is because of the objectification of the homosexual male body within the "gay male subculture". The framing of the male homosexual body as a sex object mirrors the same objectification that researchers have found women experience (Strother et al., 2012; 11; 44). Both the homosexual body and the female body are argued to have been reduced to being a means to attract a male mate, feminising the male homosexual body by association. The need for their bodies to be socially desirable may place homosexual men under pressure to conform to body ideals, increasing the likelihood of that they will be dissatisfied with their bodies (44). This may explain why both homosexual men and heterosexual women share a higher level of preoccupation with their appearances (44). Nonetheless, this supposition is contested by the fact that research has found no differences between body ideals and levels of engagement in body enhancing behaviours between heterosexual and homosexual men (44). Therefore, higher prevalence rates of AN in homosexual men, as reported in the literature, may be due to biases present in the field regarding the feminisation of AN (42). Thus, being homosexual is not a prerequisite for developing AN, although homosexual males may be more vulnerable to developing AN (Strother et al., 2012; 1; 2; 11; 16; 17; 25; 29; 31; 32; 33; 34).

Men who suffer with AN often report an asexual orientation (11; 42) or a lack of any romantic relationships (Guegen, J. et al., 2012). This asexuality may or may not be a precipitating factor in the development of AN. Men experience decreased levels of testosterone as a consequence of AN, which in turn may diminish their sexual desire (Strother et al., 2012; 42). Men who experience internal conflict regarding their sexual identities may revert to starvation as a means to suppress an erotic desire for the same sex (Strother et al., 2012; 28; 42). This need to suppress sexual feelings may be due to underlying gender identity concerns (28). This means that adolescence is a particularly vulnerable time for the development of AN, given the increased levels of hormones that develop during puberty (42).

There is no agreement in the literature regarding the prevalence of AN in homosexual men. This inconsistency means that one cannot assume that simply because a man is homosexual, that he is at risk for developing AN or is more likely to have AN (Strother et al., 2012; 20). The increased incidence of AN in homosexual men may be due to social factors rather than inherent qualities, that is practitioners are more likely to recognise a stereotypically female disorder such as AN in men who are more feminised (Strother et al., 2012; 42). It may be that homosexual men are more feminine and that this personality trait makes them more vulnerable to the development of psychological disorders, but this association is not conclusive as the links between femininity, homosexuality and

mental illness have been examined without due consideration for extraneous factors such as practitioner biases and social stereotyping, furthermore this supposition is not uncontested in the literature (Bem, 1974; Bem, 1981; Long, 1989; May & Spangenberg, 1997; Schneider, 2005; 42). Therefore, while due consideration for sexual orientation and sex role should be given when assessing the risk for developing AN in men, it should not be a decisive factor.

Family Dynamics

Men with AN are more likely than other males to have close-knit relationships with their mothers (50), who are often over-protective (11; 28). Enmeshed relationships with their mothers may drive men to assert their independence and agency by controlling their bodies (11; 14; 17; 32; 42). Because young men who have controlling mothers may not feel able to assert their autonomy from their mothers, they will attempt to gain control over their lives through their bodies, by controlling what they eat and their appearance (11; 17; 42). There is a tendency for the parental dynamics to be conflict avoidant despite reportedly poor relationships (28). This may be why AN is more likely to develop during adolescence when men begin to establish independent identities (28; 11; 18; 19; 32; 34; 42). Nonetheless, men with AN often have a poor quality of life, exhibiting poor relationships with their friends and family members (1; 8; 11; 14; 28; 44). The fathers of men who suffer from AN are significantly more likely to be obese than fathers of female sufferers (28). There is also a trend for there to be a family history of eating disturbances, particularly of AN in the mothers of men who have been diagnose with AN (28).

The literature suggests that men may develop AN as a function of discordant family environment (Fisher, Hetrick & Rushford, 2010). Specifically, the articles included in the review cite the fact that men may wish to break away from an enmeshed relationship with their mothers by taking control over their bodies. This points to adolescence as being a crucial time for the onset of AN, as this is typically is a period in a persons' life where he would begin to strive for an individual identity. Therefore, men who suffer from AN later in life may still be combating enmeshed relationships with their mothers or may be developmentally stagnated. Further, men who suffer from AN not only experience troubling family relationships but also experience dysfunction in other personal relationships, which is a function of mental disorder itself as stated in the DSM 5 (28; 44). Thus, instruments that assess the occurrence of anorexic symptoms in men, should account for possible dysfunctional family dynamics, as well as social dysfunction.

Body Ideals

The ideal body for men purported in the media is that of a meso-morphic body shape, both slim and toned (11; 18; 19; 20; 50). While thinness was previously associated with diagnoses of HIV/AIDS, given the tendency for individuals who suffer from these illnesses to lose large amounts of weight, more recently society has begun to idealise and lust after the slim V-shaped body which has diminished this pathologisation of thinness (44). Men feel pressured to conform to this body image ideal, for social approval, especially when they have body image disturbances (Strother et al., 2012; 50). Because of the underlying drive for thinness, like women who suffer from AN, men see their bodies in distorted ways (42). Often men will inaccurately assess their size and shape (28; 42). Many different factors contribute to this need to conform, including media influences and cultural expectations (1; 11; 13; 18; 20; 28; 44). "Unlike women whose preferred body image is thinness, men's preferred body image is muscular" (Weltzin et al, 2005, p.188). While men are as worried

about body image as women are, they feel a different pressure to be both lean and muscular, whereas women are simply expected to be trim (2; 6; 11; 15; 16; 20; 29; 34).

Discrepancies between the muscular images men see in the media and their own bodies, may lead men to feel dissatisfied with their own appearances and consequently men may take action to achieve these often unrealistic ideals (Strother et al., 2012; 44). In order to achieve their ideal body, men may take part in activities to diminish their weight (42), such as self-starvation and over exercising. Men will often use these methods to trim down on fat, while abusing steroids in order to achieve the muscular but slim body ideal (Strother et al., 2012).

Muscularity is associated with masculinity, and thus men believe that by developing muscle, they will be seen as more of a man and thus will gain confidence and be more attractive (20). It must be remembered, however, that while men who suffer from anorexia are reported to desire the same level of muscularity as other men, they appear to have distorted views of their levels of fatness, in that these men "[perceive] themselves as almost twice as fat as they really [are]" (Weltzin et al, 2005, p.189). Freeman (2005, p.60) reported that "both males and females with eating disorders desire a body weight that is 75% below their ideal [healthy weight]" (42), although men report being satisfied with a slightly higher body mass index (BMI) than women (Guegen, J. et al., 2012; 28).

While women appear to be more concerned with the appearance of specific regions of their bodies, men are more likely to be concerned with general appearances like their overall height and muscle tone (44). Furthermore, where men are concerned with specific areas of their bodies, these are more likely to be the stomach, chest and arms, rather than the buttocks, hips and thighs, as is of concern in females (Strother et al., 2012; 42). It is important to note however, that men may be reluctant to admit to being concerned over their body image as concern over your weight and shape is stigmatized as being a female preoccupation (Strother et al., 2012).

Men are being placed under increasing pressure by the media to achieve a meso-morphic body ideal (11; 20; 44; 50). This means that men who suffer from AN are likely to focus their body dissatisfaction on their arms, chest and abdominal muscles, rather than their bums, hips and thighs as women do (28; 42). In fact the drive for thinness as well as muscularity in men means that they are likely to be more accepting of a higher BMI than women (Guegen, J. et al., 2012; 2; 8; 28; 32; 34; 35). This means that men presenting with AN may not have as low a BMI as women who suffer from the same disorder do, but they will still exhibit an inherent fear of gaining weight. Further, the need to be slim as well as trim means that men who suffer from AN are more likely than women to use anabolic steroids in order to compensate for a decrease in testosterone, which leads to a diminished muscle tone (Strother et al., 2012;). Therefore, measures of anorexic symptomatology in men need to be aware of the influence of the social body ideal on the ways in which they express their body satisfaction. Self-report instruments should ask questions around the upper body and the competing desires in men to both lose weight but maintain muscle.

Biological symptoms

For females, a clear indicator for the diagnosis of AN is the cessation of menstrual periods. Amenorrhea was previously listed as a necessary criterion for the diagnosis of AN, however the absence of this symptom in men meant that many of those suffering from AN went undiagnosed. While the DSM 5 has removed amenorrhea as a necessary indication of AN, it does not provide

alternative biological indicators for the presence of AN in men, as in the case of the ICD-10 (World Health Organisation, 1999). Data has shown that men and women experience different biological symptoms as a result of self-starvation (20). In men there is no clear cut biological disturbance included in the DSM diagnostic criteria, however there is a commonly reported decline in testosterone levels (Strother et al., 2012; 1; 11; 13; 17; 18; 20; 21; 32; 33; 35; 42; 50), often accompanied by a decreased desire to engage in sexual intercourse (Strother et al., 2012; 1; 8; 11; 13; 17; 18; 19; 28; 31; 33; 35; 42; 50). Counter intuitively, while men may desire a more muscular appearance, the decrease in testosterone may result in muscle atrophy (20). It is important to note that men may not be aware that self-starvation can result in diminished muscle tone, and thus they may not see the apparent mismatch between the actions they take to achieve their body ideal (that is diminished calorie intake) and their ultimate goal of achieving a toned body (20).

The ICD-10 (World Health Organisation, 1999) mentions that men who suffer from AN will experience decreased levels of testosterone, due to inadequate food intake. This is supported by the studies included in this review (Strother et al., 2012; 1; 11; 13; 17; 18; 20; 21; 32; 33; 35; 42; 50). A self-report instrument would need to consider a proxy measure for this decrease in testosterone, as men are unlikely to be aware of the levels of this hormone in their body. The literature indicates that a decreased sex drive is often a consequence of low levels of testosterone in men (Strother et al., 2012; 1; 8; 11; 13; 17; 18; 19; 28; 31; 33; 35; 42; 50). Therefore, men who report a diminished interest in intercourse or who report feelings of asexuality may be anorexic.

Co-morbidity

In general, there is a trend towards a higher prevalence of the co- occurrence of psychiatric diagnoses in men with eating disorders than other men (42; 44). Men with AN most commonly experience depression (Strother et al., 2012; 2; 4; 5; 6; 9; 12; 14; 16; 20; 21; 26; 29; 31; 33; 35; 42; 44; 50). Men who develop AN tend to be more prone to suffering from alcoholism and other substance abuse problems (such as the abuse of steroids) (2; 4; 6; 9; 10; 16; 18; 20; 25; 28; 29; 31; 33; 35; 42; 44), as well as other mental disorders like schizophrenia (20; 44). Further, anxiety disorders are common amongst men who over exercise (20) and those who suffer from AN (3; 4; 5; 6; 8; 9; 20; 22; 26; 33; 42). Obsessive and compulsive symptoms are also common amongst men with eating disorders, which may be evident in their drive to achieve the perfect body or regimental exercise regimes (2; 5; 6; 10; 20; 22; 42; 44).

Men with AN may suffer from a particular kind of body dysmorphia, typically referred to as muscle dysmorphia, whereby a person believes that they need to develop a greater bulk of muscle despite being very muscular (44). It may also be possible that the high intake of anabolic steroids amongst men with eating disorders (Strother et al., 2012), may also contribute to the occurrence of other psychotic symptomatology such as paranoia, a depressed mood and delusions (44). One important aspect of muscle dysmorphia is that the diagnostic criteria do not mention a focus on nutrition for those who suffer with this disorder (Strother et al., 2012). This is an important factor for determining if a man who is concerned with his muscle tone actually primarily suffers from AN.

Men with AN are also likely to suffer from personality disorders (4; 12; 25; 33; 42). It is also commonly reported that men with eating disorders also struggle with gender identity problems (44; 28). A history of sexual abuse is common among eating disordered patients (Strother et al., 2012). It has been speculated that men may turn to AN in order to suppress conflicting feelings after being

sexually abused by male perpetrators, especially if this trauma leads confusion regarding their sexual identity (Strother et al., 2012; 1; 2; 11; 27; 33).

Given the high incidence of co-morbidity amongst men who suffer from AN, it is not uncommon for men to be misdiagnosed. In young males, anorexia may be misdiagnosed as having psychogenic dysphasia or other endocrine disorders (44). Misdiagnoses may also be due to the effects of "starvation syndrome" (Freeman, 2005, p.62) which causes "anxiety, irritability, low mood, poor concentration, social withdrawal, sleep disturbances and a loss of sexual interest". The co-occurrence of symptoms commonly associated with other psychological illnesses which are actually a consequence of AN, may make it difficult to distinguish between AN and other co-morbid disorders. Freeman (2005) argues that AN can be distinguished from other disorders when the purpose behind the weight loss is to effect power over one's own body and assert independence through the use of food (42). What may make this differentiation difficult is the fact that men may seek to hide their illness out of a fear and shame due to the fact that AN is stereotyped as a feminine disorder (Strother et al., 2012;).

Men who suffer from AN have a high propensity for experiencing co-morbid disorders (16; 20; 25; 26; 33; 42; 44). These disorders include anxiety disorders (3; 4; 5; 6; 8; 9; 20; 22; 26; 33; 42), depressive disorders (Strother et al., 2012; 2; 4; 5; 6; 9; 12; 14; 16; 20; 21; 26; 29; 31; 33; 35; 42; 44; 50), substance abuse disorders (Strother et al., 2012; 2; 4; 6; 9; 10; 16; 18; 20; 25; 28; 29; 31; 33; 35; 42; 44), schizophrenia (20; 44), obsessive and compulsive disorders (2; 5; 6; 10; 20; 22; 42; 44) and gender identity disorders (Strother et al., 2012; 28; 44). The occurrence of these disorders in men may be due to the effects of malnourishment (Freeman, 2005), however it is difficult to determine whether these symptoms occur before the onset of AN. The obsessive and compulsive symptoms may be linked to the need for men who suffer from AN to assert a degree of control in lives, through their bodies. Gender identity disorders may be prevalent in men who use AN to suppress sexual interest due to the possibility of past sexual trauma and a denial of homosexual tendencies. The excessive use of steroids in order to combat the wasting effects of AN may make men who suffer from AN appear to be struggling with substance abuse disorders. Nonetheless the fact that these disorders often co-occur in men who suffer from AN, whether prior to or as a result of AN itself, means that any measure which aims to assess anorexic symptomatology may need to include a measure of some of the symptoms that are shared by these co-morbid disorders.

Conclusion

Ultimately this review has captured a snapshot of the state of the literature on AN in men, and has sought to inform the development of an instrument that may be used to assess and measure the symptoms of AN in men. AN in men is a developing topic, and while reviews have been conducted in the past, the state of knowledge in this field is constantly changing and being updated. A review of the literature on AN in men between July 2000 and 2013 has served to inform practitioners and researchers of more recent developments in the body of knowledge surrounding AN in men. This review has captured the information on AN in men from articles collected in men between the release of the DSM-IV-TR and the DSM 5, taken from Google Scholar and SA ePublications. The review has pointed to the key symptoms that men suffer from as including excessive exercise, body dissatisfaction, biological symptoms and a variety of co-morbid disorders. The literature under review has also pointed to the need to consider men's psychological histories, including past experiences with bullying, dysfunctional family dynamics, difficulties with sexual identities and a

need to be fit, masculine and healthy when determining if anorexic symptoms are present in a male. While many of the symptoms experienced by men who suffer from AN appear to be shared by women, such as a fear of fatness despite being severely underweight, men do appear to have higher rates of co-morbidity, different body ideals, experience different changes in hormones and have a need to assert their independence and masculinity.

Chapter 6: Phase Two – Interviews with Clinical Psychologists and Psychiatrists

Introduction

The interviews with the clinical psychologists and psychiatrists yielded information concerning the similarities and differences between the symptoms experienced by men and women who suffer from AN, as perceived by these healthcare professionals. The data also revealed the tools which are most commonly used by psychologists and psychiatrists for the purposes of diagnosing AN. The findings from the interviews with the clinical psychologists and psychiatrists will be combined with the findings from the integrative literature review to inform the development of items Chapter 7, that may be used to inform the creation of a self-report screening instrument to measure AN amongst men.

Sample

In phase two, professionals in the field of AN were invited to participate in an interview using a snowball sampling technique. More specifically, only those clinical psychologists and psychiatrists who with AN in Johannesburg, South Africa were approached to participate in this study. This was due to the location of the researcher at the time of the study and the accessibility of the participants. Fourteen practitioners were interviewed. The professionals were contacted through the researcher's contacts in psychology, through the database of the South African Depression and Anxiety Group (SADAG), and through their affiliated places of work. The director of SADAG was contacted and a request was made for access to the names and contact details for psychologists and psychiatrists who work with those who suffer from AN. The researcher then forwarded the aforementioned e-mail to relevant clinical psychologists and psychiatrists. The research departments at Tara Hospital and Crescent Clinic and were approached in order to gain permission to invite the clinical psychologists and psychiatrists under their employ to participate in an interview. A template of the research request form is included in Appendix G. Therefore, this research included interviews with clinical psychologists and psychiatrists who work in hospitals as well as in private practice. All practitioners were invited to participate via e-mail. The e-mail invited clinical psychologists and psychiatrists to participate in an interview with the researcher and included a participant information sheet (see Appendix A), and the researcher's contact details.

Each research participant was asked to provide the contact details for other clinical psychologists and psychiatrists working with men who suffer from AN, and who they believe would be interested in participating in this study. The interviews occurred at a time and place that was convenient to the participants. The questions that were asked of the clinical psychologists and psychiatrists are included in Appendix F. These questions broadly related to the experiences they have had of treating men who suffer from AN. The clinical psychologists and psychiatrists were also asked if they would be willing to give their professional opinions regarding the content validity of the instrument, once the items have been developed. Sampling continued to saturation, where no new information was elicited from the interviews with the professionals.

It should be noted that only 9 out of the 14 professionals interviewed had worked with men diagnosed with AN. This is an important limitation of the study, as it means that 5 participants had not directly worked with men who have AN. Nevertheless, their insights were still valuable because

they do work with EDs and had would still represent views held by other practitioners that work in the field concerning men with AN, especially concerning potential biases in regards to diagnosis. Further, at the time of the interviews, 9 participants had 4 years or less experience in the field. While this may not seem like a lot of experience, their training would have included very recent updates to the theoretical constructions of AN in men, meaning they had important insights to offer in this regard. A final constraint for the generalisability of this sample is that the participants were limited to Johannesburg, South Africa. This means the views reported here may be specific to this region and while ideas taken from the interviews may be transferable to similar contexts, this should be done in such a way as to acknowledge this limitation.

Table 3 below describes the participants who contributed to the findings of this study.

Table 3: Demographic details for participants

Participant No.	Gender	Age	Profession	Years in Practice	Diagnosed/treated AN in men
1	Female	27	Clinical Psych.	3	Yes
2	Male	27	Clinical Psych.	4	No
3	Male	27	Clinical Psych.	3	Yes
4	Female	28	Clinical Psych.	4	No
5	Female	26	Clinical Psych.	3	No
6	Female	34	Clinical Psych.	9	Yes
7	Female	42	Clinical Psych.	3	No
8	Female	28	Clinical Psych.	2	Yes
9	Female	57	Psychiatrist	24	Yes
10	Male	31	Clinical Psych.	4	Yes
11	Male	35	Psychiatrist	2	Yes
12	Female	48	Clinical Psych.	8	Yes
13	Female	33	Clinical Psych.	7	Yes
14	Female	43	Psychiatrist	12	No

Measures

The information collected from the integrative review of the literature was supplemented by semi-structured interviews conducted with professionals in the field of EDs. The interviews were guided by a list of twelve open-ended questions although the order of questions asked and the exact questions differed because the researcher followed the line of conversation and asked participants to elaborate on the points they raised (Potter & Hepburn, 2005). The specific interview schedule can be found in Appendix F. The questions asked of the clinical psychologists and psychiatrists assisted in assuring the content validity of the instrument. These interviews were guided by the proposed items for inclusion in the questionnaire and follow-up interviews included questions around the applicability and usefulness of each item in assessing anorexic symptomatology in men. The interviews took approximately one hour to complete. One of the key advantages of using semi-structured interviews is that information important to the individual participant can be accessed (Fylan, 2005). This style of interviewing allows for a deeper understanding of the research question,

from the perspective of the participants (Fylan, 2005). While semi-structured interviews typically have a basic schedule of a few important questions there is flexibility around which questions are asked of each participant because not every question is relevant to every participant, and at times questions may need to be re-phrased due to sensitivity, or answers to questions need to be explored in more detail where there may be contradictions or misunderstandings (Fylan, 2005). This less structured approach suits social constructionism as it allows the meaning-making process to be guided by the participant (Fylan, 2005).

Procedure

Phase two followed on from phase one. After ethical clearance for the study was obtained, as well as permission from the relevant persons (the director of SADAG and the research units at Tara Hospital and Crescent Clinic), clinical psychologists and psychiatrists who work with men who suffer from AN were invited to participate in the study. A semi-structured interview was conducted with those clinical psychologists and psychiatrists who voluntarily chose to participate, after being informed of their ethical rights (see Appendix A) and signing the informed consent sheet (see Appendix B). These interviews served to supplement the data from the integrative review of the literature. The interviews were therefore guided by a list of questions that focused on improving the content of the instrument items, although the order of questions asked and the exact questions differed from this schedule (Potter & Hepburn, 2005). The interview schedule can be found in Appendix F.

The interviews were audio recorded and participants were asked to give consent for their interviews to be taped on the informed consent sheet (see Appendix B) prior to the interview taking place. Interview recordings were transcribed using an "orthographic" technique which included "a verbatim account of all verbal (and sometimes nonverbal-e.g. coughs) utterances" (Braun & Clarke, 2006, p.88). The transcriptions of the interviews were then analysed using thematic content analysis. The final version of the test items were then designed utilizing a combination of the information gathered in phases one and two. The participants had access to the study's findings through the University of the Witwatersrand's online library database of doctoral dissertations or they could request for a summary of the research findings to be sent to them via e-mail.

Data Analysis

"Data were transcribed using an abbreviated version of the Jefferson notation (Atkinson & Heritage, 1984) to a level that included words, speech particles, and pauses (not timed) but omitted other features such as intonation and pace of speech. Punctuation marks were added to improve readability of the transcripts. Details of the transcription notation used are given in the appendix. Pseudonyms were substituted for participants' names to preserve confidentiality and anonymity" (McVittie, Cavers & Hepworth, 2005, p. 414).

All interview transcripts were subjected to thematic content analysis. The data analysis followed the six steps outlines by Braun and Clarke (2006). The analysis set out to organize the data in such a way that meaning could be extracted from it, in response to the given research questions. Using a social constructionist lens, the researcher sought to give voice to the views of the participants by selecting pieces of the data that served to address the research interests. Therefore, this study used a theoretical thematic analysis (Braun & Clarke, 2006, p. 84). Further, while the analysis was grounded in the data, the information extracted and the interpretations made moved beyond the obvious meanings of the data and aimed to examine the underlying, latent ideas and assumptions held by

the participants (Braun & Clarke, 2006). Further, the researcher examined the prevalence of the themes across the data set, in order to establish the frequency with which the ideas were discussed, as in content analysis. The thematic content analysis of the interviews conducted in phase two also spoke to the measure's content validity (Foxcroft, 2001; Wolfaardt, 2001).

Reflexivity

As noted by Potter and Hepburn (2005), the research interview inevitably involves an interaction between the interviewee and the interviewer (in this case the researcher). Further, the types of questions asked in an interview are dependent on the research interests of the interviewer. Therefore, the data that emerges from an interview needs to be understood within the context of that interview (Potter & Hepburn, 2005). Thus, the interviewer should be considered as a potential influence on all data obtained. Since the influence of the interviewer cannot be removed, the data needs to be understood in the context of the interview. Therefore, the role of the interviewer was considered in the analysis of the interview data.

Since the data analysis was driven by theory, namely social constructionism, the researcher's interpretation of the data was also guided by the study's research agenda. Therefore, rather than the themes 'emerging' from the data set, they were actively identified and selected by the researcher (Braun & Clarke, 2006). Thus, the researcher needed to be clear about the decision-making process as to what qualified and a theme. Further, the reported data was limited as it did not consider content that diverged from the interests of the current study.

Ethical Considerations

Participants were sent an information sheet (Appendix A) that summarised the purpose of the research and what would be required of them if they consented to take part in the research. The sheet informed them that they would have the right to withdraw from the study prior to the completion of their interviews or to decline from answering any questions that they were not comfortable responding to, without any negative consequences. Participants were informed that their interviews would be audio recorded and they were asked to sign a consent form for both their participation in the study, as well as for the researcher to tape their interviews (see Appendix B). Research participants were also informed that while the recordings of their interviews and the transcripts of the recordings would not be destroyed for five years after completion of the study, as they may be useful to future research. The interview data was stored in a secure locked cupboard at the University of the Witwatersrand.

The participant information sheet also informed the clinical psychologists and psychiatrists that although their names would be known by the researcher, no identifying information would be linked to their transcripts or be mentioned in the research report, future publications or presentations. The names of the organisations with which participants were affiliated were also excluded from the transcripts and research report. Pseudonyms were used in place of participants' real names in order to ensure confidentiality. Participants were also informed that they may be asked to participate in a follow-up interview in order to clarify any information that they shared in the initial interview. The content of the interviews was kept confidential and only the researcher and her supervisor had access to the audio recordings and interview transcripts. Once the study was complete, participants were given access to the results of the study in the form of a one-page summary of the research

findings which was sent to them via e-mail upon their request. They were also informed that they may access the full dissertation through the University of the Witwatersrand's online library.

Finally, it was important to note that the most likely ethical concern for the study, in relation to the participants in phase two, was the need for the clinical psychologists and psychiatrists to ensure that they do not disclose any information concerning their clients (National Health Act, 2004). In order to ensure that the confidentiality of the relationship between the healthcare professionals and their clients was not violated, the questions asked in the interviews pertained to their experiences with clients in general and at no point were the professionals asked to share their clients' identifying information with the researcher.

Findings and Discussion

Face-to-face interviews with clinical psychologists and psychiatrists yielded results that spoke to how these two categories of health professionals understand AN in men. Further, their views on the similarities and differences in symptom expression found in men and women were discovered.

The ways in which the participants constructed AN in men are discussed in relation to ten over-arching themes. These themes are presented below in Table 4 and are subsequently discussed.

Table 4: Over-arching Themes

Theme	Participants
1. Diagnostic Criteria	P1; P4; P5; P6; P7, P9; P10; P11; P12; P13; P14
2. Tools for Diagnosis	P1; P3; P4; P5; P6; P8; P9; P10; P11
3. Behaviours	P1; P4; P5, P9, P10
4. Cognitions	P2; P4; P5; P6; P12
5. Developmental Stages	P1; P3; P4; P7; P8, P9; P12
6. Familial Relationships	P3; P4; P5; P6, P9, P10
7. Co-morbid Disorders	P2; P3; P4; P6; P7, P10
8. Body Image	P1; P2; P7; P8, P9; P10
9. Sport and Exercise	P2; P3; P5; P6; P8
10. Stereotypes and Stigma	P2; P3; P4; P5; P6; P10

Theme 1: Diagnostic Criteria

The most important objective for both the clinical psychologists and psychiatrists was to ensure an accurate diagnosis so that their clients could receive appropriate treatments for their concerns. Below is an examination of the different subthemes around the diagnosis of AN, informed by the interview data collected from the participants, as well as the theory around the diagnosis of AN, discussed in Chapter 2. Most of the psychologists and psychiatrists based their understanding of AN on the DSM-IV-TR (American Psychiatric Association, 2000) and DSM 5 (American Psychiatric Association, 2013), more specifically the criterion around having a low body weight. There was some recognition that the DSM IV-TR does not incorporate a holistic diagnosis, wherein even if one of the key criteria are not met, the diagnosis should not made, such as if the client's Body Mass Index was not below 15% of that expected for their age and height (American Psychiatric Association, 2000).

Nevertheless, there was acknowledgement from the participants that the diagnostic criteria included in the DSM-IV-TR and DSM 5 were not all-encompassing and that, given the limited scope of the diagnostic criteria, it would be possible for clients to not receive the most appropriate diagnosis and therefore treatment for their disorder.

Participant 1's (P1) statements below show that while she largely based her diagnoses on the DSM, she had reservations about whether the criteria were sufficiently inclusive to allow for the correct diagnosis of AN in all cases. There was particular concern over whether all required criteria needed to be met, as stipulated by the DSM. Below is her response to a question about her understanding of AN:

> P1: "... to diagnose patient's anorexia, we almost, we kind of went with a DSM thing to really go through a kind of a checklist, um not really having to stick to the DSM but really like, acknowledging that it's not just a low body weight, that it's not just um the perception of being um fat or whatever but it really like a combination of it, so looking at um low BMI, looking at their perception, looking at their thought [sic] and behaviours around their perceptions, looking at their actual behaviour around eating, behaviour around dressing um [clicking of mouth] I'm trying to think of the others hhh, but ja, really looking quite holistically, um and being able to make sure that they, they actually fit quite a few criteria then, rather than just one criteria [sic]."
>
> …
>
> MR: "So when you say like not sticking to the DSM, you mean by, hh er-following it but still having room for…alternatives?"
>
> P1: Ja. Because I think sometimes the DSM really doesn't, um, I mean I've sat with a patient and clearly seen that they anorexic and clearly see that they have anorexic thinking, but then but then for maybe one criteria they won't fit the um the diagnosis for anorexia nervosa. Um and both like me and my colleagues will actually agree to give the diagnosis despite the fact that they haven't fit the full criteria. Some people can be quite strict so like our head psychiatrist who worked at the clin-at the ward, she-she really felt that if you didn't fit the full criteria you actually had to be given a diagnosis of eating disorder non [sis] otherwise specified. Um but then I've kind of felt that that patient would fall, in- into bit of like a loophole or into like a bit of a gap and, and you weren't able to treat them fully and let them understand fully what their, you know diagnosis or issues are by not being able to give them that full diagnosis, so I think sometimes the DSM works in terms of being able to guide you, hh but um, I don't think it's the b-end of, you know, being able to say that's what the patient has."

In response to the same question, Participant 12 (P12) had a similar perspective that the DSM did not quite capture all aspects of the disorder, and that more information needed to be considered, such as how the disorder related to a sense of self:

> P12: "Um, I mean clinically it, it's obviously the criteria around, I mean those are the stuff you can read in the DSM-IV, um underweight, um, um, n-, restricting, not eating, even if there is abundance of food. I, I think if you want to look more at how I understand it in terms

> of my experience working with it, um I, it it's attaining the sense of self-worth through body, body shape, size and, and weight. Um, and I think it's the inability to nurture oneself through, food."

It should be noted that despite the release of the DSM 5 in July 2013, before these interviews took place, the majority of participants still referred to criteria from the DSM-IV-TR in their responses. Participant 5 and Participant 14 even specifically listed the amenorrhea criterion from the DSM-IV-TR when discussing the diagnostic criteria for AN. Therefore, it seems that new diagnostic criteria take time to be learnt and internalised by practitioners, as well as included in their everyday thinking and practice. Below we can see Participant 14's (P14) explanation of how she understands AN:

> P14: "...And we, we look at anorexia nervosa, it's really in terms of, of, um, a pattern of, en-, enforced weight loss…because of distorted body image views. Um, and when, we look at the definition in terms of that, that weight loss in terms of diagnostic criteria um, one would be, be looking at a weight loss of, at least eight-, eighty percent, or baseline twenty percent loss of weight or more, from baseline um, together with a distorted body image, distorted views ah, a-, amenorrhea for at least 3 months. Um, and the kind of the, the, that [knock on door and sound of door creaking, recording paused]. In terms of the k-, the, the, kin- the, the sort of the way in terms of that, this forced weight loss is, is induced because of a distorted, ah body image that, the really obsession around, ah their view of being overweight is either through restricting, so not having any food intake at all, or binge/ vomit, or in terms of use of laxatives, appetite suppressants or ov-, over exercise. Um, and so ja, that's pretty much, but seeing it as a serious, ah disease, psychiatric disease. I think sometimes, I think in terms of the spectrum falling along the OCD spectrum..."

Over and above the acknowledged general shortcomings of the DSM criteria, Participant 6 (P6) went on to note how, although she believed that men could be diagnosed with AN, men may not necessarily meet the criteria set out in the DSM.

> P6: "Um, because, look men won't necessarily have the same um, criteria to be fulfilled like women um, but yes men are also body conscious and do have body image problem [sic] and body perception problem and actually sometimes have dysfunctional relationships with food so it is not uncommon or impossible for men to have anorexia nervosa as well."

P6 also noted that while a diagnosis should be guided by the DSM, there was a hesitancy to base this solely on the DSM criteria:

> P6: "Obviously we all guided by the DSM 5 now, um but I think the main thing that you need to assess with males is, I think, their attitude and relationship with food…is more than enough to, to give a diagnosis you know, especially if it's causing distress within themselves and especially if it's causing dysfunctional in their everyday life..."

Thus, from the interview data there is an understanding that the DSM criteria should be used to diagnose AN in men but that additional evidence would need to be consulted. There was an understanding that the DSM criteria did not fully capture the experiences of men with AN. The DSM does not specifically discuss male symptoms or symptom expression for AN (World Health Organisation, 1999). While the move away from the amenorrhea criterion in the DSM 5 does signal

an understanding that the DSM-IV-TR, and former editions of the DSM, had feminised AN, it does not address the possible differences in experiences for men and women with AN, nor the different biological impacts of the disorder, as in the ICD 11 (World Health Organisation, 1999). If the DSM is to continue to be the primary reference for diagnosis of AN, then it must account for gender differences. In the interim, it is argued that practitioners will need to make use of alternative tools to support accurate diagnoses of the disorder in men.

Theme 2: Tools for diagnosis

The diagnosis of AN is a multifaceted procedure, requiring many points of information. The practitioners interviewed often combined multiple tools and techniques in order to determine whether a client they were treating fit the diagnostic criteria for AN. There seemed to be a general consensus that no one technique should be used in isolation, since all methods will have some limitations. Most of the participants reported using their clinical judgements or clinical interviews to diagnose AN. Most of the participants also specifically mentioned reviewing a person's BMI to determine whether they met the criterion for a low body weight. Further, a number of participants stated that they did not use rating scales or self-report tools due to concerns about their perceived lack of reliability. When speaking specifically about decisions to diagnose AN in men, however, most of the psychologists and psychiatrists interviewed stated that the diagnosis would be based on the DSM, as well as, consensus, and clinical judgment.

Clinical interview

Quite a few participants mentioned using a clinical interview to diagnose a client with AN. It was not clear from participant responses whether this consisted of ad hoc questions guided by clinical experience, a composite form developed by the clinic or hospital where they worked, which considered the DSM criteria, or followed the Structured clinical interview for DSM-IV axis I disorders, clinician version (SCID; First *et al*., 1996). Derenne et al. (2010) note that it is considered best practice for eating disorder diagnoses to be made using a combination of a self-report screening tool, followed by a more comprehensive clinical interview. Interviews may follow the SCID (First *et al*., 1996) or the EDE (Fairburn & Cooper, 1993), which contain reliable and yet flexible clinician-led interview questions for determining diagnoses (Derenne et al., 2010). Nevertheless, these two measures are time-consuming to administer, require training for proper administration, and thus are not often used (Derenne et al., 2010). Therefore, it is more common for psychologists and psychiatrists to use an "unstructured diagnostic interview (UDI), in which clinical judgement is used to guide question-asking and interpretation of information" (Jensen-Doss & Hawley, 2011, p. 477). Unfortunately, the use of UDIs has been proven to be biased and unreliable (Jensen-Doss & Hawley, 2011, p. 477).

In response to a question about what tools are used to diagnose AN, Participant (P4) and Participant 11 (P11) spoke about interviewing clients but it was not clear whether these were linked to formal interview structures or not:

P4: "…the initial intake interview..."

P11: "By cl-, a structured clinical interview."

Participant 12 (P12) described using an interview with an accompanying form for diagnosis, which sounded similar to the SCID (First *et al*., 1996) but may have comprised of questions developed at the clinic where she worked:

> P12: "…we, we, we've got a um, ah, a, a list ag a form that we fill in with, with certain questions a-, around it…um, we tend to do it a bit, quite, I suppose informal…um, somebody comes in an-, and we kind of have a conversation around um, you know, what are they presenting and then we get a b, a little bit of collateral, because usually they will come with a parent, or a boyfriend, or someone…"

P12 added that the interview would not be used without consideration of other aspects, such as additional information from the partners, friends or family of the client.

Most diagnoses of eating disorders are informed by an interview evaluating "body shape and weight concerns, dietary patterns, and inappropriate compensatory behaviours to control weight", followed by a clinical history where "information about the onset of symptoms, precipitants to behaviours, treatment history and response, weight history (minimum, maximum, and desired weights), and co-morbid medical and psychiatric conditions" is collected (Derenne et al., 2010, p. 147). Lastly, this information is usually further supplemented by the assessment of a client's weight and height, as well as other medical tests. Therefore, the techniques these participants stated were used for diagnosis seemed to follow the types of practices typically used in the field of eating disorders. Further exploration of the actual questions asked of clients should be considered for future research.

Clinical Judgement

Clinical judgement is another tool often used in the process of diagnosing eating disorders. It is a broad concept, which includes the ability to make diagnoses, as well as to make decisions about treatment and prognosis, based on medical experience and informed reasoning (Chin-Yee & Upshur, 2018).

Participant (P1) felt confident basing diagnoses on her clinical judgement:

> P1: "…'Cause I think once you see, after you've seen so many patients and once you've sit in with people who have seen so many patients as well, with, you know, anorexia, we can, we can kind of sit together and say that they, they definitely do fit the diagnosis or they definitely don't."

In contrast, Participant 3 (P3) indicated that he had some concerns about the reliability and ethics of basing a diagnosis solely on a clinical judgement:

> P3: "…it was based on, on the patient's history um, and the way he portrayed himself in those few minutes that he was in the ward round…"
>
> …
>
> P3: "It was not based on the criteria, um, it was not based on anything we saw, it was based on a feel so yeah like you say, an intuitive approach um, so ja obviously for me that was very frustrating…"

Participant 10 (P10) noted that he would use the DSM together with his clinical judgement, showing that he believes additional data are needed for diagnosis.

> P10: “Um, I, I suppose I would have looked at the DSM diagnostic criteria but mostly just clinical judgement.”

Participant 13 (P13) indicated that she preferred to use clinical judgement in conjunction with additional sources of information:

> P13: “I think it was ba-, it was based both on like personal experience…also obviously on collateral information, from the family…that backed up my initial like hypothesis, and then obviously like with reference to the DSM.”

Participant 8 (P8), noted that she would use clinical judgement to make diagnoses but not necessarily any additional diagnostic tools:

> P8: “Ah, there were no tools used, I think it was a clinical judgement.”

Clinical judgement is inherently influenced by the positionality of the clinician (Mamede et al., 2007), in other words, their decisions are influenced by their personal biases, life experiences, their identities, their education, and their interactions with others. In this way, psychologists’ and psychiatrists’ theoretical training and past work experiences will always have an impact on their understandings of, as well as the diagnostic and treatment decisions they make concerning new clients (Mamede et al., 2007). Thus, clinical judgement is always subjective and open to human inaccuracy (Mamede et al., 2007). It is interesting to note that these psychologists and psychiatrists did not mention using screening tools that are often considered to be more objective measures of AN symptoms, to assist them with their diagnoses. This stands in contrast to the suggested standard practices put forward by Derenne et al. (2010), which suggest that screening tools together with clinical interviews are most often used to make diagnoses. Jensen-Doss and Hawley (2011) argue that there is clear evidence to suggest that the use of clinical judgement for diagnosis in isolation is poor diagnostics practice.

Perspectives of Psychometrics

Research conducted by Jensen-Doss and Hawley (2011) supports the position put forward Derenne et al. (2010), which recommends that the best practices for diagnosis should consist of the administration of a standardised screening tool, followed by a structured diagnostic interview (SDI) to confirm the initial assessment. However, most practitioners, much like the clinicians in this study, do not follow these guidelines, preferring instead to use UDIs or no assessment tools at all (Jensen-Doss & Hawley, 2011). Reasons cited in the literature for not following these practices include views that accurate diagnoses are not important because they are merely utilised for medical aid authorisation purposes, or that certain diagnoses may foster a sense of shame in patients that should be avoided, or a belief that measures are inaccurate or not validated for use amongst certain populations (Jensen-Doss & Hawley, 2011). Below the perspectives of the participants on the use of ratings scales are discussed.

Participant 12 (P12) noted that she did not use any rating scales at her clinic:

> P12: “Um, we don’t necessarily use any scales or anything like that...”

Participant 14 (P14) states that she did not usually use rating scales and she was most comfortable using the history taking form developed by her healthcare institution. Nevertheless, she did acknowledge that self-rating scales could be useful particularly when there is uncertainty around the diagnostic category for a client due to them not blatantly meeting all the diagnostic criteria:

> P14: "Okay, first, a lot is his-, is history taking…um, then we, we fortunate obviously in females because a, a good diagnostic would also be in terms of their um amenorrhea…ah, and then the BMI…So then th-, those would be, but I mean, I know you can do the eating disorder inventories and things like that, but I actually, I haven't [laughs]…[continues laughing] what I've tended to do because I worked at [hospital name]…for quite some time, and [hospital name] has, ah you know, as you know, they've got an eat-, I never worked in the eating disorders unit, but they have a phenomenal um intake, called just a history…taking, so, so if I know I'm seeing somebody with an eating disorder, I'll actually, um use that um, sort of intake, form. So, it sort of go through, through everything, but I actually, I um, I haven't used any of the scales…um, um but, but it would, would be useful I think to, to do. I think for those, hh because we do see, um especially in our adolescents as well, and a-, adult patients, is that it's not a full-blown eating disorder…But you would sort of put Eating Disorder Not Otherwise Specified, as you would see there are hints coming through…where there is control around food, a little bit there is, they're trying to manage their, their appetite, um, it, it's, it's not full blown because they're still getting their periods, um, they, they, they are a little bit underweight but not, so it could go either way..."

P14 also adds that while self-rating scales may be useful to aid diagnosis and ensure no details are missed when clients are assessed, due to potential clients' response biases, lack of insight, or denial, which are common amongst the eating disorders, such instruments should not be used independently:

> P14: "…so I think in terms of the eating disorders, having a, a self-rating scale is great…um, my only concern with the self-rating scale is in terms of reliability. But, I still think if it comes with, with a person who, any rating scales, if a person do-, is not wanting to get the help, is in denial, lacks insight, well that's not going to help you anyway…so I think having, it, it's really helpful for those patients that really are, are, have some concerns, they can do the rating scale, and then as a clinician, you can do your rating scale um, as well…because, I also think, that the rating scales, particularly a clinician rating scales if, help you ask the patient, the questions…such that you're not missing, anything out…"

Participant 10 (P10) also acknowledges that self-rating scales may be useful to counter-act his own biases but that rating scales may also be subject to response biases, so a combination of both should be used, together with other information to support diagnosis:

> P10: "Um, if I'm having an off day, then my clinical judgement might suck ass and um, psychometrics can be very beneficial, but at the same time, if the person who's filling it in is having a bad day, the psychometrics might suck ass, so I, I would say probably a combination of both might be better, um to be honest, and j-, ah also maybe throwing in a dietician..."

Participant 9 (P9) suggests that any tool used to assist diagnosis should adhere to the DSM criteria and that the measure should not be too long but should be similar to a clinical interview:

> P9: “So any tool will need to include the DSM criteria um…as, as the tool um in, in order that you end up, that you actually make a diagnosis. Um and then obviously things like it mustn’t be too long, um, and um, it must be something it, that would follow the structure and the content of a clinical interview...”

Therefore, it seems that most psychologists and psychiatrists in this sample do not routinely use screening tools to help with the diagnosis of AN in clients. This is consistent with what was reported by Jensen-Doss and Hawley (2011). Neither the psychiatrists nor the psychologists were inherently against the use of assessment tools to assist with diagnosis, despite not tending to use them. This may be due to a lack of training, or perceptions that the measures have not been validated for use with people from certain backgrounds. Making sure screening tools are easy to use and do not take too much time would minimise some of the potential barriers to their use (Jensen-Doss & Hawley, 2011). Further, measures would need to demonstrate that they conform to the DSM and address some of the key challenges when it comes to diagnosing AN, based on the statement given by the participants above. Two of the key challenges when it comes to diagnosing AN are that clients are usually reluctant to share or admit to their disordered behaviours and thoughts, and individuals with AN will often try to hide their disorder from those around them (Derenne et al., 2010).Therefore, the wording of any screening tool needs to be sensitive in order not to provoke a defensive response from the person completing it.

Body Mass Index

As mentioned by Derenne et al. (2010), over and above the use of clinical judgement, history taking and the use of psychometric tools, consideration should be given to medical assessments in order for a more accurate diagnosis to be made. There are many biological indications of AN, however, the easiest one to measure is the Body Mass Index (BMI). Further the use of the BMI to aid diagnosis is supported by both the DSM (American Psychiatric Association, 2013) and the ICD (World Health Organisation, 2019).

The quotes listed below from Participants 5 and 12 (P5, and P12) show that the measurement of a client’s BMI is commonly used to support a diagnosis of AN:

> P5: “Um, what, how we did it was their BMI had to be below a certain amount… so we kind of just diagnosed it on those criteria, the basic criteria which is in the DSM-IV.”

> P12: “…and then you will obviously look at, at um, ah physical stuff as well, hey? You will look at weight, you will look at height, you will look, sometimes we’ve got a medical doctor sitting in on, on the assessment…

> …

> P12: “But um, I, I mean, you’ve got the physical presentation, and then you, you’ve got your BMI...BMI would be a good indicator...”

Overall, participants used multiple sources of information to inform their diagnoses including clinical judgements, to clinical interviews, and BMIs. Generally, there is some acknowledgement from participants that no singular technique for diagnosis should be used but rather a combination of approaches should be taken in order to minimise biases. It is argued that the best practice for

diagnosis should include the use of standardised measures (Derenne et al., 2010; Jensen-Doss & Hawley, 2011). Moreover, given the social construction of AN as a female disorder, the minimisation of gender bias is particularly important and therefore screening tools specifically developed to account for this are needed.

Theme 3: Behaviours

Most of the psychologists stated that they expected that males with AN would have the same types of behaviours as females with AN, including their manipulation of food, but mentioned that they would possibly be more secretive. This is in contrast to the findings presented by Darcy et al. (2012), which showed that males scored lower on eating in secret than females.

Food- Related Behaviours

The psychologists and psychiatrists who were interviewed indicated that much of the food related behaviours of males and females with AN are similar. These behaviours include restrictions, laxative use, hiding food, and avoiding activities related to food.

Participant 1(P1) noted that a male patient she worked with had very similar food-related behaviours to the female clients with whom she worked, included cutting up food into small pieces:

> P1: "…Um, he definitely had the same disordered, um, ways of eating. So, um, he would do the same tactics as the female patients would do, so cutting their food up their food into tiny pieces, hh um, ja, really doing the same things as, I think, using laxatives, um a lot around kind of manipulating his food and manipulating his meals. Drinking lots of water, putting hot sauce on everything, breaking up his, his meal into very small pieces, um, using the bathroom a lot during, um, during meal times, skipping meal times, um, so, so the way he ate was actually very, very similar to the female patients"

Participant 14 (P14) shared that she believes individuals with anorexia will eat more slowly due to their distorted perceptions of food quantities and volumes:

> P14: "...Your anorexia nervosa patients will tell you immediately it's like, you know, there's they, they get small portions and it's like this is, everything is distorted and it's a mountain, and 'I can't eat this much', and they'll take like an hour to two hours to finish their food. They'll cut it up in bite-size pieces, it's, it's like a real, torture for them..."

Food Restriction

The participants went into quite a lot of detail about the types of food restrictions that persons with AN may follow.

Participant 9 (P9) noted that clients with AN will try to eat what they consider to be healthy foods, in other words, no carbohydrates and fats. P9 mentioned that males may also be concerned with eating foods that may help to build muscle, such as lean proteins.

> P9: "Ja, ah I think that maybe one of the issues with the boys is um [long pause], it's around um, one well, certainly around the ones I have come across, ah um, the last two in particular. Is around being healthy…and not necessarily being thin but not having fat. Having muscle was okay but not, not having any fat so you know it would, would be around no

> carbs, no fat, high protein, that kind of, of ah diet that they would follow…um so maybe that is slightly different from, from females who you know, just want to be thin…"

Participant 11 (P11) followed the same line of thought as P9, stating that persons with AN would want to eat foods they considered to be healthy, however, that the volume and quantity of food would be limited.

> P11: "…so, age wise, presentation wise, it's more or less the same, hh same type of eating pattern of, eating in inverted commas, healthily…and, wh-, which is a-, almost nothing, thinking a rice, rice cake is, [laughs] is a full meal..."

Participant 12(P12) shared that individuals with AN would be quite restrictive in the quantity and types of food that they eat and that they might even take some pride in their ability to be so restrictive, such that they possibly could not claim to have eaten things that they would consider to be unhealthy:

> P12: "…um, um, I mean if somebody is very restrictive in their, their eating to the point that they constantly lose, weight um, and there's no medical explanation for it, um, I mean it's pretty clear..."
>
> …
>
> P12: "…um, and be very, very specific, because people that, that are really, really anorexic, um they take so much pride in it that, that they, they would try to lie, but they can't [laughs]…'cause they can't really write there that they're eating a pie…"
>
> …
>
> P12: "…um, they, they, if they fill that thing I think it needs to be very specific around the food that you get a good sense of how restrictive they really are…um, because if, if you ask for things like 'do you have regular meals?' they would say 'Yes, yes I do'…but maybe it's just an apple..."

Participant 13 (P13) was in agreement that males may construct many of their food restrictions as ways to ensure they eat "healthily". Nevertheless, P13 acknowledged that both male and female patients engage in similar restrictive and avoidance behaviours, when it comes to food.

> P13: "…and they very, very selective about the types of food that they would, and wouldn't eat, so that sort of, that fear of certain foods…was like very prominent as it is in adol-, like in adolescent, or like older females…Um, so, you know, fear of hav-, having anything that was like pros-, processed foods…um fear of having like anything that they would consider to be like junk food, fear of having anything that had like excessive sort of like fat contents…or, like oil, um, ja or like fear of eating like massive portions."

Participant 14 (P14) reiterated the points raised by the other participants that persons with AN will not only restrict the quantity of food eaten but also the types of foods:

> P14: "…um, it is around, when you actually ask them about their, their eating patterns. You'll see as well the anorexia nervosa patient will be very pedantic, very specific about what

> they'll eat…what they won't eat, um, the, the keeping out the carbs…as much as possible, um, restricting the amount of protein. So you'll see the kind of food, the portions..."

Secrecy

In addition to the restrictions on the quantity and types of foods that males with AN may ascribe to, the participants noted that males may need to be more secretive about their food-related behaviours because of social stigma.

Participant 4 (P4) noted that while for female AN patients with AN being slim up to a certain point may actually gain them social admiration, she believes that for males this would not be the case and instead that they would face shame and judgement:

> P4: "Ja, probably secretive as well. Um, ja. I would imagine it would be very difficult. It's interesting because I would imagine for a woman when you are quite skinny it's admired…um, by other people, gen-, I mean just generally speaking. And it could be up to a point, could be considered quite attractive, even beyond a point."

Participant 5 (P5) noted that males may engage in restrictive or compensatory behaviours that could be done in private and be hidden from others, due to potential shame:

> P5: "They could be more, would be more secretive about what's going on…What they would do when they, well I think, I think males would be more, hh although I am not too sure, I was going to say, I think they could be more secretive, they would be more secretive about what going on…they wouldn't be like um, outwardly saying they're not going to eat because they're trying to lose weight, whereas a woman might, that's very socially acceptable…um, so I think you would have to find behaviours that men might do on their own, in their own time…which don't surround other people, um, ja."

Deception

Similarly, to female clients with AN, the participants noted that males would engage in deceptive behaviours, as a way to avoid having to be confronted by caregivers or other concerned persons.

Participant 4 (P4) noted that both male sand females who had been diagnosed with AN would engage in behaviors to hide food so that they would not have to eat it and others would not know that they had not eaten it:

> P4: "And also quite secretive, quite sneaky…It's not a nice word, but um, ja. Hiding sugar in between the magazine pages. You're allowed to read magazines…during your meals, that type of thing, ja…When I was there, or was it when [colleague's name] was there, sorry I can't remember, but they had a new rule hh which was when you finished your coffee you had to turn the cup upside down because…they'd be hiding little bits of food, you know, like because they'd, in the dregs of their coffee basically…"

Participant 10 (P10) echoed the types of behaviours noted by P4 when describing how clients might hide the fact that they had not eaten breakfast from their caregivers:

> P10: "…and this is just what I understand anyway, and you'll find a lot of um, the deception in terms of say…um, the parent will say, "Okay did you have breakfast this morning?" And

> they'll say "Yes, of course I did. Look." And then they'll sprinkle a little bit of the cornflakes at the bottom of the bowl, a little bit of milk in there, mix it up and it looks like they had a whole bowl of cereal…with milk, you see? So there's that kind of deception element that I'm talking about…"

Compensation

While there were many restrictions on the types of food and the amounts of food that persons who have AN follow, if they were to eat more than they considered to be acceptable, then they would engage in behaviours to compensate for the food eaten.

Participant 10 (P10) stated that persons with AN would engage in exercise to compensate for eating foods that they believed would make them gain weight:

> P10: "…with-holding food from oneself or say eating half a piece of toast, and this would be more the indirect method, and then exercising for 5 hours. So not only would it burn off the toast but it would burn off every, a-, anything else that would possibly be remaining and in that way a restriction, just ah like a post hoc restriction."

Participant 13 (P13) stated that compensatory behaviours were quite common for female patients, and in male patients too:

> P13: "So, it's an eating disorder that is characterised predominantly by a fear of being fat, an extreme weight loss, and obviously the associated behaviours include restricting...and or, like ah bingeing, which is then followed by excessive purging and other compensatory behaviours, and it normally emerges within l-, adolescence, predominantly it's been studied as a disorder um, in young, like females…but obviously we're starting to see, to see the emergence of the disorder in males as well."

Building Muscle

A potentially unique focus for males with AN is that they have been reported to not only seek to be slim but also to be muscular. Therefore, it is fitting to note that Participant 14 (P14) stated that men might eat more protein or use products with protein in them to build muscle:

> P14: "Hh um, because I think, ja, it's all about the guys pump-, pumping themselves up, there's a big drive. I see a lot of adolescents now, spending fortunes on these USN products and protein pumps, and um, I mean protein, you know, those shakes and…" (line 238)

The behaviours mentioned above included anorectics manipulating food to make it look like they had eaten, as well as, the use of deception to convince others that they had eaten, when in fact they had not or avoiding speaking about it. There are very clear restrictive behaviours taken by persons who have AN in terms of the amount and kinds of foods they will eat, as well as how and when.

Theme 4: Cognitions

The psychologists and psychiatrists described rigidity in thinking and an obsessive thought processes as being present in both males and females who suffer from AN. Moreover, there was also a discussion around the presence of body image distortion in men and the need to conform to a supposed body ideal as being linked with a sense of self-esteem.

Magical Thinking

According to García-Montes et al. (2014) magical thinking is where a person believes that two events may be causally related, even when there is no scientific evidence for this. Aharoni and Hertz (2012) found that magical thinking was strongly correlated with a diagnosis of AN in women. The participants in this study argued that men with AN would also display this type of thinking.

Participant 4 (P4) explained that an individuals with AN would use compensatory behaviours to counter possible weight gain by engaging in specific activities or eating certain foods, such as vinegar:

> MR: Can you give me an example of the magical thinking?
>
> P4: "Um, can I? Let me think about it… Hmm, maybe that was a bit extreme of a word, but, ah, undoing, I suppose… Like, I eat this um, so if I do this this and this and this, then I can reverse that, so...Ag, maybe magical is too extreme but, um, I don't know another word for it. Less than magical, just what… [Laughs] I can't think hh but, ja whatever, vinegar or, ja. I'll drink this thing it'll be fine, or ja."

Avoidance and control

Wildes et al. (2010) found that persons who have AN often try to avoid experiencing negative emotions. Not eating helps those with AN avoid dealing with their feelings because their brains are not capable of dealing with their negative emotions when starved.

> P12: "Um, but I mean I can talk forever about this, I mean um, ah the, the, the restriction itself also have a function, so, so it's a lot of layers I mean…by not restricting, by restricting you don't feel…So, you don't have to deal with uncomfortable feelings. Um so ja, it's, I mean it, it..."
>
> …
>
> P12: "...maybe the emptiness within, physically not having food, gives them this, emptiness around feeling.
>
> …
>
> P12: "Mmm. I think um, most people with eating disorders are very angry…they just don't know how to express it, um again classically, um the, the anorexic girl needs to be good…so she cannot show bad emotions like anger…and by, by, by restricting she, she doesn't feel it…and the, the anger is internalised, the anger is directed on, self…"
>
> P13: I think that, look I think the elements around actually like needing, like using the disorder to, like for control purposes, I think is very, very similar…I think that the disorder can also emerge in adolescence, in males. I think that in my experience they often use the restriction as a way to numb, feelings that are difficult to, like to tolerate…and that happens in females as well. Um, there's often an exceptional like ambivalence around, like change, around recovery, around like getting better…"
>
> …

P13: “So essentially, like my understanding has been that, ah when their external environment, or the family environment or anything that they can’t control, hh feels completely like out of order, it feels, chaotic...but th-, that restriction, over a long period of time on a physiologically level actually becomes quite addictive…but on an emotional level, actually seeks to numb out the chaos, because they feel that at least this is one area of their life that, that they good at, that they can control, and it allows them to distract themselves, by focussing on that…and that’s why you often encounter a fortune of resistance when you try to and initiate certain behaviours, such as weight gain.

Perfectionism

P12: “…there, there, there’s, there’s certain personality traits and there needs to be certain vulnerabilities, because all boys want to gym a bit and, I don’t know, have a six-pack or whatever...but not all of them, very few of them, I don’t know what the stats is, but not all of them end up, with a anorexic process…so, I, I think it’s the same, that, that sense of achievement you get through it, the, the, the, the feeling of being so in control, um, like the feeling of emptiness, um, like, ja, an-, and…and to get caught up in that, you have to have your vulnerabilities, and that is the wrong self-worth and self-esteem, and ja…Um, I, I mean if, if, again if you look at literature they, the, I mean the stuff that they list would be perfectionistic, um, low self-esteem, um, ja, inability to sit with uncomfortability of feelings, like, like the good, good girl syndrome...um, but, but I think a nice way of, of, of looking at it is, um, ah, a inability to unconditionally love oneself, that you constantly have to achieve…an-, and that’s a personality, um your achiever, like, like if you get 80 percent on the test, it just, it just satisfy you for a very, small period of time…and then you need to get 90 percent, and then that’s not good enough. It, it’s, it’s a constant, ah, a constant need to achieve to feel okay, so take this, this personality profile, if I put it that way, and you stumble on dieting…which you constantly can achieve, you can always make it less, and you measure it, you can get on the scale and it can give you back you’ve been, good…um, an, and som-, some, some ah, I mean a lot, a lot of, of patients it, it’s often around the, the family dynamic and the function of the illness, but now and again you will get somebody that it is, that is what it is, it is the personality, and then you need to learn to manage, that feeling of not, not being okay, you, you can’t constantly, because it’s never enough.”

P13: “…and I think the difficulty with, Anorexia is that it renders, I think like even your most, think intelligent, or like rational, like individual, unable to make like healthy decisions around food, and healthy decisions around, their lives. And I think that both, with like males and females, you do sometimes see sort of that, that overachieving, ‘A Type Personality’. And I think, especially for males because that’s not something that somebody expects in males, they can often mask those difficulties underneath these like these other achievements... or other aspects of their lives because they think that they’ve got control over…”

P14: “Um, and I think it has a lot to do, as well, with temperament and personality. So, I think that very perfectionistic, the very rigid, style of thinking, the very um, driven, ah extremely disciplined um, ah person, ah w-, will probably also be more at risk of developing an eating disorder, and I think it’s also an element of control...as well, because a lot of people will say, ‘Well that, the, the, their relationship around food, has a lot to do with control’, and it’s the only area in their lives that they feel they have control over, and, and it

actually becomes addictive... Ah, a lot of my patients will say that they're addicted to the hunger pangs…They get a high from it. So [laughs]…so, I think it's got, I think it is driven by this need to be thin, but then, you know, you have that certain personality profile that just take, takes it to, to the extreme…"

Rigid Cognitions

P4: "…a lot of rigid thinking. Um, like this is allowed, this is not allowed. Hh um, if um, I have to do 15 minutes of exercise it's absolutely going to be like on the 15 minute it's going to stop."

P5: "I think definitely like a rigidity about them, sort of everything is black and white."

P14: "...and I think when you get to that weight, I personally think that, you know, mentally people are not thinking properly. You know I think that there, there's actually very fine line between actually going into a full, psychotic, psychotic state actually...that they're thinking, the rig-, rigid thinking, the stick-ability of, of their thoughts is, is phenomenal [laughs]."

Denial and lack of insight

P11: "Well most likely because he doesn't really want to volunteer that he's got an eating disorder because, he doesn't, he's as thin as a stick but still fancies, he's actually fat."

P14: "…so you get that also in the eating disorders…the denial, the lack of insight, the minimising, ah the underreporting…

Fear of fat

P4: "Um, so that would be an example um, another interesting one that I, ah, sometimes just think about is the idea of 'I can gain weight but I, it can't be fat…so it must be muscle, I can't be, just have like fat…"

P6: "Extensive fear of gaining weight, uh body distortion, um and obviously attitude towards food and body perception...negative [attitudes] in terms of a very dysfunctional relationship with food, fear that one calorie or one item of food is going to increase their weight."

P14: "I've got a few of my patient have, you know they will always be, have anorexia nervosa, their thought process around food, there is always that fear around gaining weight, they will always count calories."

As can be seen from the comments of the interviewees, persons with AN struggle with a rigidity of thought, in other words the belief that things may be good or bad. Rigidity of thought includes thinking that may classify food or certain behaviours as being good or bad, this leaves no space for flexibility or consideration of context. Together with this rigidity of thought, may be the idea that fat is or weight gain is inherently negative and this can result in fear. Moreover, ideas about actions or thoughts being good or bad can lead to perfectionism. Over and above these reportedly typical forms of thinking that practitioners see in persons with AN, there is a major impact of starvation on thought processes that this can result in diminished thinking.

Theme 5: Developmental Stages

A few of the psychologists brought up possible developmental issues as being a part of the experience of AN in men, wherein two psychologists reported difficulties experienced by males in regards to their sexual identities. Others referred to a possible fixation at the oral or oedipal stages of development. Different psychologists drew on different theoretical perspectives in order to gain a deeper understanding of the disorder in men.

Maturation Fears

P1: "He voiced quite a fear of growing up being seen as a teenager... anorexia is very much linked to being able to revert back to that Oedipus Complex"

P4: "I guess you'd say it was an oral phase."

P11: "Okay, if you look at it um again clinically, um, you can always define it as a adolescent illness. Although um, the kind of patients I work with can be anything from 14 to 60, but, but it doesn't matter how you look at it, you always find it back in, in adolescence, but it, it can have different functions for the thirty year old, after twenty years of being ill, um but the way I see it, is, is it, it's a developmental illness and it fulfils a specific need while you grow up. And that need can be different. It, it can be around um, can be around acceptance, around body, it can be around a way of control, it can be around being visible in the family, it can be a function of communicating certain needs that you can't verbally do, and I mean classically it's a regression, it's regressing back to being little, and that can have various functions, um it can also be seen as a way of not growing up, 'cause if you frail and fragile and people need to feed you, you, you cannot grow up."

P13: "I think that their emotional age and their chronological age, I think definitely didn't correspond, and I think that in the same way, wh-, the same way as in adolescent females who often see, almost like a Peter Pan kind of syndrome and that fear of, growing up, I think that they, I think that this particular individual was quite regressed."

Sexual identity

P3: "He had struggled with his sexual identity as well as his identity in general."

P7: "Very much the early stuff, and related to attachment and also the capacity for things like empathy and mindfulness, and um self-awareness."

P8: "Sexual identity issues...so I think it was part of an identity struggle for him um, and for him weight became the focus of that identity struggle."

P14: "...And I think it has a lot to do um with sexuality as well, um with the emerging, sexual, sexuality um, but it also, uh, that's the time, sort of th-, where the emerging sense of self as well comes through, and so, in terms of exposure to, to sort of, views on, on body and looks um, it's a very confusing time for adolescents, there's often anyway in adolescence, conflict with parents."

Identity Dissatisfaction

P9: "...I think that's the same with females because it's around um you know the crisis of adolescence I think, which is, you know, around the formation of identity, um, and developing independence. Those are the kind of conflicts that I think are central very often in anorexia nervosa whether it's male or female..."

P13: "Look I think with, with like if you look at adolescent, like boys, and, like their, number one, they're trying to identify with their, with their peer group. They're trying to become like one of the boys... but at the same time they also like want that, r-, male role model, that they can identify with, somebody that they can actually, almost like, show them, the road. And th-, that adoles-, like adolescence for them is also like, it's a time of like essentially being able to like assert themselves, to also like, be recognised, you know, for like who they are, I suppose their identity, their talents, like their abilities, but I think that if they feel that they are, I suppose their identity, their talents like, their abilities, but I think that if they feel that they, like they fall short, that the eating disorder essentially also becomes one thing that they can identify with, it becomes the thing that they have, that relationship with, the thing, like can help them almost like stand out."

Independence

P9: "Ok uh er if an individual doesn't feel competent and confident enough to form their own identity and see who I am, and um what agency I have in the world, um and struggles with developing independence which you know I think the other theme is sort of conflicted dependence on parents and the inability to move and the fact that when the individual develops anorexia nervosa they regress and actually become more dependent so it's that whole, those underlying conflicts and themes that I think are usual."

P12: "...A lot's got to do with changes in the body, and acceptance of the changing body, and, and what puberty represents, um, and then obviously you get your later onset, which is, late high school or early, varsity. And I think, that, that presentation is more around, 'can I leave home?', 'can I grow up for whatever reason. But I never, it's never that clear cut either, but, but it, it is, I think it is because what is the changes in adolescence? It's bodily changes, it is um sexual changes, it's, so, so, I think that, that is something that needs to be conquered, on some level. And it's about being independent, being able to take care of your-self. And sometimes you cannot leave because you, might fear failure, or feel that you cannot do that, or sometimes you insistent that you cannot leave. So you must stay there, whatever that dynamic is."

P13: "And I think that, like for them, I mean to actually start eating and become healthy also like meant risking differentiating, form the mother, and not being able to protect them. Okay, anymore. So I think it had to be approached, th-, the relationship with the mom had to be approached in a very, like gentle way, in order to ultimately encourage, you know, their own sense of self and their own identity and their own kind of, that differentiation. But it wasn't something that could be sort of tackled, head on, and obvious, and obviously then because the, the, type system was so chaotic, they like, trying to actually, almost like take away their way of coping mechanism."

P14: "...I think eating disorders and the adolescent young adult work, that's one thing they have a lot in common, it's sort of the, the chaotic or, or shouldn't say, maybe it was chaotic, but the distressed or dysfunctional, um family unit, um, which, which we need to, we need to look at, ja. Um, whatever it is, it's, it's, you know, it is around a need to be noticed, whether it's around a need to be heard, whether it's about stamping individuality in a family, um about rebellion, about anger, um, uh, about control, um you see, that sort, that is common to both, you see them in adolescence and the eating disorders, there's, there's quite a bit of family dysfunction, and, and distress..."

As can be seen from the quotes included above, the body changes that take place in adolescence may cause discomfort for persons with AN, as these may make them feel they are losing control of their bodies. Further, men tend to experience puberty later than women, which may account for the later onset of the disorder. There also seems to be a kind of acknowledgement that adolescence instigates a time when individuals seek to find their identity and where they find that the distance between who they are and who they would like to be is too great, this identity dissatisfaction may manifest through the body. Gaining control and power over their bodies, may help individuals who have AN feel empowered at a time when they may feel less powerful in other aspects of their lives. Further, the rigidity of thinking and tendency towards perfectionism may lead persons with AN to experience feelings of inadequacy and a low self-esteem.

Theme 6: Familial and Social Relationships

Most of the psychologists mentioned a problem with family functioning, as contributing to the occurrence of anorexia in men, wherein the clients experienced very enmeshed and controlling familial environments. The psychologists and psychiatrists seemed to think that the men may use AN as a way of asserting control over their own bodies and gaining independence from controlling family members.

Controlling or Uninvolved Dynamics

P4: "Enmeshed families... overly involved and controlling parents".

P3: "... the mother in the family has a tendency to be very, almost pushy, um very forceful and it's almost like there is a tendency for the patient to have to live up to a certain standard, be a certain way, look a certain way, um and if not then obviously there is not a lot of approval."

P3: "... It's a way of taking up less space um so in other words they felt like they're not worthy to take up space, usually because of the family setting and the way the family saw them."

P12: "There's lots of dynamics. Um, hh, okay, let me think about all of them. I, I mean the classic stuff, which is also just theory, is, a overbearing, controlling parent. Okay, um, because how do you rebel against that? Um, what I've learned is, there's not a lot you can do if your child doesn't want to eat. Hh, it's the ultimate, ultimate control. So I think we, we can list that. Ah, what I often see is parentified children. It's, it's, um, when, because of whatever happens in the family, mommy's depressed, um, mom is an alcoholic, okay? Then you take that role. Okay? You take care of mom. Or you take care of your little brothers or

sisters or, so while you are adolescent and while you're supposed to be a child, you are parentified. And often then, when, because you did, you, you, you were not allowed to be a child, so those needs were not met, which means then when you're 20 years old you, you might actually regress. To get what you need, because you've never been, allowed, so I think, that, that dynamic. Um, ah, um, though I, I think if you've got um, I mean we often talk about, um, e-,e-, eating disorders and then you like look at the dynamic with the mothers, I mean you can, you can see it as, the not-good-enough mother, and then the too-good-enough mother. And both can create a dynamic for a eating disorder, because the not-good-enough mother is, is around neglecting her. Not, not, not being there either physically, or, emotionally, so by regressing through your anorexia you can try force your mom to mother you. Cause you to nurture you. Or even if you can't get mom to nurture you, maybe you can get somebody else to nurture you, but it's a complication. And then um, sometimes also if, if, if, if it's too-involved mom, hey, and the mom that, that provide all the needs, or all the time and cannot allow the, the child ever to sit with any form of comfortability because, when, when that child grow up she's not necessarily equipped to handle adulthood. Because everything's been done. If that makes sense? So there's different dynamics. Um rejection, I, I think if you are somebody with, you know, your father left or um, um, if, if I'm the good girl, if I'm prettier and I'm cleverer and I achieve more and part of that is also if I'm thinner..."

P13: "I guess if anyone ever recognised, that there's been, that there's been problems around like, food, like food, weight and eating, and maybe stuff around development history as well....I think one where everyone is left to their own devices, which actually, which gives rise to, more restrictive behaviours developing, that may go undetected. And the restrictive behaviours almost may be, if you kind of look at the communication value of the behaviour, that adolescent for example, may be desperately crying for there to be, for there to be somebody who actually notices them, that something's happening. You know, that then brings like one of their care givers to actually like sit with them, while they eat and actually nurture them in a way that, th-, they haven't actually had, whereas, where, I think like food is centre, like of like an interaction, there may be an overemphasis on food, it may b-, it may be sort of like, over-feeding, like on a, on a physical level but on an emotional level, the environment may also be sort of overbearing and overwhelming, there may not be the same opportunity for like differentiation, and so the restrictive behaviour like, like becomes the means by which they try and separate themselves but obviously struggle in the process."

Extreme Dynamics

P5: "Well, most of them, there was a lot of family difficulties."

P6: "... family dynamics play a role both in adolescent females with EDs you know, even if they're adults, but females and males... when there is lots of abuse in the home, lots of sometimes emotional abuse or you know a tension in the home environment."

P13: "Um, there are often problems in the relationship with one of the like parents within the parental like sub-system. It's either, as within like female patients, it's either a relationship that is far too enmeshed, with the mother, or for like boys, which are often, see there's, there's a lack of, a suitable male role model with whom they can identify with."

P13: “Look, I think the commonality across all three [clients] I think were the very unstable, like home life. Um, I think, also, I think, an over-identification with the, with the maternal figure. That herself wasn’t able to also, let go, I think obviously then, like lack of sufficient boundaries, between the two so, you know, even though, you know, they’re an adolescent, or you know, an adult male, and they like, developing, the, hhh, the mother fails to actually like kind of cease, see that growth, see the differentiation and still then kind of treat them as a child, that needs to have decisions, made for them.”

Attachment Styles

P10: “... So that’s the way I would understand it, more in terms of an attachment disorder, as opposed to, um, a thing of food, um, it could be a number of things, but wa-, one I could say is that um, say for instance, the, the father was emotionally unavailable, or sometimes even physically unavailable and that type of thing. Emotionally unavailable and you’ve got the mother who’s more, um, over-involved, um let’s just say it’s like that to a point of almost suffocation.”

Family History

P11: “Well, we never actually got to the bottom of how it started, but his whole family is quite thin. Um, but his dad, I think was obese. I think that is where it s-, stemmed from, he didn’t want to be like his dad, but then he took everything into extremes.”

Living with AN can lead individuals to experience loneliness because they may cut-off social interactions to avoid food or having to respond to questions about their behaviours and weight loss. Parental relationships for persons with AN tend to be extreme in their dynamic. As stated by the participants, parental relationships are often either overly controlling or uninvolved. This extreme kind of relationship with their key caregivers, may lead anorectics to develop insecure attachments, making straining their relationships with others. Family further influences individuals with AN through genetics, since the likelihood of developing AN increases when one has first-degree relatives with AN or another ED.

Theme 7: Co-morbid Disorders

The psychologists often spoke about the co-morbidity of other psychological disorders with AN, and the possible difficulties they might have in distinguishing between the disorders. The most commonly mentioned co-morbid disorders were substance abuse, obsessive compulsive disorder (OCD), gender identity disorder, borderline personality disorder, depression and even schizophrenia. The excessive levels of control exerted over the body and food could be considered obsessive in nature. Further symptoms of depression and schizophrenia include a loss of appetite. The drive to seek approval from loved ones could be considered borderline, while the desire to delay progress into adulthood could be related to gender identity problems. A few of the psychologists recognised that this difficulty in distinguishing between the different disorders might be because they still held feminised views of anorexia, despite being aware that AN can occur in men. Here are some examples of the ways in which the psychologists and psychiatrists viewed these disorders as over-lapping and difficult to differentiate:

Borderline Personality Traits

P3: "...most anorexic patients have um a lot, a lot of the aspects you usually associate with Borderline Personalities".

P4: "Ill personalities, I suppose, Borderline... very poor ego development, um…very split personalities and ja, needing to punish the self..."

OCD Traits

P2: "I think some of the difficulties would be to classify it from other diagnoses, you know, the co-morbidity with anxiety or depression or OCD...I don't think I would readily diagnose anorexia before diagnosing something else."

P10: "And um, wi-, with eating, with anorexia, it's a bit more like, just generally, I'm speaking in general terms obviously, but it's a bit more like the na-, narcissitic behaviour. So things need to be perfect or they need to be orderly or they need to be in the right place or the right way, you need to respond in the correct way. Or not carry, a heavy thing on a tray with a light thing on the other end of the tray because it will fall. Like going to that level of detail in terms of perfectionistic... So I don't mean drawing in a straight line, I mean behaving the right way, thinking the right way, feeling the right way and son, and so on, and so on."

P14: "I think sometimes, I think in terms of the spectrum falling along the OCD spectrum, you can see in terms of anorexia, because a lot of patterns of behaviour around food, uh weight, uh um, is, is very obsessive, it can be very obsessive-compulsive, even along the lines of a psychotic disorder in terms of just they're very much, you could say, deluded thinking around their body image, their body shape, size, um, so I think it encompasses, sort of you can see it along, it, it's, it falls under eating disorders but, you can see it as sort of being also as part of an obsessive-compulsive spectrum, even bordering into a psychotic, spectrum as well."

Depression

P6: "High commonality with depression."

P7: "I have never been exposed to any male that experienced um, anorexia, ah there was never a diagnosis made. There was obviously things related to extreme loss of weight but that was normally linked to other psychoses you know, maybe depression or a mood disorder or schizophrenia."

P11: "Well he presented with quite a depressed mood, um, some suicidal thoughts, and then deranged, his sleep was normal, but he said his appetite was decreased. But he wasn't too worried about that. And he had less energy, quite anhedonic, poor memory, poor concentration."

P13: "You know that, because obviously low weight can be, sort of a side effect of having a ma-, like a major depression, um, and I guess you have to take an extensive history, obtain collateral information like with, with their permission, but where we look at things like, you know, anorexia and let's say alcohol and substance abuse, we also know, that they also occur on the same sort of spectrum of disorders, there's both an addictive element, and patients who starve themselves, will as they become addicted to their feeling of being thin,

and in terms of, in terms of like managing the depression and the eating disorder, there's obviously where we need to get a psychiatrist, like involved, because, if the depression is interfering significantly with their ability to actually, function, then you've got to decide whether like medication, is obviously needed, but the difficulty with that is medication obviously comes with, often comes with, associated weight gain, and then how do you manage that, with the associated emotions and it causing that exceptional distress in the individual."

P14: "Patients who, who are anorexic for other reasons will give you a completely good explanation as to why they not eating, they'll, often tell you, it's not because I don't want to eat, it's not because I'm scared of putting on weight, it's because I just don't have, I've lost appetite like a lot of depressed patients."

Anxiety and Trauma

P9: 'Definitely anxious, anxious temperaments and in terms of disorder, pre-existing anxiety disorder I find very common. Um, um perfectionistic, uh, sort of uh cluster c type of personality traits. Uh anxious, dependent, perfectionist, obsessional, all those, those kinds of traits..."

P12: "I think um, er, um, anything that, that, because trauma makes i-, t-, trauma you can't, it's, it leaves you with a sense of not, being in control. Um so, I think it can be, a divorce, it, it can be, a death in the family, um, it can be sexual trauma, er, which seems to be more a bulimic kind of presentation but, ag, I mean anorexia, ah, or any eating disorder you, to have an eating disorder and be able to, abuse your body in that way, you have to disconnect from body. And that disconnection can be a sexual trauma. That body is...bad. So I think that it can be any form of trauma, or anything, the person suffering are experiencing as trauma. Something she cannot control. Cannot, cannot control. Dad leaving, if that makes sense, ja."

…

P12: "...You obviously get your, your textbook classic anorexic presentation. But, but I mean there's a lot of grey areas in that as well 'cause you will, you will, you, I, I mean patients can, can present eating disorder wise with restriction, binging or compensation behaviour. Sometimes that will be a, mix. Um, um, ja, I mean where it will not necessarily be a, a clear eating disorder is, when you end up with somebody in the unit, but that's not really eat-, it's not eating disorder. That, er, had a trauma, and are very anxious, and stopped eating. But that's not a eating disorder."

Substance Abuse

P10: "Some kind of interpersonal distress, or relational distress, or relational problems, or personal, relationship issues, you know. I, I would think that you could find that, you could probably find if it's anorexia, some anxiety stuff or even panic disorder stuff. Um, probably some depressive stuff er in there as well, you could throw in, um, with m-, many, with many people with er, er substance addiction; they tend to have an eating thing as well. With many, many people. So there t-tends, to be a co-morbidity anyway."

AN shares many features with mood, personality, anxiety, and substance use disorders. Persons with AN may experience anxiety related to not meeting high standards or social acceptance. This perfectionism may also link to obsessive compulsive behaviours, as a means to help regain a sense of control. They may experience depression because they are so dissatisfied with who they are and struggle with a low self-esteem. This may also be linked to gender identity disorder where individuals with AN may find it difficult to identify with their gender assigned at birth. Because of attachment issues, as previously mentioned, persons with AN may seem to have borderline personality traits. Eating patterns may lead to symptoms that mirror problems with bodily functions and thought patterns that are linked to schizophrenia. Persons with AN may also use substances in an effort to control their weight or help them build muscle.

Theme 8: Body Image

The psychologists and psychiatrists perceived men as being more focused on overall slim and toned appearance rather than specific areas of the body (such as their bums and thighs). While some of the participants suggested that men and women who experience AN may share a dissatisfaction with their bodies, they believed that the nature of this distortion may be different.

Self-esteem

P2: "I suppose they wanna both improve their self-esteem. One wants to you know in terms of being a bigger better man, the other one wants to, the woman wants to improve by being a prettier skinnier woman."

Cultural Ideal

P2: "... there is sort of extreme focus on your body. On the perception of what your body should be like based on you know these standards you've set up..."

P9: "...I suppose part of that is around the cultural stereotypes of what is beautiful in men and women. You know that women it is beautiful to be stick thin in western culture, whereas for men it's actually important to have some kind of body definition but not fat, so muscles is okay."

P14: "So I think it's very much uh, it is a social thing, there is this drive to be thin, but the extreme, I think we've lost concept of what thin and healthy versus thin and um, sort of androgynous looking."

…

P14: "So I think it's got, I think it's driven by this need to be thin, but then, you know, that you have that certain personality profile that just take, takes it to, to the extreme, um, and, um, you know, ja, and culturally there is this drive to be thin, but people are forgetting thin with health. We, we we, we, we forgetting that yes, there's a whole drive to av-, avoid obesity now and to combat that, um, um, and we need to sort of bring in healthy, healthy terminology instead of fat-thin.

Body Fat

P1: “With women, the female patients, they can always point out specific places, what they like, what they don’t like...for him, one of the biggest differences is that it’s about body fat...his body size.”

P7: “What I have experienced with men is that they are very much into eating healthily and wanting to lose a lot of body fat.”

P8: “It’s more normally been about shape and um, it distorts in a different way, ‘cause that classical idea of an anorexic looking in the mirror and seeing a fat person when they’re actually thin. I haven’t actually seen that...more fixated on body fat than being small.”

Muscularity

P10: “So they would have anorexia in the form of definition, not in the form of bulk now. But more in the form of definition. Because um, to become very defined, like big defined, you, you, have to be very selective and very restrictive, in terms of what you can eat, and what you can drink and when you can do it. And they take it incredibly, incredibly seriously.”

P12: “... I, I do think there’s more pressure on, on, on young men, these days around body. Which I don’t think necessarily was there 30 years ago. I think men were very defined by power. Where, where I think, I, I mean, if you talk to girls, you know the fifteen year old and the sixteen year old, they will tell you, you know, the boys will spend more time on their hair than they do. You so, so I think there, there’s a social, cultural dynamic to this as well. That, that perfection for boys can be having a certain body and a six pack...”

P13: “I’ve had some experience with some male patients, like within my practice, and I’ve seen the way the disorder has manifested in them, as well. And I think whilst, you know, for females, we’ll look at them being exceptionally, being underweight, and pre-occupied, preoccupied with their body shape, and size, while men are preoccupied with their body shape, and so sometimes it’s not only about being, you know, underweight it’s also about being obsessed with how muscular they are. Like how, kind of lean they are, like how much of their, like their six pack for example, somebody can see.”

…

P13: “About like how big can they actually, become? And you know, I think sort of in the literature you’ll, they’ll refer to it as bigorexia. With females it’s about like, how thin, how lean, you know, can they become? How, underweight? But the similarity’s obviously then that there is a huge distortion in terms of the way in which they perceive their body weight and shape and then obviously the, behaviour that they initiate in relation like to that.”

P14: “So it’s, it’s very much around, sort of I think the middle, around their, their tummy area and their thigh area. It’s just, it’s, it’s very much a distortion and that fear of just ballooning and gaining, gaining weight, and, and, they judge it very much by their abdominal circumference or that feeling of, of, of fullness.”

Body Distortions

P11: “And also because he’s got the body dysmorphia or body image problems, that’s how the diagnosis was actually made. Well, mostly his stomach area, which he felt was fat or had a layer on it, though, even though he was quite, really thin.”

P12: “... They, they, their perception is always bigger than what it really is, But not necessarily a huge, obese individual. It is just bigger, then what they see themselves. So I mean they are always distorted. And, and, and they, they, I mean they can’t see that, because this is what they want, so there is lack of insight, ja... Er, it’s always about the weight. I mean it’s always that number. Um, and then sometimes, there, there can be obsessions with specific body parts. Like stomach, um, it differs, ja. .. I, I, think the men do, do that thing that they want muscle, and, but if they get sick it’s the same. The stomach is, too big or they feel fat or it, it seems to be the same.”

One of the key social factors often considered in the development of AN is the culturally relevant body ideal. Men, unlike women will tend to focus on their muscularity, together with a drive to be lean or not fat. This fear of fatness is contrasted with a drive for thinness, often seen among women. The focus of male body dissatisfaction is often on the stomach, shoulders and chest rather than the area s below the mid-section, as is often the focus with women. Lastly, it must be noted that persons with AN often lack insight into their actual shape and size and tend to see themselves as being larger than their desired size.

Theme 9: Sport and Exercise

All of the psychologists and psychiatrists suggested that men with anorexia may rely more on exercise than other forms of purging. Nonetheless there was a hesitation to readily acknowledge excessive exercise as a symptom of AN in men because of the belief that men may engage in a lot of exercise for sport or “just to be healthy”. Therefore, the participants expressed caution around determining whether the level of exercise should be considered severe in the context of a particular sport, for example.

Excessive Exercise

P2: “I think if you had to ask their teammates. Is what he is doing, you know, normal in that sense or would you guys be doing the same thing?”

P3: “I have found for example, obviously you have situations where a lot of males are into aesthetics and how they look these days which um can be a problem. So is that the reason? Is it just a normal kind of pursuit of physical enhancement?”

P5: “Some of it has to do with men trying to over exercise and trying to be tones and so they might not even realise that they falling into like an anorexia.”

P8: “I think it would probably need to be an excess of what was required, a lot of sports require low weight and so um, I think it would be to do with, the effect on their health.”

P11: “Um, and his pattern was mostly just restriction of, of intake and excessive exercising...He would gym quite a lot but only do cardio. And then also would run every day, and also do long distance running, which, you know, you could say why he’s so thin, and it’s

part of the exercise routine and everything, but because it's out of keeping with what other people would say is of a norm... "

P12: "... I think their initial presentation is usually around starting to go to gym and, wanting to build muscles and, and going on a diet, initially, but, but as it, as it progresses it, it's got the same functions. It's about control, it's about anger, it, its bout um, fear of failure..."

P13: "...A severe, like restricting behaviour, and they also like over-exercising to kind of compensate for anything that they thought they'd eaten."

P13: "With men I think that from times you'll see that, for example, the, the compensatory behaviour's in the form of like exercises about like, developing that muscle."

Theme 10: Stereotypes and Stigma

The psychologists and psychiatrists reported concern around the impact of diagnosing anorexia in men, due to the social stigma men may experience, because of the diagnosis. The participants also hypothesised that the men, as well as their families might be reluctant to accept the diagnosis due to its construction as a feminine disorder.

Social Stereotypes

P12: "Um, so initially when, when I, because I had a few male patients. I, I, Kind of, think it's going to be different with them, but it's not. What, what I found is that their process, and their reason and the function of the illness is exactly the same, as what it is for females. It's just because they male, I, I think we, we, we have a perception that it's different but, but it's not. In my experience it's no different. Everything I've mentioned to you, um in, in the process of, of the male patients can be applicable. Um, the other thing that I think I, I, I, mean may-, maybe we can see it more now because maybe, may-, it's, it's, more acceptable to come out. I, don't know, how much research there was, what happened, I don't know, thirty years ago or twenty years ago or, or whatever, but, but I also think that the roles, roles with men and women are changing."

P4: "... for a woman when you are skinny it's admired... for a man, I don't know that it will be the same. I don't know if his friends would be like 'Wow, you're looking so good'. So I would imagine they wouldn't really understand... wanting to be too muscular [is] more accepted and even 'normal' for society."

Further, the psychologists reported that they would expect opposition from many of their colleagues, who still do not view AN as a disorder that men can experience. Therefore, some psychologists seem to be influenced by the social construction of AN as a female disorder.

Biases

P4: "Mm, I would imagine it's not common so it wouldn't be on your top ten list of things to look out for. I would imagine that people would first go to something else."

…

P4: "…I suppose um, it is not common for men to, or people think it is not common for men to want to be very skinny. That is more ah…a female thing. I suppose um, people imagine men want to be more, muscular or, hh um, I suppose they wouldn't really understand it, and then common, you know in popular media or whatever it's more of a female disorder…so I suppose it's generally not commonly seen in men, ja…To be honest, I don't think we ever even discussed anorexia in men in my training…even went on to say that at the time, there were no beds specifically for men with AN in the clinic where she worked….Um, there's a lot of um professionals that for some reason, when they see it's a male, they can't accept that it is an individual that has anorexia."

P5: "I think it's something that's not well known, I don't think people talk about it a lot. It's sort of um something that's common, it's sort of seen as like a girls', stereotypically a woman/girl problem."

…

P6: "The more awareness we have around it, I think the better it would be and I think male anorexia is a massive problem uh, um, and I think, you know, that's where we need to hone in our skills because I think males do, are more stigmatised in terms of fear of coming for intervention. So it would be nice to have more awareness of it so that, and offer them a safe, comfortable environment to get treatment, and to let families know that it's okay for males to get treatment."

P14: "...So um, yes, but I mean I do, I do believe um, you, you, you definitely can see it in males, but I think it's obviously rarer, um and um, so, so our perception is maybe it never happens, you know, our perception is it's always white girls, western, uh, upper middle class, type A personalities, which, to be honest, that is my experience [laughs], but we are now starting to see, males, um, and obviously black, black females as well, but they, they're comprising still, I think the, the minority, but the numbers are increasing."

P14: "And I think for males, um, I think I suppose it's pre-, pretty much, maybe w-, we don't look for it as much? 'Cause we think, well it's pretty much a, a female condition, I think perhaps the stigma, um, and I think it do-, for a lot of males, ja, we, we, we generally, we, we generally don't or, or they don't seem to volunteer it and maybe we don't ask because we don't expect to see, eating disorders, um, you know as I say with this young boy, um, but his was a different pathology, but, but even still, it's, he in a long time was the first adolescent adult I've seen who's, who's been underweight, um, so I think it's ja, I think it's maybe the stigma, the fact that we don't expect to see it in males, so it's still that we pretty much, we, we don't look for it. People don't present, we don't ask for it, I think the shame, I think it's difficult for the boys or the guys to come anywhere, 'cause the majority are girls."

Shame

P2: "Well I think there is a lot of stigma with anorexia and you know, ah um it's seen as a female disorder. And I think men having that diagnosis, would damage their confidence even further."

P10: "...I think there is probably a shame element for an adult male to go into a hospital and say I have an eating disorder. Um, I thinks it's been mostly publicised and categorise and, and you know, depicted in the media as a, as a female disorder, um, either one: anorexia, bulimia or binge eating. Um, but I think also in terms of anorexia though, I think there's something more to it, because generally characteristics for an alpha male are more you're tall, you're big, you've got a lot of muscle, you've got a lot of um, width, you've got a lot of strength, a lot of power, er, a lot of presence, and, it, it, seems counter-intuitive to, well, it seems counter to, um, for a man to be anorexic, because it's and, and, we're talking about a heterosexual man to be anorexic, because it's, and, and, we're talking about a heterosexual man to be anorexic, um, because it seems counter to alpha male characteristics, um, so I think sometimes it's difficult for us to take that in. Um that it certainly exists, it's certainly there and so on and so on, and then i think it's easier to understand a man having that, that steroid getting bigger fetish, um, as it is a man to want to be thin and slender. It's probably easier for a person to understand a homosexual male to want to be thinner or slender or fit into size 28 jeans and you now, so on and so on.... I think that's why it's probably under-reported you know. I think most people would look to the idea that, no they probably have HIV and that's why they're slim, or they, they not eating enough, which is true, but there's probably more to it than that, um, and... I think more people would be inclined to look elsewhere than eating disorder, you know."

P11: "Um, he was quite resistant to go in, more than the females... Well eating disorders are supposed to be a female disorder, so he didn't want to be labelled as having a female disorder."

P13: "Look, males are often not as verbally, like or emotionally expressive as, as your female patient, and they may find it like quite threatening if you try and sort of look, delve a little bit, like deeper into the underlying, like emotional issues, and so you, you have to work differently. You got to work in a very sort of non-threatening, like manner, and initially actually like quite sort of like... into reflecting on how difficult it is, in order to form an alliance with the patient, so they feel they can open up to you."

…

P13: "And obviously, for men, maybe those, the shame, around thinking, hell, the shame around like recognising, that this is actually a problem. That, I think that for men that it's a disease that can be quite like, isolating, because obviously, like, the majority of our studies have focused on, on females, and so it's maybe isolating, it may be something that's very, not so like, research contributes to that body of literature, and research in like that regard. And how forthcoming like are they? In actually admitting and recognising that it has been a problem."

P14: "So, so for guys it's very much more about pumping, pumping iron I think and, and sort of, building bulk, rather than actually, shrinking, shrinking away, and, and, and losing weight, so, so I think, I think that's very much in terms of, sort of, perhaps the manly man or the association that this is, this is a female disease. You know, that, 'guys can't have this problem, because I'm, I'm a guy', so there's probabl-, perhaps could be a little bit of shame, hide, hiding away."

Men with AN may experience shame and denial. They might not seek help due to feelings of shame for struggling with a disorder that is widely understood to be feminized. Further due to the association between the disorder and femininity, men who have AN may deny their experiences in order to reject the idea that they may be viewed as less masculine by others. There is much stigma about men who have AN and this may make men avoid seeking help due to fear of judgement for being less masculine. Lastly, the shame and stigma may result in secretiveness and a reluctance to admit struggling with AN symptoms.

Conclusion

Theory is a useful tool for understanding disorders, but it affects the way in which we view the world. Thus, clinicians need to be aware of the impact of theoretical perspectives, as well as the impact of dominant social discourses, on their interpretations. One way to counter this may be to use a more eclectic approach with clients and possibly to work with consensus where differential diagnoses are concerned. The differences between AN in men and women need further investigation and there is an overall need for a greater understanding and awareness of AN in men in practice and training. While the psychologists interviewed in the study often referred to the DSM and a personal clinical judgement in determining whether to diagnose AN in men, however there was some reported uncertainty as to how they should go about diagnosing anorexia in men. Psychologists and psychiatrists could possibly work with screening tools to assist in diagnosis. A screening tool may serve as a first point of call, for determining whether AN may be a possible diagnosis for male clients.

Chapter 7: Phase Three – Item Development

Introduction

Based on the findings of phases one and two, it can be concluded that men seem to focus on developing their musculature while minimizing their fat, and are concerned with different areas of their bodies (arms, stomach and chest) as compared to women (hips, buttocks and thighs). Men are more prone to use anabolic steroids and excessive exercise as means to lose weight than women are. Men are also less likely to report using laxatives than women are. Men and women seem to have similar levels of family pathology and difficulty in relationships. Men who suffer from AN are also more likely than women to have a history of obesity. Further, there are conflicting findings regarding the prevalence of AN in homosexual men, leading to the conclusion that sexual orientation may not necessarily be a risk factor for the development of AN in men. While men do not experience amenorrhea, they do exhibit a decrease in testosterone which results in a diminished sex drive. Furthermore, the literature has stressed the need to consider these symptoms within a social context which champions certain body ideals and behaviours as being the epitome of masculinity. Ironically, the anorexic man is able to conform to the athletic, slim, muscular meso-morphic body type and seems to have absolute control over his body, this is because the attainment of these social ideals require the employment of abnormal, excessive behaviours like over-exercise, starvation and the use of steroids. These findings from the integrative review in Chapter 5 may be used in conjunction with the findings from the interviews with participants in Chapter 6 in order to inform the development of items for future inclusion on a self-report screening measure of anorexic symptomatology in men.

Sample

The development of items was based on the data collected under phases one and two.

Measure

Demographic variables that are important for understanding anorexic symptomatology in men that emerged from the integrative review of the literature were also included as items. Further variables which will assist researchers in making responsible assumptions regarding the generalisability of the findings were also included. Therefore, the demographic variables included as test items are the potential participants' geographic region, their citizenship, their age, their first language, their race, religious affiliation, their sexual orientation, and their socio-economic status (see Appendix H).

Race is an important variable to include in the demographic questionnaire because there is conflicting research regarding the prevalence of AN amongst the different racial groups (Edwards & Moldan, 2004). Nonetheless, research findings such as those of Delport and Szabo (2008) suggest that there are in fact no differences across racial groups.

Religion is a potential confounding variable due to the fact that many religions include fasting and purging practices that mimic anorexic symptomatology (Edwards & Moldan, 2004; Joughin, Crisp, Halek & Humphrey, 1992). The sexual orientation of potential participants will also be an important variable since there is debate in the literature regarding the prevalence of AN amongst homosexual individuals. While some research suggests that homosexuality is a risk factor for the development of AN (Williamson & Spence, 2001), other research strongly contradicts these findings (Boisvert &

Harrell, 2009). Therefore, it was valuable to speak to this ongoing debate by accounting for sexuality as a possible extraneous variable by including an item related to sexuality.

Items related to future participants' socio-economic statuses were measured using their monthly income, level of education and occupation. These measures of socio-economic status for individuals feature widely in the literature on socio-economic status (Higgs, 2002). While these measures are strongly correlated with one another, it is believed that socio economic status is a complex concept that requires multiple measures (Yang & Gustafsson, 2004). Income is typically measured on an interval scale but it may be categorized using a theoretical cut-off point, in the case of this study the variable was measured on an interval scale (Higgs, 2002). Education is commonly measured in terms of qualifications, specifically the highest level achieved by the individual (Higgs, 2002). Lastly, occupation is usually ranked according to prestige and skills (Higgs, 2002). Once the data has been collected commonalities between participants' responses can be used to categorise the data. It will be important to record participants' socio-economic statuses so that the data can be appropriately generalized. It should also be noted that persons who completed online questionnaires may typically be of a higher socio-economic status, which may limit future study's findings (Fyfe, Leonard, Gelmi, Tassell & Strack, 2001). Further, it is debated that AN may be more prevalent amongst high income groups and it will be important for future studies to speak to these previous findings (Gard & Freeman, 1996).

Participants should also be asked whether they have been diagnosed with AN or another mental disorder and whether or not they were in therapy. It will be important for the data analyses to be able to distinguish those who have been diagnosed with AN and those who have not. Further, it will be important to ensure that the participants' responses were not influenced by them suffering from other mental disorders. Finally, participants should be asked to indicate their sex, to confirm that only data submitted from male participants is included in the study. The demographic questions that could be asked of participants may be found in Appendix H. This information will assist researchers in ruling out confounding variables and in outlining the study's parameters for generalisability.

The new items were developed according to the guidelines in Foxcroft (2001), as well as, the Health Professions Council of South Africa (HPCSA; 2010) and the ITC (2012) standards. The specific questions asked in the instrument were developed around the themes found in the integrative literature review and the interviews with the health care professionals. These themes were combined and then broken down into 6 categories of content or sub-scales. Table 5 below shows the content to be included in the questions under each category.

Table 5: Content Categories

Category	Content
Body	
	overall body shape
	arms, torso and stomach
	musculature
	fear of fatness
	cold
	lanugo
	constipation

	body checking
Behaviours	
	limited food intake
	preferences for certain types of foods
	avoidance of social gatherings with food/alcohol present
	excessive exercise
	compensatory exercise/purging
	steroid use
	substance use
	diminished sex drive
	compulsive behaviours
Cognitions	
	magical thinking
	obsessive thoughts about weight/food/body
	perfectionism
	negative self-talk
	rigid cognitions
	A-type personality traits
Social Difficulties	
	family discord
	overbearing parental figure
	difficulties asserting independence
	feeling a lack of control
	difficulties managing at work or in relationships due to behaviors
History	
	obesity
	bullying
Identity	
	identity dissatisfaction
	difficulties establishing identity
Power and Control	
	control over body
	sense of superiority

The types of questions asked took on a similar form and had similar content to those found in other self-report measures currently used to assess levels of anorexic symptomatology in men, such as the EAT-26 (Garner & Garfinkel, 1982), EDI-3 (Garner, 2004), EDE-Q (Fairburn & Beglin, 2008) and EDAM (Stanford & Lemberg, 2012). Two older versions of the most commonly used examples of these instruments, the EDI (Garner, Olmstead & Polivy, 1983) and the EAT (Garner & Garfinkel, 1979) (see Appendix D and E respectively) are included at the end of this report for reference. Therefore, the new instrument had a forced-choice format (Foxcroft, 2001) with an interval rating scale, akin to other psychological likert-type response formats (Wolfaardt, 2001).

Procedure

The procedure for developing the items conformed to the guidelines outlined by Foxcroft (2013). Prior to "item writing (p.75) is "the planning phase" (p.70). , Future research involving instrument development, based on the items generated in this study, will follow the subsequent sequence of steps recommended by Foxcroft (2013): "assemble and pre-test the experimental version of the measure" (p. 75), "the item analysis phase" (p.76), "revise and standardize the final version of the measure" (p.78), "technical evaluation and establishing norms" (p.79), "publish and refine continuously" (p.79).

Item Development

Foxcroft (2013) argues that before question items can be developed, their purpose needs to be made clear in the planning phase. The purpose of the items generated in this study was to assess the levels of anorexic symptomatology in cis-men for self- screening and research purposes, and possibly to be used as complementary aids for diagnosis. As a self-report items the questions asked in this study do not fully capture all aspects of anorexic symptomatology. Namely, they do not assess the actual occurrence of physiological symptoms that men who suffer from AN experience. The test will thus only point to a high risk for AN in a male and will signal a need for further assessment by a Clinical Psychologist or Psychiatrist.

The planning phase, was informed by parts one and two of this study. The constructs the instrument intended to measure needed to be defined before they could be assessed. The integrative literature review conducted in part one, as well as the interviews with the healthcare professionals in part two, informed the operational definitions of the constructs to be measured by the instrument. Therefore, this study followed a "rational method" for defining the test's key constructs (Foxcroft, 2001, p.72). The integrative review and interviews also provided information on the how anorexic symptoms differ between men and women, so that this measure was able to distinguish not only between people who suffer from AN and those who do not but is also able to more accurately measure the levels of symptoms experienced by men.

The test items generated were similar to those found in instruments already developed to measure symptoms of AN (Foxcroft, 2001). Thus, the test response options conformed to a likert-type scale. The exact item composition and number of items was determined by the themes that emerged from the findings of the integrative review and interviews. The writing of the items was aided by the findings of the literature review and interviews, as well as similar tests (Foxcroft, 2001).

Data Analysis

The findings and discussion from the interviews with clinical psychologists and psychiatrists, as well as, the integrative literature review were combined to inform the content for the new test items.

Reflexivity

The selection of items for inclusion in the test in phase three, although guided by the findings of phases one and two, was predominantly dependent on the researcher's judgment (Foxcroft, 2001). Therefore, certain themes which may still be important to the understanding of AN in men may not have been incorporated in the measure. Thus, it was be important to ensure that any decisions made to include or exclude certain constructs were justified and supported by the data from phases one and two. Further, keeping a journal of all the decisions made during the study allowed the

researcher to be aware of any personal biases and to assess their impact on the data. This self-reflection contributed to the transparency of the research process.

Ethical Considerations

As per the guidelines stipulated by the Health Professions Act (1974, p.31), the development of the test items conformed to the "scientific procedures and current professional knowledge for test design, standardisation, validation, reduction or elimination of bias, and recommendations for use." In accordance with this, the construction of the instrument items conformed to the guidelines stipulated by the HPCSA (2010) and the ITC (2012).

Findings and Discussion

Because the instruments that have been used to measure AN in men have been found to lack validity for this population, new items have been developed, based on the findings of the integrative literature review and the interviews in this research. The findings from these analyses revealed that while they key symptoms of AN are the same for men and women (such as a fear of fatness despite being severely underweight), men are more sensitive to stereotyping and are concerned with different areas of their bodies, that is men focus on both musculature, as well as a fear of becoming fat. Further, they tend to be concerned about different areas of their bodies compared to women, namely more their chests, arms and stomachs rather than their hips, buttocks and thighs. Men diagnosed with AN are more prone to excessive exercise, anabolic steroid use, and purging behavior. Conversely, laxative use is less likely to be acknowledged by men as a means to lose weight. Both men and women have similar levels of pathology in their families and relationships. Men are more likely to have a history of being overweight prior to developing AN than women. There are higher rates of morbidity amongst men and a later typical age of onset (late teens). Men diagnosed with AN tend to have a diminished sexual desire, which is most likely linked to a decrease in testosterone levels. Men have high rates of comorbidity for anxiety and depression. There are conflicting findings concerning whether homosexual orientation places men at an increased risk of developing AN. AN may be linked to identity dissatisfaction in line with what is believed is ideal for one's gender (this includes appearance and sexuality-based stereotypes). Because men who have AN are more sensitive to stigma and stereotyping, the phrasing of questions for a measure of AN needs to be sensitive to gender norms. Because masculinity is often linked with power and control, it is argued that male anorectics would use their bodies as a site to diminish perceived identity deficits, since gender identity is closely linked to the body. Further, men with AN reportedly feel the need to establish more control over themselves due to enmeshed family environments and re-gain identity satisfaction by achieving body related goals. The items and content domains listed below aim to have increased gender sensitivity and may be used to inform the development of the Male Anorexia Nervosa Inventory (MANI) in future research. The items annotated with a single asterisk below are focused on elements of AN symptomatology specific to cis-males, according to the findings from phases one and two. The items given a double asterisk are linked to the identity theory proposed in chapter 2 of the study and these ideas were found to be linked to AN in men, according to the findings from phases one and two. The remaining items share similarities with other tests and are concerned with symptoms reportedly found in both males and females.

MANI Test Items

Body

1. Do you find it difficult to keep warm?
2. Do you find it difficult to get comfortable at night?
3. Are you no longer interested in sexual intercourse?*
4. Do you want your stomach to be completely flat/smooth?*
5. Do you dislike softness on your body?*
6. Do you prefer it when your body feels firm?*
7. Do you have fine hairs developing on your body?
8. Do you suffer from constipation since reducing your food intake?
9. Are you dissatisfied with the amount of muscle on your arms and chest?*

Behaviours

10. Does exercising help you to avoid thinking about food?
11. Does exercising make you feel less hungry?
12. Do you pretend that you have eaten, when you haven't?
13. Do you believe you need to exercise even when your body feels tired?
14. Do you exercise to compensate for eating food?
15. Do you exercise with the goal of losing weight?
16. Do you avoid social gatherings in case there is food?
17. Do you lie about eating food when you haven't had any?
18. Do you take substances to avoid feeling hungry?
19. Do you use steroids to build muscle?*
20. Do you only eat foods that build muscle and limit weight gain?*
21. Do you limit the kinds of food you eat?
22. Do you limit the amount of food you eat?
23. Do you exercise more than would be considered necessary for your training goals?

Cognition

24. Does it take you a long time to perform deep-thinking tasks?
25. Do you feel like your brain is working slower than it did before you lost weight?
26. Do you believe that foods can be categorised as good or bad?
27. Are other people's perceptions of your body different from your own?
28. Are you afraid of becoming fat?
29. Are you distracted by thoughts of food?
30. Do you constantly think about your weight?
31. Do you believe that breaking your diet would be a failure on your part?
32. Do you believe that you need to do things perfectly to be successful?

Social Difficulties

33. Do you believe your parents or guardians are controlling?
34. Are your relationships with others negatively affected by your desire to lose weight?
35. Do you find it difficult to socialise with others around food?
36. Does your exercise regime get in the way of your social commitments?
37. Does your work suffer because of your commitment to exercise regularly?

History

38. Do you have a history of being overweight?*
39. Have you been bullied because of your weight?*
40. Have you ever experienced a sexual trauma?

Identity

41. Are you disappointed in who you are? **
42. Are you dissatisfied with who you are? **
43. Do you feel like you have not met your own expectations? **
44. Do you believe that you have failed to meet the expectations of others? **
45. Do you feel as though your ideal self is unattainable? **
46. Do you believe you would feel better about yourself if you were slimmer? **
47. Are you satisfied with who you are? (reverse scored) **
48. Do you believe that who you are is far from your ideal self? **

Control and Power

49. Do you feel proud when you avoid eating? **
50. Do you feel powerful when you lose weight? **
51. Do you negatively judge others for indulging in foods? **
52. Do you try to go for longer and longer periods without eating food?
53. Do you believe that people who eat are weak? **
54. Does controlling your diet make you feel powerful? **
55. Do you believe that your body is the only thing under your control? */**
56. Do you strive to be perfect in everything that you do?
57. Do you believe that you will have failed if you eat?
58. Do you feel like your life is out of your control?
59. Do you feel like your body is one aspect of your life that you can control? */**
60. When you eat do you feel a loss of control over yourself?
61. Does avoiding eating food make you feel powerful? */**

The item response format would be as follows: Always, Often, Sometimes, Rarely, and Never, whereby each level of agreement would have a corresponding score from 5 to 1, respectively. Generally higher levels of agreement would be linked to a higher possibility of AN being present.

Conclusion

The development of a new measure of AN in men has been indicated as necessary in the literature. The items presented above were developed solely to screen for AN amongst cis-men. These items were informed by the findings of an integrative literature review and interviews with clinical psychologists and psychiatrists. While the items will need further development and testing, they are believed to be a good start to aid the development of the Male Anorexia Nervosa Inventory (MANI) in future research.

Chapter 8: Concluding Comments

Introduction

This chapter gives an overview of the contributions of the research to knowledge, of the limitations and strengths of the study, as well as an explanation of how the study can be used to prompt further research.

Overall Strengths and Limitations

The strengths and limitations for the different parts of the study are discussed concurrently, as many of the strengths and limitations pertain to the overall design. Further, the discussion of strengths and limitations may also speak to the integration of findings and the overarching recommendations for further research on this singular topic of AN in men.

There were limitations on samples for phases one (limited number of experts) and two (only 3 databases and set search terms and limited sources to journals articles published in English). The study is therefore constrained in terms of its generalisability. The test items developed were largely influenced by a particular South African perspective, since the researcher, clinicians and psychologists interviewed were all from Johannesburg, South Africa. The interviews were conducted in Johannesburg due to the accessibility of the participants based the location of the researcher at the time of the study. Therefore, the experiences of males with AN elicited from the interviews with the healthcare professionals are limited in their transferability to those of practitioners working with men from similar contexts. This limitation was intended to be mitigated through the use of data from the integrative review which covered other contexts, however, it should be noted that even the findings from the review predominantly focused on westernised regions. Further, only 9 out of the 14 professionals interviewed had male clients with AN. This means that the data collected from them is limited in that it does not reflect first-hand experiences of professionals working with AN in men. However, their views are believed to still hold value because they are representative of the views of males with AN that may be held by other practitioners who work in the field of EDs. In addition, at the time of the interviews, 9 participants had 4 years or less experience in the field. While this is a limited amount of experience, they had been recently trained and so would have been familiar with the most recent updates to theoretical constructions of AN in men, thus offering important insights in this regard. The small number of experts with experience of treating male AN in the sample demonstrates how few experts working with AN in men there are in SA and the need for more data on understandings of males with AN in this context, towards which this study aimed to contribute.

In terms of data collection there may have been negative effects from the researcher acting as an interviewer and limited access to articles. Using only published journal articles for the integrative literature review meant that some areas of grey literature were not have covered. The content of the test items developed was based on a restricted range of literature, which may not fully capture all of the experiences of men who have been diagnosed with AN. Further the researcher was new to test item construction and so the test items may need further refinement. There were also some weaknesses in terms of the data analysis, in that the types of information focused on, as well as, the level of depth and detail of the analysis were limited. The reporting of the data were limited in terms

of theoretical boundaries, and practical considerations in terms of time and finances. The use of a mixed methods design is believed to have aided in strengthening the fidelity of the instrument items (Collins, Onwuegbuzie & Sutton, 2006). However, the difficulties that were present in combining methodologies and philosophical paradigms needed to be acknowledged, given the debates in the literature concerning the incompatibility of the different research worldviews (Howe, 1988; Greene, 2008). Nonetheless, it was argued that the objectives of the research rather than its theoretical stance would be given priority (Bryman, 2007), and as such both qualitative and quantitative methods, as well as post-positivist and social constructionist worldviews, were combined in this study.

The findings of the study were limited but demonstrate the need to pilot a screening tool for AN designed specifically for use amongst men and the study has made progress towards this by developing test items, as well as, made contributions to theory, knowledge and practice. The use of both an integrative review of the literature and interviews with healthcare professionals was intended to ensure that the items for the future measure would have strong content validity (Foxcroft, 2001; Wolfaardt, 2001). The use of mixed methods and multiple sources during the test item's development should also serve to verify the validity of the instrument.

The use of an integrative literature review, as well as interviews with clinical psychologists and psychiatrists to inform the development of the instrument, rather than primary data from men who suffer from AN, could be considered a shortcoming of the study. Fossey, Harvey, McDermott and Davidson (2002) have argued that the use of secondary data may not accurately reflect the specific experiences of the group among which the items will be used. Nonetheless, the integration of data from multiple peer-reviewed journal articles, as well as professionals who work in the field of eating disorders has served to corroborate this information as being a close reflection of their experiences.

The use of reflexivity and the oscillation between the use of the first and third person in the writing of this report is believed to have added to "the subjective experience as part of the evidence for the author's claims, and [made] the author's perspective and constructive role in creating meaning in [this] study more visible" (Zhou & Hall, 2016, p.2). The balance of these two views in the paper served to highlight the limitations of objectivity and subjectivity in research, and in so doing drew them together in such a way as to be mutually beneficial. The limitations of post-positivism in that it is not able to provide a wholly unbiased account of events were mitigated through open disclosure of possible theoretical, personal and interpretive biases on the part of the researcher, consequently allowed the reader to critically evaluate the researcher's interpretations (Shannon-Baker, 2016; Zhou & Hall, 2016). The weakness of social constructionism to at times prioritise the views of individuals over those most commonly agreed upon was also balanced by the push for generalisability (Zhou & Hall, 2016). Further to this end, the potential for over-generalisation of the findings of the study was restrained by the social constructionist view that all meaning is bound to particular persons, times, places and perspectives (Schwandt, 2000). In this way the tensions between the two perspectives were used to complement one another in a dialectical manner (Shannon-Baker, 2016). In addition, the reflections served to generate deeper and more detailed insights from the data (Shannon-Baker, 2016).

Further, although it is believed that these test items may be used for a new instrument that could act as a screening tool for use by men and by their health care professionals, these items may still

not rule out the possibility of misdiagnosis, due to professional and personal biases. Nonetheless, the specific focus of the items on a particular disorder should reduce the likelihood of misdiagnosis and of the over-use of the EDNOS category by professionals. The careful wording of items mean they are sensitive to gender biases, and should mean that men are more likely to report their experiences honestly and thus to be more accurately assessed. The focus on male specific concerns means that the content of items should possess greater face validity for men. The self-report format of the test items developed is more versatile as it may be used by men themselves or healthcare professionals to screen for anorexic symptomatology. Nonetheless, it must be noted that self-report data may be negatively impacted by a lack of insight or denial amongst potential participants, as well as potential reactivity effects, in the reporting of their experiences. Further, more experienced test developers could be consulted to verify that the item's constructions meet required standards.

A further limitation to the validity of the study was the fact that it did not focus on cross-cultural differences between men from different geographic areas, ethnicities, religions, or socio-economic statuses. The articles that were used to inform the development of the test items focused mostly on men in their twenties, from families who could afford to send them to university or college. Further, although race and religion were not often mentioned in the articles reviewed, the data did predominantly come from countries where the majority of the populations were white and Christian. Moreover, the interviews conducted were limited to practitioners from Johannesburg, South Africa. Therefore the study's findings are not necessarily transferable across cultures and future research on the utility of the items amongst different population groups will need to take these variables into account.

Ultimately, the information gained in developing items for a new screening instrument to measure AN symptomatology in men has served to expand on the literature available pertaining to the experiences of men with AN. A new instrument based on such items would arguably increase the awareness of and help-seeking for AN in men. The need for a new instrument to screen specifically for anorexic symptomatology in men has been well established. Better test items will improve the likelihood of men who suffer with AN being correctly diagnosed and receiving the proper treatment. A more accurate means for developing assessments of AN symptoms in men means that the research conducted on male samples will be more valid and reliable, leading to a greater understanding of AN in men. Further, this research also challenged the ways in which AN has been conceptualized both diagnostically and in broader society.

Recommendations for Future Research

The test items developed here should next be reviewed for content and face validity (De Von et al., 2007; Foxcroft, 2013; Gregory, 2007; Zamanzadeh et al., 2014) by clinical psychologists and psychiatrists. Face validity may be understood as the degree to which a measure appears to be assessing what it intends to measure (Ellis & Levy, 2009). Content validity entails the degree to which the items of a test are able to encompass the information that the measure is supposed to cover (Huck, 2009). The content validity of a test is commonly assessed by having experts on the desired content review the test's items in line with their professional knowledge of the subject area (Huck, 2009. While iinterviewing experts is a commonly used technique to inform the development of test items (DeVon et al., 2007), a DELPHI study is an alternative technique that may be used for future research to obtain expert consensus on the symptoms of AN in men and to review the content of the test items. This is because a DELPHI study is often used to "collect and distill [sic] the anonymous

judgments of experts using a series of data collection and analysis techniques interspersed with feedback" (Skulmoski, Hartman, & Krahn, 2007, p.1).

Therefore, the items should be sent to a minimum of three and a maximum of 10 experts to review (Lynn, 1986). This is because as the number of reviewers increase, the probability of judges reaching a consensus as to the utility of the items decreased, and if fewer than three reviewers are used then the chances of concluding that the items are not relevant when they actually are, is high (Lynn, 1986). This assessment of the items can be done electronically using Survey Monkey. The healthcare professionals should be invited to rate and comment on the utility of each item developed via an email link. The ratings of the relevance of each item should be made on a 4-point Likert-type scale (Davis, 1992; Lynn, 1986; Polit & Beck, 2006; Polit, Beck & Owen, 2007) and the reviewers should be asked to make suggestions for improving the wording of the items, as well as to suggest additional items not yet included (Davis, 1992, Foxcroft, 2013; Gregory, 2007; Lynn, 1986; Zamanzadeh et al., 2014). This will fit the final "judgement-quantification stage" or step 4 of Lynn's model, namely an assessment of the content validity of the items, and step 5, which includes a review of the content validity of the measure as a whole (Lynn, 1986, p. 383). Future research should therefore complete steps three to five of Lynn's (1986) procedure for establishing content validity, the last three steps of Foxcroft's (2013) instrument design process, and phase three of the IDCV (Onwuegbuzie, Bustamante & Nelson, 2010).

The content and face validity can be determined by the CVIs and recommendations for the improvement of the test items reported. The responses of the reviewers can be analysed using statistical techniques, as well as thematic content analysis in order to determine the content and face validity of the instrument, as well as to further refine the items. Psychologists and psychiatrists can be asked to rate the relevance of the test items and these ranked scores (1. not relevant, 2. somewhat relevant, 3. quite relevant, 4. highly relevant), which can be analysed using the Content Validity Index (CVI) parameters recommended by Polit, Beck and Owen (2007), in order to determine whether the test items possess high content validity. In addition, since the CVI cannot account for agreement between the reviewers by chance, the cut-offs for CVI values recommended by Polit, Beck and Owen (2007) should be applied as they minimize the likelihood that the levels of agreement found regarding the relevance of items will be greater than they would be at random. To supplement this data, recommendations regarding the test items from the review panel should be subjected to thematic content analysis. These comments should include suggestions for additional items, overall impressions of the questions and proposed improvements concerning item phrasing and the order in which questions should be presented (Davis, 1992, Foxcroft, 2013; Gregory, 2007; Lynn, 1986; Onwuegbuzie, Bustamante, & Nelson's, 2010; Zamanzadeh et al., 2014). In addition, a pilot study should be conducted to examine the responses of men both diagnosed with AN and not, using appropriate statistical techniques, and a thematic content analysis in order to determine the reliability and validity of the items. This will enable the validity of the items to be compared across different cultural groups to determine transferability of the items for use in different regions and with participants from different cultural backgrounds (Foxcroft, 2013). Lastly, more experienced test developers should review the test item construction to improve the validity of the items.

Overall Conclusion

The findings of this study have contributed to the growing body of literature on AN in males as well as challenged existing conceptions of AN by interrogating the reported differences in the literature

between the experiences of men and women who suffer from AN. This investigation has informed both clinical practice and further research through the development items that may be used for a new screening instrument to measure anorexia in males. The development items to measure the levels of AN symptomatology in SA men may lead to the future development of a normalised measure that can be used amongst male populations, both for research and in practice, to screen men for AN or as an aid to diagnosis. The applicability of the resulting instrument to other samples and contexts will still need to be established but the existence of the measure means that it may be adapted and changed to suit alternative populations.

In conclusion, this report has established a comprehensive list of symptoms for AN in men, as well as established the differences and similarities between symptom expression in men and women, based on the first integrative review of literature found under SAePublications, Google Scholar and PsychINFO between July 2000 and 2013. The findings of this study have shed new light on the beliefs held by 14 South African psychiatrists and clinical psychologists. These results showed that clinical psychologists and psychiatrists hold biases concerning gender and its links to AN. Further, they acknowledge that while many of the core features of AN are the same for males and females, the expression and experience of these may be different between genders. This research has developed an original list of items, based on the findings from these interviews and an integrative literature review, which may be useful for developing a screening tool to aid the measurement of AN symptoms in men. The arguments made in this dissertation suggest that it is important to consider the impact of gender and of identity on the experience and diagnosis of AN in men, as well as the subsequent need for a measure of AN in men that accounts for these. This indicates the need to revise and update psychological theories of AN, as well as the diagnostic criteria for AN. Further, the wording of items for screening tools need to take into consideration the ways that social constructions of gender and AN can impact on how men perceive and respond to test items.

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Appendices

Appendix A: Participant Information Sheet for Interview

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4503 Fax: 011 717 4559

Hello, my name is Megan Reeves. I am currently completing a Doctoral Degree in Psychology at the University of the Witwatersrand. I am conducting a study to investigate the symptoms that are experienced by men who have been diagnosed with anorexia nervosa. This research is important because while the symptoms experienced by women who have been diagnosed with anorexia nervosa have been studied widely, there is little research on the different experiences of this disorder which men may have. Therefore, as a practicing clinical psychologist/ psychiatrist, I am inviting you to participate in this research on a voluntary basis.

There will be no consequences if you decide not to participate. If you choose to participate, you may choose not to respond to any questions that you do not feel comfortable answering. Further the interview questions will pertain to your involvement with clients in general and at no point will you be asked to provide any identifying information concerning your clients. Please note that while your name will be known, it will not be linked to the interview records in any way nor will your name be mentioned in the research report, further publications or presentations. Whatever is said in this interview will be kept confidential, as only my supervisor and I will have access to the audio recordings or interview transcripts. I will be conducting the interview and it should not take more than one hour of your time. Please note that you may be called upon to participate in some follow-up interviews in order to clarify any information that you share.

With your permission, the interviews will be audio recorded while I take some brief notes so that the interview can be transcribed for data analysis. Further, the information from the interview, including direct quotes, will be used in the research report and subsequent publications or presentations. Your details will not be written on the interview records nor in any research publications and neither will the names of any organisations with which you are affiliated. A pseudonym will be used in place of your real name. The recordings and transcripts of your interview will be kept in a secure locked cupboard at the university for the purposes of future research, where my supervisor and I will have access to them. The data from this study will be presented in a formal research dissertation that may be accessed through the University of the Witwatersrand's library database after July 2016. A summary of the study's findings will also be sent to you upon request.

To participate in this interview with me, please sign the consent form attached to show that you have read and understood the aim and process of this interview. Should you require any further information regarding this study, please do not hesitate to contact me or my supervisor. Please detach and keep this sheet.

Researcher:	Supervisor:
Name: Ms. Megan Reeves	Name: Prof. Sumaya Laher
E-mail: megan_moya@yahoo.com	E-mail: sumaya.laher@wits.ac.za

Although I do not anticipate that this is likely, should this process cause you any distress please note the following free telephonic counselling services, which can also provide referrals for further face-to-face counselling if necessary: Lifeline: 011 728 1347
The South African Depression and Anxiety Group: 0800 567 567

Appendix B: Informed Consent Sheet for Interview and Audio Recording

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4503 Fax: 011 717 4559

I _____ (the participant) have been given the participant information sheet for the study entitled "Towards the Development of an Instrument to Measure Anorexia Nervosa in Men: A South African Pilot Study" being conducted by Miss Megan Reeves. I consent for Miss Megan Reeves to interview me for this study and to audio record the interview. I have read the information sheet and understand its contents.

I understand that:

 My participation in this research is entirely *voluntary*; as I am free to choose to participate or not to participate.

 I may decide to stop participating at any time prior to the completion of the interview, since there is *no penalty* for withdrawing or refusing to participate.

 I may choose not to answer specific questions and there is *no penalty* for refusing to address these questions.

 I agree to allow for the use of direct quotes from my interview in the research report as well as subsequent presentations and publications.

 All information will be treated with the utmost *confidentiality*, whereby pseudonyms will be used in place of my real name and no identifying information will appear in the transcripts, future publications or the research dissertation.

 My name and the names of any organisations I am affiliated with will be omitted from the interview transcriptions.

 I understand that the recordings and transcripts from this interview will be kept in a secure locked cupboard at the University of the Witwatersrand for a period of five years after completion of the study and that only the research supervisor and researcher will have access to them.

 If I agree to participate I need to *sign* this form as proof of my willingness to participate.

Therefore, I hereby give consent to voluntarily participate in this interview with Miss Megan Reeves:

Participant signature: _____ Date: _____

I also give consent to be audio recorded in this interview with Miss Megan Reeves:

Participant signature: _____ Date: _____

Appendix C: Participant Information Sheet for Electronic Questionnaire

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4503 Fax: 011 717 4559

Hello, my name is Megan Reeves. I am currently completing a Doctoral Degree in Psychology at the University of the Witwatersrand. I am conducting a study to investigate the symptoms that are experienced by men who have been diagnosed with anorexia nervosa. For my research I have developed a preliminary instrument designed to assess levels of anorexic symptoms experienced by men specifically.

This research is important because while the symptoms experienced by women who have been diagnosed with anorexia nervosa have been studied widely, there is little research on the different experiences of this disorder which men may have. Therefore, I am inviting you to participate in this research on a voluntary basis. Should you feel vulnerable upon completing this questionnaire, please contact Lifeline or the South African Depression and Anxiety Group (whose numbers are provided below) who offer free telephonic counselling services.

Participation in this study involves the completion of an online questionnaire containing items relating to your body image, as well as your eating attitudes and behaviours. The questionnaire should take no longer than 30 minutes to complete. If you decide to participate in this study, you will be asked to complete a questionnaire online by following the link sent via e-mail. After you have completed the questionnaire you should click the "submit" button. If you choose to participate in this study, you are kindly asked to complete the questionnaire within four weeks of receiving this e-mail.

Participation in this study will be anonymous. No identifying information will be requested from you and therefore none of your responses will be linked to you. By completing and submitting the questionnaire you will be consenting to your participation in this research and to the use of your responses for inclusion in my doctoral thesis, conference presentations and research publications. The data from this investigation will therefore be stored electronically under password protection for a period of five years after completion of the study so that it may be used in future research. After five years, the data will be destroyed.

All responses will only be viewed by my supervisor and me. Your responses will remain anonymous and only general trends will be reported in the research rather than individual answers. As part of the study all participants have the right to withdraw from the study at any given point before the submission of your answers without repercussions. As a participant, you are also entitled not to respond to any question that you do not wish to answer. This being said, you are encouraged to answer all questions since this will aid the research process and allow for a fuller understanding of the experiences of men who suffer from anorexia nervosa.

The data from this study will be presented in a formal research dissertation, research presentations and publications. The results of this study may be accessed through the University of the Witwatersrand's library database after July 2016. A summary of the study's findings will also be sent to you upon your request. Should you require any further information regarding this study, please do not hesitate to contact me or my supervisor.

Researcher:
Name: Ms. Megan Reeves
E-mail: megan_moya@yahoo.com

Supervisor:
Name: Prof. Sumaya Laher
E-mail: sumaya.laher@wits.ac.za

Lifeline: 011 728 1347; The South African Depression and Anxiety Group: 0800 567 567

Appendix D: The Eating Disorders Inventory[3]

This is a scale that measures a variety of attitudes, feelings and behaviours. Some of the items relate to food and eating, while others ask you about your feelings in regards to yourself. THERE ARE NO RIGHT OR WRONG ANSWERS SO PLEASE TRY TO BE COMPLETELY HONEST. PLEASE NOTE THAT RESULTS WILL BE COMPLETELY ANONYMOUS. Read each question and place a (X) under the column which applies best to you. Please answer each question very carefully.

Statement	Always	Usually	Often	Sometimes	Rarely	Never
1) I eat sweets and Carbohydrates without feeling nervous.						
2) I think that my stomach is too big.						
3) I wish that I could return to the security of childhood.						
4) I eat when I am upset.						
5) I stuff myself with food.						
6) I wish that I could be younger.						
7) I think about dieting.						
8) I get frightened when my feelings are too strong.						
9) I think that my thighs are too large.						
10) I feel ineffective as a person.						
11) I feel extremely guilty after overeating.						
12) I think that my stomach is just the right size.						
13) Only outstanding performance is good enough in my family.						
14) The happiest time in life is when you are a child.						
15) I am open about my feelings.						
16) I am terrified about gaining weight.						
17) I trust others.						
18) I feel alone in the world.						

[3] These items were taken from Garner, Olmstead and Polivy (1983, p.21-23).

Statement	Always	Usually	Often	Sometimes	Rarely	Never
19) I feel satisfied with the shape of my body.						
20) I feel generally in control of things in my life.						
21) I get confused about what emotion I am feeling.						
22) I would rather be an adult than a child.						
23) I can communicate with others easily.						
24) I wish I were someone else.						
25) I exaggerate or magnify the importance of weight.						
26) I can clearly identify what emotion I am feeling.						
27) I feel inadequate.						
28) I have gone on eating binges where I have felt that I could not stop.						
29) As a child, I tried very hard to avoid disappointing my parents and teachers.						
30) I have close relationships.						
31) I like the shape of my buttocks.						
32) I am preoccupied with the desire to be thinner.						
33) I don't know what's going on inside me.						
34) I have trouble expressing my emotions to others.						
35) The demands of adulthood are too great.						
36) I hate being less than best at things.						
37) I feel secure about myself.						
38) I think about overeating.						
39) I feel happy that I'm not a child anymore.						
40) I get confused as to whether or not I am hungry.						
41) I have a low opinion of myself.						

Statement	Always	Usually	Often	Sometimes	Rarely	Never
42) I feel I can achieve my standards.						
43) My parents have expected excellence from me.						
44) I worry that my feelings will get out of control.						
45) I think that my hips are too big.						
46) I eat moderately in front of others and stuff myself when they're gone.						
47) I feel bloated after eating a normal meal.						
48) I feel that people are happiest when they are children.						
49) If I gain a pound, I worry that I will keep gaining.						
50) I feel that I am a worthwhile person.						
51) When I am upset, I don't know if I am sad, frightened or angry.						
52) I feel that I must do things perfectly, or not do them at all.						
53) I have the thought of trying to vomit to lose weight.						
54) I need to keep people at a certain distance (feel uncomfortable if they get too close).						
55) I think that my thighs are just the right size.						
56) I feel empty inside (emotionally).						
57) I can talk about personal thoughts or feelings.						
58) The best years of your life are when you become an adult.						
59) I think that my buttocks are too large.						
60) I have feelings I can't quite identify						
61) I eat or drink in secrecy.						
62) I think that my hips are just the right size.						
63) I have extremely high goals.						
64) When I am upset, I worry that I will start eating.						

Appendix E: Eating Attitudes Test[4]

Please place an (X) under the column which applies best to each of the numbered statements. All of the results will be *strictly confidential*. Most of the questions directly relate to food or eating, although other types of questions have been included. Please answer each question carefully. Thank you.

Statement	Always	Very Often	Often	Sometimes	Rarely	Never
1. Like eating with other people.						
2. Prepare foods for others but do not eat what I cook.						
3. Become anxious prior to eating.						
4. Am terrified about being overweight.						
5. Avoid eating when I am hungry.						
6. Find myself preoccupied with food.						
7. Have gone on eating binges where I feel that I may not be able to stop.						
8. Cut my food into small pieces.						
9. Aware of the calorie content of foods that I eat.						
10. Particularly avoid foods with a high carbohydrate content (e.g. bread, potatoes, rice, etc.).						
11. Feel bloated after meals.						
12. Feel that others would prefer if I ate more.						
13. Vomit after I have eaten.						
14. Feel extremely guilty after eating.						
15. Am preoccupied with a desire to be thinner.						
16. Exercise strenuously to burn off calories.						
17. Weigh myself several times a day.						

[4] These items were taken from Garner and Garfinkel (1979, p.874).

18. Like my clothes to fit tightly.						

Statement	Always	Very Often	Often	Sometimes	Rarely	Never
19. Enjoy eating meat.						
20. Wake up early in the morning.						
21. Eat the same foods day after day.						
22. Think about burning up calories when I exercise.						
23. Have regular menstrual periods.						
24. Other people think that I am too thin.						
25. Am preoccupied with the thought of having fat on my body.						
26. Take longer than others to eat meals.						
27. Enjoy eating at restaurants.						
28. Take laxatives.						
29. Avoid foods with sugar in them.						
30. Eat diet foods.						
31. Feel that food controls my life.						
32. Display self control around food.						
33. Feel that others pressure me to eat.						
34. Give too much time and thought to food.						
35. Suffer from constipation.						
36. Feel uncomfortable after eating sweets.						
37. Engage in dieting behaviour.						
38. Like my stomach to be empty.						
39. Enjoy trying new rich foods.						
40. Have the impulse to vomit after meals.						

Appendix F: Semi-Structured Interview Guide

Questions:

1. For how long have you been practicing as a clinical psychologist/psychiatrist?
2. What is your understanding of the term anorexia nervosa?
3. Do you personally believe that anorexia nervosa is a disorder that men can experience? Please explain your answer.
4. Have you ever diagnosed a man with anorexia nervosa?

4.1. If yes, how did you diagnose him, for example what methods or tools did you use?

5. Do you know of a colleague who has diagnosed a man with anorexia nervosa?
6. How many clients have you consulted with who have suffered from Anorexia Nervosa?

6.1. How many of these clients are male?

7. What are some of the difficulties you have experienced or anticipate with regards to diagnosing Anorexia Nervosa in men?
8. Have you ever treated a man who is suffering from Anorexia Nervosa?

8.1. If yes, what types of symptoms did he exhibit and were these symptoms any different from those typically experienced by women who suffer from anorexia nervosa?

9. Are there any recommendations you would like to make in regards to the development of a self-report instrument for measuring anorexia nervosa in men?
10. Would you be willing to offer constructive feedback on possible items for inclusion in a self-report measure of anorexia nervosa in men?
11. Would you be willing to share my details with men who you have treated or diagnosed with anorexia nervosa so that they may contact me if they are interested in participating in a pilot study of to assess the efficacy of a screening instrument? They will be forwarded a link to an online anonymous questionnaire that they may complete in their own time.
12. Do you have anything else you would like to add?

Appendix G: Research Request Form

Psychology
School of Human & Community Development
University of the Witwatersrand
Private Bag 3, Wits, 2050
Tel: 011 717 4503 Fax: 011 717 4559

To whom it may concern,

My name is Megan Reeves; I am currently doing my doctoral degree in Psychology at the University of the Witwatersrand. In order to complete my degree I need to compile a research thesis. The aim of my study is to investigate the symptoms experienced by men who have been diagnosed with anorexia nervosa and to use this information to inform the development of a self-report screening instrument to measure anorexic symptomatology in men. My research will involve a literature review of the available data on the topic, as well as interviews with practising clinical psychologists. The data gathered from these sources will be used to inform the development of an instrument which I would like to pilot by administering the questionnaire online to men who have been diagnosed with anorexia nervosa, and to men who have not been diagnosed with anorexia nervosa (or any other psychological disorder).

This study will contribute to a slowly growing body of knowledge surrounding the experiences of men who suffer from anorexia nervosa and will help to inform psychological research and practice. Should my research proposal be passed by the relevant ethics committee, would you be willing to grant me permission to invite your clinical staff to participate in my research at a time and place that is convenient for them?

Please indicate your willingness to allow me to invite your staff to participate in my research by completing the following:

I _____, in my capacity as_____ do hereby grant Megan Reeves permission to contact the clinical staff at _____ with the purposes of inviting them to participate in her research.

Signed: _____ Date: _____

Kind Regards

Megan Reeves

Appendix H: Demographic Questionnaire

Please tick the appropriate box in response to the questions that follow. Please note that this information is purely for statistical purposes.

1. Age: _____

2. Province: _____

3. Citizenship: South African ☐ Other (Please Specify): _____

4. Sex: Man ☐ Woman ☐

5. Religious Affiliation: Christian ☐ Jewish ☐ Muslim ☐ Hindu ☐
Agnostic ☐ Atheist ☐ Other (Please Specify): _____

6. Race: Black ☐ White ☐ Coloured ☐ Indian ☐
Chinese ☐ Other (Please Specify): _____

7. First Language: English ☐ Afrikaans ☐ Zulu ☐ Xhosa ☐
Sotho ☐ Ndebele ☐ Other (Please Specify): _____

8. Sexual Orientation: Homosexual ☐ Heterosexual ☐ Bisexual ☐

9. Occupation: _____

10. Monthly Individual Income: _____

11. Highest Level of Education: Doctoral Degree: ☐ Masters Degree ☐
Honours Degree ☐ Bachelors Degree ☐ Matric ☐
Other (Please Specify): _____

12. Have you been to see a psychologist? In the last week ☐ In the last month ☐
In the last six months ☐ In the past year ☐

13. Have you been diagnosed with anorexia nervosa? Yes ☐ No ☐

14. Have you been diagnosed with another mental illness other than anorexia nervosa?
Yes (Please Specify) _____ No ☐

Appendix I: Ethics Clearance Certificate 1

R14/49 Ms Megan Moya Reeves

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130752

NAME: (Principal Investigator)	Ms Megan Moya Reeves
DEPARTMENT:	Psychology Tara Hospiral and Cresent Clinic
PROJECT TITLE:	Towards the Development of an Instrument to Measure Anorexia Nervosa in Men: A South African Pilot Study
DATE CONSIDERED:	26/07/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof Sumaya Laher
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	04/09/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature _____ Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix J: Ethics Clearance Certificate 2

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

R14/49 Ms Megan Moya Reeves

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M180797

NAME: (Principal Investigator)	Ms Megan Moya Reeves
DEPARTMENT:	Psychology Tara Hospital and Cresent Clinic
PROJECT TITLE:	Towards the Development of an Instrument to Measure Anorexia Nervosa in Men
DATE CONSIDERED:	26/07/2013
DECISION:	Approved unconditionally
CONDITIONS:	Renewal for 5 Years Valid for the Period 01 July 2018 - 30 June 2023 Previously M130752
SUPERVISOR:	Prof Sumaya Laher
APPROVED BY:	Professor CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	13/08/2018

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary on the Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in **July** and will therefore be due in the month of **July** each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Reeves. 28-09-2018

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix K: Table of Frequencies for Excluded Sources
Table 6: Summary of frequencies for excluded sources

Database Findings	Abstracts Only		Books		Conflated Results		Incorrect Focus		Incorrect Sample		Internal Biological		No access		Not pe review	
Google Scholar	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	
AN_in_a_man	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
AN_in_men	0	0.00	6	4.96	1	2.44	9	12.33	8	7.69	2	8.00	3	6.52	3	8
AN_in_a_male	0	0.00	3	2.48	1	2.44	1	1.37	1	0.96	2	8.00	1	2.17	0	0
AN_in_males	0	0.00	30	24.79	15	36.59	9	12.33	40	38.46	2	8.00	9	19.57	7	19
man_with_AN	0	0.00	4	3.31	4	9.76	10	13.70	8	7.69	3	12.00	7	15.22	2	5
men_with_AN	0	0.00	11	9.09	5	12.20	10	13.70	3	2.88	4	16.00	3	6.52	3	8
male_with_AN	0	0.00	3	2.48	0	0.00	0	0.00	0	0.00	1	4.00	2	4.35	8	22
males_with_AN	0	0.00	16	13.22	3	7.32	10	13.70	23	22.12	6	24.00	6	13.04	2	5
anorectic_man	1	100.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	2.17	0	0
anorectic_men	0	0.00	2	1.65	2	4.88	6	8.22	0	0.00	1	4.00	1	2.17	0	0
anorectic_male	0	0.00	0	0.00	0	0.00	0	0.00	1	0.96	0	0.00	2	4.35	0	0
anorectic_males	0	0.00	2	1.65	0	0.00	1	1.37	0	0.00	1	4.00	0	0.00	0	0
anorexic_man	0	0.00	4	3.31	0	0.00	3	4.11	1	0.96	0	0.00	0	0.00	0	0
anorexic_men	0	0.00	12	9.92	1	2.44	1	1.37	1	0.96	0	0.00	2	4.35	1	2
anorexic_male	0	0.00	5	4.13	1	2.44	3	4.11	0	0.00	0	0.00	1	2.17	2	5
anorexic_males	0	0.00	5	4.13	5	12.20	4	5.48	9	8.65	0	0.00	2	4.35	3	8
male_AN	0	0.00	17	14.05	2	4.88	6	8.22	9	8.65	2	8.00	6	13.04	4	11
man_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	2
male_diagnosed_with_AN	0	0.00	1	0.83	1	2.44	0	0.00	0	0.00	1	4.00	0	0.00	0	0
males_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0

Total	1	6.67	121	100.00	41	83.67	73	35.27	104	68.87	25	80.65	46	93.88	36	61
Database Findings	Abstracts Only		Books		Conflated Results		Incorrect Focus		Incorrect Sample		Internal Biological		No access		Not pe review	
PsychINFO	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	
AN_in_a_man	0	0.00	0	0.00	3	50.00	2	100.00	4	16.00	2	40.00	0	0.00	2	10
AN_in_men	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
AN_in_a_male	0	0.00	0	0.00	3	50.00	0	0.00	18	72.00	3	60.00	2	66.67	0	0
AN_in_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorectic_man	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorectic_men	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorectic_male	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorectic_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorexic_man	0	0.00	0	0.00	0	0.00	0	0.00	1	4.00	0	0.00	0	0.00	0	0
anorexic_men	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorexic_male	0	0.00	0	0.00	0	0.00	0	0.00	2	8.00	0	0.00	1	33.33	0	0
anorexic_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
Total	0	0.00	0	0.00	6	12.24	2	0.97	25	16.56	5	16.13	3	6.12	2	3

Database Findings	Abstracts Only		Books		Conflated Results		Incorrect Focus		Incorrect Sample		Internal Biological		No access		Not pe review	
SAePublications	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	
AN_in_a_man	0	0.00	0	0.00	0	0.00	11	8.33	3	13.64	0	0.00	0	0.00	0	0
AN_in_men	0	0.00	0	0.00	1	50.00	7	5.30	7	31.82	0	0.00	0	0.00	0	0
AN_in_a_male	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
AN_in_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorectic_man	0	0.00	0	0.00	0	0.00	3	2.27	0	0.00	0	0.00	0	0.00	2	9
anorectic_men	0	0.00	0	0.00	0	0.00	11	8.33	0	0.00	0	0.00	0	0.00	0	0
anorectic_male	8	57.14	0	0.00	0	0.00	32	24.24	0	0.00	0	0.00	0	0.00	3	14
anorectic_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
anorexic_man	0	0.00	0	0.00	0	0.00	5	3.79	1	4.55	0	0.00	0	0.00	1	4
anorexic_men	0	0.00	0	0.00	0	0.00	3	2.27	0	0.00	0	0.00	0	0.00	1	4
anorexic_male	0	0.00	0	0.00	0	0.00	15	11.36	0	0.00	0	0.00	0	0.00	5	23
anorexic_males	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_AN	6	42.86	0	0.00	1	50.00	45	34.09	11	50.00	1	100.00	0	0.00	9	42
man_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_diagnosed_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
man_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
men_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
male_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0
males_suffering_with_AN	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0

Total [a]	14	93.33	0	0.00	2	4.08	132	63.77	22	14.57	1	3.23	0	0.00	21	35
Grand Total [b]	15	1.96	121	15.78	49	6.39	207	26.99	151	19.69	31	4.04	49	6.39	59	7

a – the percentages shown in this row are the percentages for each column total of each column grand total

b – the percentages shown in this row denote the percentage for each database column total of the 767 sources retrieved for review

Appendix L: Findings for integrative literature review

Table 7: Summary of findings for integrative literature review

No.	Search	Reference	Type	Sample	Methods
1	AN in men 2 of 4	Peate (2011)	Secondary Research, Qualitative Clinical Review	Secondary Research, Qualitative Clinical Review	Secondary Research, Qualitative Clinical Review
2	AN in men 4 of 4	Weltzin (2012)	Primary Research. Mixed Method	111 males between 12 and 60 years old	Self-report measures EDI-3, EDE-Q, BDI-II, STAI, CAC. Semi-structured diagnostic interviews. Chart reviews.
3	AN in a man 1 of 7	Mitchell et al. (2012)	Primary Research, Quantitative	Probability sample of 1220 men and 1760 women with EDs and PTSD; 46 men and 191 women endorsed AN items	CIDI
4	AN in a man 2 of 7	Hewitt, et al. (2001)	Primary Research, Quantitative	724 death records with AN cause of death	ICD-9 Diagnostic criteria, Content Analysis
5	AN in a man 3 of 7	Gutierrez & Vazquez (2000)	Primary Research, Qualitative	Three cases (1 male patient), 23 years old	Case Study; Interviews; EAT-40; Symptom Checklist 90-Revised
6	AN in a man 4 of 7	Raevouri et al. (2008)	Primary Research, Qualitative	5 males twins, born between 1975 and 1979 from Finnish twin cohorts	Short-version of the Structured Clinical Interview for DSM-IV (interviews) (MINI)(BMI); self-administered questionnaires - Disordered Eating Attitude Scale, Restraint Scale
7	AN in a man 5 of 7	Scagliusi et al. (2009)	Primary Research, Quantitative	7 men with anorexia nervosa patients at a major treatment center in Brazil between 2006 and 2008	BMI; Four self-report measures: SCL - 90R; GSI; EDI; EAT-40; BDI; socio-demographic, personal and clinical data.
8	AN in a man 6 of 7	Gueguen et al. (2012)	Primary research; Quantitative	23 anorectic males hospitalised in pairs between 1988 and 2004; Fatality was assessed in in 2008.	
9	AN in a man 7 of 7	Hudson et al. (2007)	Primary Research; Quantitative	2890 part II respondents; 23 AN	CIDI & SCID.
10	AN in a male 1 of 18	Murray et al. (2012)	Primary Research, Quantitative	21 male muscle dysmorphia patients; 21 male AN patients; 15 male gym users	BMI, EDE-Q, MDDI, CET, measure of appearance enhancing substance use
11	AN in a male 2 of 18	Wooldridge & Lytle (2012)	Integrative overview, Qualitative	Not clearly defined; Research on familial, biological, cultural, and psychodynamic factors	Literature Review
12	AN in a male 3 of 18	Winston et al. (2004)	Primary Research, Qualitative	2 males with AN and GID	Comparative case study
13	AN in a male 4 of 18	Botha (2010)	Secondary Research, Qualitative	Not clearly defined	Social Constructionist
14	AN in a male 5 of 18	Ramacciotti et al. (2000)	Primary Research, Quantitative	7 females and 6 males with AN and EDNOS	Adult Attachment Interview
15	AN in a male 6 of 18	Mangweth et al. (2003)	Primary Research, Quantitative	17 AN men, 10 BN men, 21 mountain climbers, 21 controls	Somatomorphic Matrix

16	AN in a male 7 of 18	Nunez-Navarro et al. (2012)	Primary Research, Quantitative	60 male and 60 female with ED, compared 120 non-ED	RDI-2, Symptom Checklist - Revised, Temperament and Character Inventory - Revised
17	AN in a male 8 of 18	Bassett (2002)	Primary Research, Quantitative	8 AN males	BSRI, Franck Drawing Completion test, Conceptual Level of Object Representation, Perceived Somatotype Scale
18	AN in a male 9 of 18	Stoving et al. (2011)	Primary Research, Quantitative	Inpatients at Odense University Hospital in Funen, Denmark, (356) 35% of patients had AN, (17) 5% of whom were male	BMI; Ideal body weight (median for average population), self-reported binge-purge behaviours, survival analysis
19	AN in a male 10 of 18	Hepp & Milos (2002)	Primary Research, Qualitative	One 35 year old biological male "transsexual" patient with AN	Case Study
20	AN in a male 11 of 18	Weltzin et al. (2007)	Primary Research, Quantitative	105 males, 58 with AN, 15 followed up after discharge	EDI-2;self-developed phone survey for follow-up
21	AN in a male 12 of 18	Walder & Baumann (2008)	Primary Research; Quantitative	One male adolescent	Case Study
22	AN in a male 13 of 228	Strober et al. (2001)	Primary Research; Quantitative	29 male anorexic patients admitted to UCLA with at least one consenting first-degree relative	Structured direct and phone interviews
23	AN in a male 14 of 18	Tchanturia et al. (2012)	Primary Research, Quantitative	48 AN individuals (19 male) and 61 controls (20 male)	Iowa Gambling Task (IGT) and Barratt Impulsiveness Scale (BIS)
24	AN in a male 15 of 18	Birmingham & Tan (2003)	Primary Research, Qualitative	1 male with AN	
25	AN in a male 16 of 18	Fassino et al. (2001)	Primary Research, Quantitative	15 male and 50 female anorectics, 28 male and 58 female controls	Temperament and Character Inventory
26	AN in a male 17 of 18	Bean et al. (2008)	Primary Research, Quantitative	107 individuals (72 females and 35 males) diagnosed with AN	Beck Depression Inventory (BDI) and Maudsley Obsessive Compulsive Inventory (MOCI)
27	AN in a male 18 of 18	Woods (2004)	Primary Research, Qualitative	16 females and 2 males	Qualitative, open-ended electronic email survey
28	AN in males 1 of 34	Crisp & Collaborators (2006)	Primary Research; Quantitative	1960-1990 population of 935 ex-patients; 850 female and 85 male	Causes of death
29	AN in males 2 of 34	Darcy & Lin (2012)	Secondary Research; Review	Most commonly used ED assessments with males	Unknown
30	AN in males 3 of 34	Al-Adawi et al. (2003)	Primary Research; Quantitative	126 female and 136 male urban Omani adolescents	CIDI and EAT-26
31	AN in males 4 of 34	Kiraly & Joy (2003)	Primary Research; Qualitative	1 male triathlete	Case Study
32	AN in males 5 of 34	Crisp & Collaborators (2006)	Secondary Research, Quantitative	751 females & 62 males with AN; 176 females & 17 males with an ED & history of AN	Secondary data analysis
33	AN in males 6 of 34	Chial, et al. (2002)	Secondary Research, Qualitative Review	Not specified	Not specified

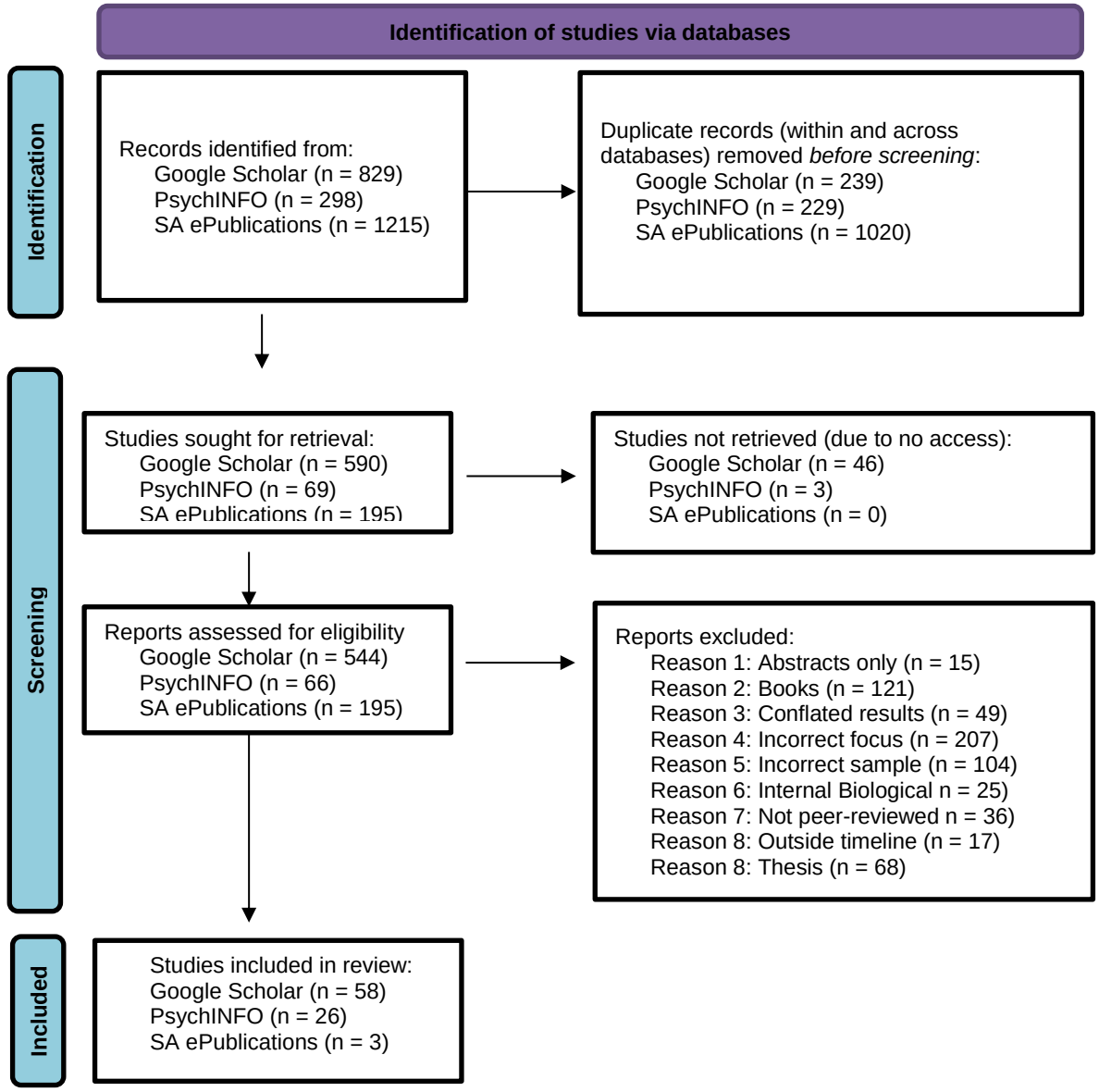
34	AN in males 7 of 34	McCabe & Ricciardelli (2004)	Secondary Research, Review	Not specified	Not specified
35	AN in males 8 of 34	Hunt et al. (2012)	Primary Research, Qualitative	1 male	Case Study
36	AN in Males 9 of 34	Goldstein et al. (2008)	Primary Research; Qualitative	1 male	Case Study
37	AN in Males 10 of 34	Cinemre & Kulaksizoğlu (2007)	Primary Research; Qualitative	1 male	Case Study
38	AN in Males 11 of 34	Nilsson et al. (2007)	Primary Research; Qualitative	5 females	Interviews
39	AN in Males 12 of 34	Woodside et al. (2001)	Primary Research; Quantitative	62 men & 212 women community sample	CIDI
40	AN in Males 13 of 34	Krentz & Arthur (2001)	Secondary, Qualitative	Not specified	Literature Review
41	AN in Males 15 of 34	Glazer (2008)	Secondary, Qualitative	Not specified	Literature Review
42	AN in Males 16 of 34	Freeman (2005)	Secondary, Qualitative	Articles published between 1979 and 2002 focused on diagnostic criteria for eating disorders in men	Literature Review
43	AN in Males 17 of 34	Jones & Morgan (2010)	Secondary, Qualitative	MEDLINE (1966-present); EMBASE (1980-present); PsycINFO (1967-present); CINAHL (1982-present)	Literature Review
44	AN in Males 18 of 34	Harvey & Robinson (2003)	Secondary, Qualitative	Not specified	Literature Review
45	AN in Males 19 of 34	Raevuori et al. (2009)	Primary, Quantitative	2122 FinnTwin Men	SCID
46	AN in Males 20 of 34	Tong et al. (2005)	Primary, Qualitative	4 cases of AN	Case Study
47	AN in Males 21 of 34	Strumia, et al. (2007)	Secondary, Qualitative	Not specified	Editorial
48	AN in Males 22 of 34	Raevuori et al. (2008)	Primary, Qualitative	2122 FinnTwin Men	Case Study
49	AN in Males 23 of 34	Meczekalski, et al. (2013)	Secondary, Qualitative	Not specified	Literature Review
50	AN in Males 24 of 34	Crosscope-Happel et al. (2000)	Secondary; Qualitative	Articles published between 1992 and 1999 focused on male anorexia	Literature Review
51	AN in Males 25 of 34	Murray & Touyz (2012)	Secondary, Qualitative	Not specified	Literature Review
52	AN in Males 28 of 34	Till (2011)	Secondary, Qualitative	Not specified	Literature Review
53	AN in Males 31 of 34	Dalgliesh & Nutt (2013)	Secondary, Qualitative	Not specified	Literature Review
54	AN in Males 32 of 34	Soban (2006)	Secondary, Qualitative	Not specified	Literature Review
55	AN in Males 33 of 34	Dignon et al. (2006)	Primary, Qualitative	15 anorectic patients	Interviews

56	AN in Males 34 of 34	Cazzuffi et al. (2010)	Primary, Qualitative	1 man with AN	Case Study
57	Man with AN 1 of 1	Bratland-Sanda & Sundgot-Borgen (2013)	Secondary, Qualitative	Not specified	Literature Review
58	Men with AN 1 of 3	Claes et al. (2012)	Primary Quantitative	132 males with ED	EDI-2, SCL-90-R, TCI-R
59	Men with AN 3 of 3	Murray & Baghurst, (2013)	Secondary, Qualitative	Not specified	Literature Review
60	Males with AN 1 of 4	Raevuori et al. (2008)	Primary, Quantitative	2122 FinnTwin Men	EDI, MET
61	Males with AN 2 of 4	Mehler et al. (2008)	Primary, Quantitative	70 males with ED	BMD
62	Males with AN 3 of 4	Goddard et al. (2013)	Primary, Qualitative	1 man with AN	Case Study
63	Males with AN 4 of 4	Striegel-Moore & Bulik (2007)	Secondary, Qualitative	Not specified	Literature Review
64	Anorectic Man 1 of 1	Abbate-Daga et al. (2007)	Primary, Quantitative	21 anorectic men & 75 controls	TCI
65	Anorectic Men 1 of 2	Wolfert & Mehler (2002)	Secondary, Qualitative	Not specified	Literature Review
66	Anorectic Men 2 of 2	Fassino et al. (2004)	Secondary, Qualitative	Not specified	Literature Review
67	Anorectic Male 1 of 1	Freeman (2005)	Secondary, Qualitative	Articles published between 1979 and 2002 focused on diagnostic criteria for eating disorders in men	Literature Review
68	Anorexic man 1 of 2	Myers et al. (2002)	Primary, Qualitative	1 man with AN	Case Study
69	Anorexic man 2 of 2	Allen (2008)	Secondary, Qualitative	Not specified	Literature Review
70	Anorexic men 1 of 2	Mangweth et al. (2004)	Primary, Quantitative	21 men with ED & 41 controls	FFMI
71	Anorexic men 1 of 2	Bosley (2011)	Secondary, Qualitative	Not specified	Literature Review
72	Anorexic male 1 of 2	Bramon-Bosch et al. (2000)	Primary, Quantitative	30 male and 30 female ED clients	BMI, COST
73	Anorexic male 2 of 2	O'Neill (2001)	Primary, Qualitative	1 man with AN	Case Study
74	Anorexic males 1 of 9	Anderson (2008)	Secondary, Qualitative	Not specified	Literature Review
75	Anorexic males 2 of 9	Hepp, et al. (2004)	Primary, Qualitative	Male identical twins with AN and GID	Case Study
76	Anorexic males 3 of 9	Strober et al. (2001)	Primary, Quantitative	747 relatives of 210 probands	SCID, SADS-L, EDFHI
77	Anorexic males 4 of 9	Woodside et al. (2004)	Primary, Quantitative	21 males & 40 females with ED	SIAB, YBC-EDS, Y-BOCS, MPS, TCI, STAI

78	Anorexic males 5 of 9	Fornari & Dancyger (2003)	Secondary, Qualitative	Not specified	Literature Review
79	Anorexic males 6 of 9	Kane (2010)	Secondary, Qualitative	Not specified	Literature Review
80	Anorexic males 7 of 9	Tantillo & Kreipe (2006)	Secondary, Qualitative	Not specified	Literature Review
81	Anorexic males 8 of 9	FernÁndez-Aranda et al. (2000)	Primary, Qualitative	1 transsexual man with AN	Case Study
82	Anorexic males 9 of 9	Kane (2009)	Secondary, Qualitative	Not specified	Literature Review
83	Male AN 1 of 5	Freeman &Szabo (2005)	Primary, Quantitative	17 males with ED	EDI & BMI
84	Male AN 2 of 5	Vande Zande, et al. (2004)	Primary, Qualitative	1 man with AN	Case Study
85	Male AN 3 of 5	Murray (2003)	Secondary, Qualitative	Not specified	Literature Review
86	Male AN 4 of 5	Karels & Oosthuizen (2010)	Secondary, Qualitative	Not specified	Legal Case Review
87	Male AN 5 of 5	Reas et al. (2005)	Primary, Quantitative	26 recorded deaths from AN	Secondary Data Analysis

Appendix M: PRISMA Diagram of Search Results

Figure 3: Flow Diagram of Search Results for Integrative Review[5]



[5] Note the diagram above uses an adapted template taken from: Page et al. (2021, p.19)