

The validity of eating disorder self-report instruments in a black working-class
population

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ABSTRACT

OBJECTIVE: The aim of this study was to understand how internationally administered eating disorder self-report instruments designed primarily for Western, white and middle-class populations, are subjectively experienced and interpreted in a non-Western, black working-class population group. **METHOD:** Two self-report measures (the Eating Attitudes Test and the Bulimic Inventory Test, Edinburgh) were administered to 21 black females, aged 13-17, from a predominantly black working-class suburb. Follow-up interviews were conducted with those participants who obtained the highest scores. **RESULTS:** Analysis of the interview data revealed four central themes: a lack of knowledge of eating disorders as understood and measured by the questionnaires; a different view of the ideal female body; language, cultural and social-class barriers to communication and accurate interpretation; and recurring contradictions in questionnaire responses. These findings revealed that this population attribute different meanings to these self-report measures than what is intended. **DISCUSSION:** The need for a culturally specific measure is emphasized in order to identify accurately symptoms of eating disorders in this population.

Keywords: eating disorders; self-report measures; black; female; working-class

The prevalence of eating disorders (ED) has increased significantly in urban areas during the last three decades. Many people are under the impression that eating disorders, more specifically anorexia nervosa and bulimia nervosa, are culture-bound syndromes (Nasser, 1988). In other words, it is sometimes perceived that people with certain characteristics, in certain areas, with certain beliefs and lifestyles are more predisposed to developing or having maladaptive eating patterns than people who do not have those same characteristics. For the most part, white, female and middle-class young women in Western cultures were believed to fit into the at-risk category for eating disorders. However the last decade of research into the topic has revealed this to be a gross generalization (Caradas, Lambert & Charlton, 2001; Le Grange, Louw, Breen, & Katzman, 2004; Wassenaar, Le Grange, Winship & Lachenicht, 2000; Winship & Lachenicht, 2000), thus calling for an alternative view on the disorder, its predisposing factors, and the methods used in identifying its symptoms.

During the initial stages of research into the ED phenomenon, the black working-class population was assumed to be immune to the disorder for a number of reasons (Nasser, 1988). However, recent studies in Southern Africa found that not only did these disorders exist in this population, but black participants often obtained higher scores than their white counterparts, suggesting higher levels of maladaptive eating patterns and attitudes (Caradas et al., 2001; Hooper & Garner, 1986; Le Grange et al., 2004; Le Grange, Telch & Tibbs, 1998; Wassenaar et al., 2000). Bearing in mind, the majority of this research was conducted with instruments designed in the West and based on Western and white conceptions of what are normal and abnormal eating behaviours and attitudes. This latter point calls into question the validity of these instruments in any population group other than the Western, white and middle class individuals for whom it was designed (Wassenaar et al., 2000).

For the sake of this study, let us assume that the typical ED population refers to Westernised white and middle-class individuals. The aim is then to gain insight into how self-report measures are understood by an atypical ED population, specifically non-Westernised black working-class individuals. Thus it may be demonstrated how much, if at all, the latter groups' interpretation deviates from the intended interpretation, which in turn, may demonstrate whether these measures are valid in this population group.

Di Nicola (1990) (as cited in Le Grange et al., 2004) believes that the notion of eating disorders has transformed from being a 'culture-bound syndrome' to a 'culture-reactive

syndrome'. In this instance, she believes symptoms of eating disorders are manifested in areas 'experiencing culture change'. Vulnerability to developing an eating disorder is thus linked to the 'erosion of traditional values' rather than the obsession with thinness that is often associated with the West (Le Grange et al., 2004, p. 441). In light of Di Nicola's perspective, not just one type of population is vulnerable to the development of maladaptive eating patterns, but rather any population that is experiencing some form of cultural transformation. This leads to the question of whether the tests developed in one population, comprising certain beliefs, norms, and ideals, can still have the same meaning in a different population, with its own distinctive beliefs, norms and ideals.

Eating disorder research conducted in the last two decades by Caradas et al. (2001), Hooper and Garner (1986), Le Grange, Louw et al. (2004), Le Grange, Telch et al. (1998) and Wassenaar et al. (2000), found that black participants were obtaining equal or higher scores on some scales than their white counterparts. These unexpected findings have forced previous advocates of a Western, white and middle-class culture-bound eating disorder, to rethink their stance (Abrams, Allen & Gray, 1993; Altabe, 1998; Gray, Ford & Kelly, 1987; Lee, 1996; Nasser, 1997; Nasser, 1988; Powell & Khan, 1995; Rucker & Cash, 1992; Striegel-Moore, Dohm et al., 2003; Striegel-Moore, Schreiber et al., 2000; Vandereycken & Van Deth, 1994).

The most widely accepted explanation for these ostensibly high rates of eating disorder symptoms in this atypical ED group is the dissemination of Western culture and lifestyles. This occurs as a result of rapid urbanization in the local black non-Western population, which subsequently increases the average individual's socio-economic status as well as exposure to Western norms, values and ideals (Anderson & Hay, 1985; Hsu, 1987; Lake, Staiger & Glowinski, 2000). Two perspectives stem from this explanation. The first believes that the apparent rise in atypical cases of eating disorders is due to the assimilation by the local black population of Western culture. The Western ideals of beauty and thinness are included in these assimilations, thus pressuring the individuals in the local population to strive for these ideals (Anderson & Hay, 1985; Hsu, 1987; Lake et al., 2000).

The second argument believes that instead of the adoption of Western culture by the locals, there is a clash between cultures. In this case, the vulnerable local individuals are those who hold a strong identification with their traditional culture and its values. With the introduction

of a new set of values, norms and ideals, a state of psychological conflict and imbalance is created as the individual is forced to choose between them (Lake et al., 2000).

The role of social class or socio-economic status (SES) in the above explanations often differs. The majority of researchers acknowledge that the average socio-economic status of the population is a significant factor in the development and expression of maladaptive eating patterns, if not the main factor (Caradas et al., 2001). In this case, the researchers believe that as the SES of the population group increases, the average body weight decreases and the vulnerability to the development of maladaptive eating patterns increases (Anderson & Hay, 1985). However, Wilfley and her colleagues (1996) investigated the relationship between eating pathologies and SES by looking at the affected individuals' level of education and their family's income, and found no such link.

Le Grange et al. (2004) discovered a possible confounding variable that could have significant implications for the validity of ED research in atypical populations thus far. Where previous research explained the increase of symptoms in these groups to influence from the West, Le Grange et al. (2004) found a lack of understanding of the instruments as the reason behind the group's high scores and ostensibly high rates of ED. Le Grange and his colleagues obtained their sample from a semi-rural black area, and in so doing minimized the possibility of Western influence. They concluded that a lack of understanding of the self-report questionnaires used resulted in unusually high scores for their sample.

The increase in recorded symptoms of eating disorders in black working-class population groups has drawn attention to the cross-cultural validity of the current instruments being used (Wassenaar et al., 2000). All instruments that are intended for implementation in scientific research need to be deemed valid in that they measure what they claim to, and reliable in that the results are predictable under certain conditions. The tests to prove this are usually conducted in the instrument's country of origin, which happens to usually be the West. The analysis and validation of some of the most popular ED self-report measures are illustrated below, as well as some criticisms aimed at them.

A common method for testing the validity of an instrument is to conduct interviews with people who have already been diagnosed with an ED. Through these interviews, the researcher is able to determine what the prominent attitudes, feelings and behaviours

associated with an ED are. Once the most influential features are established, a questionnaire is created based on these features. The questionnaire is then tested with other validated instruments whereby they are both applied to the same sample and their scores should correlate to demonstrate the validity of the new instrument (Cooper, Taylor, Cooper & Fairburn, 1987). A second form of validation is achieved by applying the test to a non-clinical sample consisting of two cohorts, one that has 'normal' weight concerns and the other no weight concerns. Their scores are expected to reflect this discrepancy in weight concern in order for evidence of validity to be demonstrated. A similar method involves the application of the test to a sample consisting of a clinical (diagnosed ED) and a non-clinical cohort. These two cohorts scores are expected to differ markedly to reflect the existence and non-existence of maladaptive eating patterns (Cooper et al., 1987).

A common method for testing the reliability of an instrument is the test-retest method. This involves applying the instrument to the same sample at different time intervals. For example, an ED questionnaire would be administered to a sample and the results analysed. This same test would then be administered to the same sample a week or month later. As long as nothing significant has happened in-between the applications of the test, such as a life-changing experience or going to a recovery clinic, it can be expected that the results between the two tests from different times would be the same, thus demonstrating reliability (Wear & Pratz, 1987). Once the instruments have been deemed valid and reliable, they are introduced into the field of research and open to further scrutiny by other experts in the specific field.

The Eating Attitudes Test (EAT) is generally considered one of the most reputable screening instruments, and is thus often the self-report measure of choice (Fairburn & Cooper, 1983, as cited in Eisler & Szmulker, 1985). Eisler and Szmulker (1985) found a noteworthy link between their participants' EAT scores and their SES. They conducted their study with girls from private and public schools (representative of a higher and lower SES respectively). According to their findings, participants from public schools obtained higher scores on the EAT suggesting higher vulnerability to developing or having an ED, and yet there was a higher incidence of actual ED cases in the private schools. The researchers indicate that this was due to systematic error in responses. In other words, the girls from different social classes interpreted the questions in different ways. They criticized the cut-off of 30 (for 40-item version) and 20 (for 26-item scale) of the EAT as 'arbitrary' and a poor indicator of psychopathology, due to the fact that the majority of the high scorers do not actually suffer

from clinical ED's. They conclude with the 'need to validate the EAT for different populations, even when these do not appear very dissimilar' (p. 171).

There is a substantial amount of criticism aimed at instruments that rely on the self-reporting of participants, which brings the validity of the method as a whole into question (Rosen & Poplawski, 1987). A large proportion of research and preliminary diagnoses are conducted with the aid of these self-report instruments to 'screen' for possible symptoms of maladaptive eating patterns and attitudes.

Rosen and Poplawski (1987) warned against relying on self-report measures as one of the primary resources for gaining information for research as well as diagnostic purposes. Their main motivation for this is that due to the inherently secretive nature of the disorder, if a respondent is vulnerable to developing or having an ED, it is precarious to assume that the self-reported responses they provide are in fact true. The researchers investigated the validity of the actual self-report method by comparing the responses obtained from their participants with the responses obtained from people close to the participants, such as parents and peers. They expected the responses from the two sources to correlate, which would provide evidence of the validity of the method of self-reporting. They found generally consistent results between the two sources, except for questions regarding 'drastic weight control behaviour' (p. 515). In this case, they discovered that the scores obtained from the girls were in fact higher for drastic measures (e.g. vomiting and purging) than those given by the external sources. Their explanation for these findings highlights the likelihood of these behaviours taking place in private, which would explain why the parents and peers were not aware of it. These findings raise concern regarding the confidence in these methods to overcome the secretive behaviour so often associated with eating disorders. In conclusion, they deemed the validation from relatives and peers ineffective in comparison to self-report methods when trying to reach the depths of the behaviour and attitudes of the person with the ED.

Dolan (1991) cautioned against the use of self-report methods in what she termed 'non-indigenous' populations. This correlates with the term 'atypical' ED populations used in this study. She believed this was mainly due to the language of the test, which is often unfamiliar to the respondents. Translation into the local language is a possible solution, but this can often result in the questions losing their specific meanings that the local language is unable to capture. Simply translating the language of the test also does not address the fact that atypical

population groups often attach different meanings to the tests, its questions and the whole notion of eating disorders. It may be the case that non-clinical and non-indigenous participants understand the wording of the test, and they respond honestly, yet their scores still indicates that they are at risk of having or developing an ED. In this case, it is highly likely that the scores are indicative of another factor, namely different meanings being derived from the test.

Rosen, Vara, Wendt and Leitenberg (1990) acknowledge numerous shortcomings of self-report measures that influence research in 'indigenous' or typical populations as well. One example is the vagueness of the one-word forced-choice responses offered in self-report measures (e.g. '*never*', '*often*', '*always*' and '*yes*', '*no*'). Such responses leave little room for explanation, and it becomes difficult to capture the complexity of some of the more complex concepts with one-word responses. Another limitation is the lack of discrimination between truly pathological attitudes and normal weight concerns prevalent in a Western 'weight-conscious society'. For example, many non-clinical participants would agree that they are "terrified about being overweight" (statement extracted from EAT), and therefore respond in a way that reflects maladaptive eating attitudes even though this is not the case. Such limitations often result in 'ambiguous and inaccurate' conclusions to be made from the data (Rosen et al., 1990, p. 520).

Researchers occasionally employ a two-phase design to safeguard against some of the aforementioned shortcomings. In this type of design, the same questions are asked initially in questionnaire format and then in follow-up interviews. The interviews allow the researcher to gain insight into how the respondent understood the questionnaire (Gray, 2003). For example, Fairburn and Beglin (1994) assessed the difference in responses obtained from a self-report questionnaire and a corresponding follow-up interview. They found little discrepancy between the responses to the two measures with regard to questions that focused on unambiguous concepts. However, substantial discrepancy was found between the responses to questions that focused on more complex, ambiguous concepts. They believed this was due to the variety of possible interpretations of complex concepts that simple 6-item Likert-type scales are unable to capture. Therefore, they believe the use of self-report questionnaires was adequate in collecting data based on unambiguous concepts, and follow-up interviews recommended for more complex, ambiguous concepts.

In summary, the high scores obtained from ED self-report questionnaires from black working-class populations may not be due to an actual increase in eating disorders within this group, but rather due to the fact that they attribute different meanings to the questions and the notion of what an eating disorder is. This could be due to a number of reasons, such as the vastly different cultural norms, values and ideals that the respondents would draw on when trying to understand and answer the questionnaires, different first languages than what is used in the questionnaire, researcher characteristics and the environment wherein the questionnaires and interviews took place.

This study aims to test the validity of these measures in an atypical ED or non-Western population, by applying two of the self-report questionnaires to a black female sample from a predominantly working-class suburb in South Africa. This will be followed with interviews based on the questionnaires in order to establish how the respondents understood the questionnaires, as well as the references they drew on to do this from their distinctive cultural and socio-economic backgrounds.

It was hypothesized that there would be significant discrepancies in responses between the two measures (questionnaires and interviews), due to the myriad interpretations that can be drawn from the questionnaires that the one-word self-report responses are unable to capture. This is compounded by the racial, linguistic and socio-economic influences mentioned above that may cause the participants' choice of a different interpretation than what is intended.

METHOD

Design

A two-phase design was utilized in collecting data. In the first phase, well-known ED self-report questionnaires (the EAT and BITE) were distributed to 21 participants. This was followed by semi-structured interviews based on the questionnaires, with those participants who obtained the highest scores in the questionnaires. According to the standards set out by the creators of the questionnaires, the high scores that were obtained should reflect a vulnerability to developing or having an ED. The interviews were able to obtain in-depth knowledge on whether the participants' scores did in fact reflect a vulnerability to ED, by gaining insight into how they subjectively approached and attributed meaning to the questionnaires.

The two-phase research design, developed by Belson (1981) (as cited in Gray, 2003) is intended to help identify via the interviews, how respondents understand questionnaires, and how much, if at all, their understanding deviates from the intended meaning. By implementing the two-phase design, standardized and manageable data was obtained from the larger sample via the questionnaires, while more detailed, explanatory data was obtained from the smaller sample via the follow-up interviews.

The focus of this research is to attain an in-depth and subjective perspective into how self-report eating disorder questionnaires are understood by young black females from working-class backgrounds. A qualitative research paradigm is best suited to accomplish this, as it allows for valuable insight to be gained into the participants' decision-making process, and their motivations and frames of references that they draw on when attributing meaning to the questionnaires.

Participants

The sample consisted of 21 black females ranging in ages from 13 to 17 years old. The gender and age of the participants were similar to the gender and age of samples used in the majority of previous ED research conducted with white, middle-class groups. This allowed the focus to be on the race (black) and social class (working-class) characteristics of the present sample. Prior to data collection, the participants ensured that they all had at least a basic knowledge of English that they had learnt in school, as well as no previous diagnoses of eating disorders.

The participants were contacted through a church situated in Gugulethu in Cape Town, a predominantly black working-class suburb. The motivation behind the selection of this sample was identifying a population who differ markedly from the typical ED population for whom the questionnaires were primarily designed. In other words, assuming the questionnaires target Western, white and middle-class individuals, this study selected non-Western, black working-class individuals, in order to ascertain whether the questions maintain their meaning when administered to an atypical population.

Materials

Phase 1: Self-report questionnaires

The questionnaire consists of three sections: a demographic section, the Eating Attitudes Test (EAT) and the Bulimic Inventory Test, Edinburgh (BITE). These measures were selected due

to their frequent use in eating disorder research and thus allowed easy comparison of the results with the results of previous studies. It was decided not to translate the questionnaires into the participants' first language (Xhosa) as they were all in at least Grade 7 and were taught English at school. It was thus anticipated that the participants had adequate knowledge of English to understand the language of the questionnaires. A more detailed description of each questionnaire follows.

Demographic questionnaire

The demographic questionnaire (see Appendix B) was able to gather essential background information from the participants, such as age, race, home language and language used with peers. Their socio-economic status (SES) was estimated from questions that asked what their parents' level of education and occupation is, the suburb in which they live, their household density, which refers to the number of people living in the house in relation to the number of rooms (Caradas, 2000), as well as certain appliances found in their home (e.g. telephone, Internet access). The participants' height and weight were measured, from which their Body Mass Index (BMI) was calculated.

Eating Attitudes Test:

The EAT, developed by Garner and Garfinkel (1979), is considered to be one of the most widely used psychometric tests for eating disorders. It measures symptoms primarily associated with anorexia nervosa (Eisler & Szmulker, 1985). The EAT-26, developed in 1982, is a revised version of the original 40-item scale (Garner, Olmstead, Bohr & Garfinkel, 1982) and consists of 26 self-report statements. Each statement provides 6 possible responses in the form of a Likert scale, ranging from 'always' to 'never'. The maximum score for each question equals 3, thus the maximum score for the whole test equals 78. This score reflects an extremely high risk of having or developing anorexia. Conversely, the minimum score is zero, which reflects no risk. A person who obtains a score between 10 and 19 is considered to be in the sub-clinical range and thus the person is at medium risk. Whereas, a person who obtains a score equal to or more than 20, is considered to be at high risk for having or developing anorexia nervosa (Garner et al., 1982; Le Grange et al., 2004). Examples of statements found in the EAT are 'find myself pre-occupied with food' and 'feel extremely guilty after eating'.

The EAT has been demonstrated a high level of internal consistency in accurately identifying symptoms of anorexia, as tested by its creators Garner and Garfinkel (1979). They

also established that the test shows concurrent and criterion-related validity (Garner & Garfinkel, 1979; Garner et al., 1982), thus often making the EAT the questionnaire of choice in ED research (Caradas et al., 2001; Eisler & Szmulker, 1985; Lake et al., 2000; Le Grange et al., 2004, Le Grange et al., 1998; Wassenaar et al., 2000)

Bulimic Inventory Test, Edinburgh:

The BITE is a widely utilized scale that measures symptoms primarily associated with bulimia nervosa (Henderson & Freeman, 1987). It consists of 33 self-report items, separated into two subsections (an assessment for existence of bulimic symptoms and for the severity of these symptoms). The symptom section allows for closed responses (yes or no). The maximum score possible for this section equals 30 (one point per response). A person who obtains a score between 10 and 19 is in the sub-clinical range and indicates possible disordered eating behaviour, but not necessarily severe enough for an official diagnosis of bulimia nervosa. A score of 20 or more is indicative of highly disordered eating behaviour and a high risk of having or developing bulimia (Henderson & Freeman, 1987).

The severity section consists of 3 frequency scales with 5 possible responses ranging from 'never' to '2 to 3 times a day'. A person who obtains a score of 5 or more per question is considered to be at high risk for having or developing bulimia (Henderson & Freeman, 1987). Examples of questions found in the BITE are 'Do you ever binge on large amounts of food?' and 'Do you ever eat in secret?'

The BITE has been established as a reliable and valid test, in that test-retest reliability and cross-validity were able to accurately identify symptoms of bulimia nervosa (Henderson & Freeman, 1987), and has been used in numerous ED studies (Le Grange et al., 2004; Le Grange et al., 1998)

The EAT and BITE have been used in various ED studies with South African populations (Le Grange et al., 2004; Le Grange et al., 1998; Wassenaar et al., 2000). No changes to the EAT were deemed necessary for these studies, whereas the unit of mass (pounds changed to kilograms) was changed in the BITE. These instruments are regarded as highly economical and for this reason, as well as their validity and reliability, they are frequently implemented in research with multi-cultural/racial/ethnic samples, as well as for diagnostic purposes (Henderson & Freeman, 1987). However, many professionals caution against the use of these

measures as a primary diagnostic tool. They advise these measures should rather be used for screening symptoms of maladaptive eating patterns only, and a clinical interview be conducted by a mental health professional when sufficient evidence for a possible eating disorder is found.

Phase 2: Follow-up interviews

Semi-structured interviews were conducted, which allowed for a certain amount of control over the direction of the interview, while still providing sufficient space and flexibility to elicit the subjective experience of each participant. The questions in the interviews were guided by the questions from the questionnaire to ensure consistency between the data collected from each phase. The questions were formulated prior to the interviews, based on each participant's responses to the questionnaire. Interviewees were not asked about their responses for every item, but rather just those that they obtained high scores for.

The interviews started with standard questions regarding any difficulties they may have experienced while filling out the questionnaires, such as: their understanding of what the study was about; what was being asked specifically of them; and any feelings that the questionnaire may have evoked (e.g., shame, embarrassment). This was followed by specific questions from the questionnaire being repeated to determine whether their responses in an interview setting would differ from their initial self-report responses. They were not told how they initially responded to ensure that they did not just repeat their previous response. This was followed by specific questions regarding why they answered certain items in the way they did and how they attributed meaning to those items. For example, item 3 on the EAT says 'find myself pre-occupied with food' and participant answered 'usually'. I would ask why did they choose that response and how did they understand the statement.

Every interview concluded with any further questions or comments that they may have had regarding the study. Only the interviewee and the researcher were present during this phase, to minimize external influence from peers and elders. The entire interview process was recorded once permission had been obtained from the interviewees.

Procedure

The first step was to obtain consent from the heads of the church in Gugulethu. This included the priest and his administrative assistant. Once this was granted, a notice was read out during church, outlining the basic information regarding the study and inviting all girls within the age group of 13 to 17 to participate. Thirty girls volunteered and a list was drawn up with all of their names and contact details. The 30 volunteers then received consent forms (see Appendix A) to be read and signed by their legal guardian as well as themselves. Emphasis was put on the fact that participation was completely voluntary.

Once the consent forms were collected, each participant was contacted and a convenient time arranged to initiate the first phase of the research. Many of the volunteers were unreachable as their contact details were either incorrect or they were never at home. Out of the initial 30 volunteers, only 21 could be contacted to fill in the questionnaires. These 21 questionnaires were then analysed and the scores calculated. Participants who obtained a score of 18 or more were contacted for the second phase. A cut-off of 18 was chosen as scores of 18 or more are categorized as sub-clinical and clinical levels of having or developing an ED (Garner et al., 1982). There were 8 participants in total who scored above the cut-off and were contacted, but only 4 were interviewed. The remaining 4 were extremely difficult to contact, or once contacted, never arrived for the interview. These results are not unusual when conducting this type of research with a population that is often hard-to-reach. Each interview took approximately 45 minutes to an hour. They were held in the church hall, thus ensuring the participants did not feel additional discomfort due to an unfamiliar environment.

Data Analysis

The data obtained from the interviews were transcribed and closely analysed, revealing four central themes. The identified themes were not mutually exclusive as certain aspects were often present in more than one theme. These central themes provided insight into how the participants interpreted the whole research process, from the questionnaires to the interviews, and what unique motivations and references they drew on when finding meaning in the questions. The interviews were semi-structured and in the same format and order as the questionnaire items. This allowed the researcher to gain an understanding of what the participants thought the questionnaire was asking of them and how they felt about completing it.

Each interview started with general questions regarding any difficulties the participants may have experienced on a whole and if the questions and the situation made them feel uncomfortable in any way. The questions then progressed to the participants' specific responses and why they answered in such a way, and what they thought the questions were asking. The scores that the participants obtained from the EAT and BITE were not analysed, as the focus was on how they attributed meaning to individual words and questions. Therefore, the scores were merely used as a screening device to aid in selecting the participants that reflected scores of clinical levels of ED for the interviews.

Ethical considerations

Prior to data collection, permission to conduct the research was obtained from the Research Ethics Committee at the University of Cape Town. Once this was granted, consent was obtained from the priest and his assistant at the church where the sample would be recruited, as well as the legal guardians of the participants and the participants themselves. This was done in the form of a consent letter, detailing what the study was about and what could be expected for those who got involved (See Appendix A). Emphasis was put on the fact that participation was completely voluntary and all data obtained from the sample would remain confidential and the participant details anonymous (therefore their initials are used in the results section when referring to their responses). The participants were entitled to remove themselves from the study at any stage of the data collection process and informed that the data they provided would be used for research purposes only. This was all reiterated on the cover page of the questionnaires. The researcher was available throughout each phase of data collection to aid in any questions or discomforts the participants experienced.

RESULTS

Those participants who obtained scores that could be categorized as 'clinical' with regards to vulnerability to having or developing an ED were interviewed. There were four participants in total who were interviewed in this category. Four overarching themes emerged from the interviews as relevant to the research question: knowledge of eating disorders as understood and measured by the questionnaires; perspective of the ideal female body; barriers to communication and accurate interpretation, namely language, cultural and social class; and lastly, the recurring contradictions that occurred in the responses to the questions in the EAT and BITE questionnaires.

Many of the responses from the interviews corresponded with the available literature, but there were some unexpected findings that are illustrated below. The responses from the participants are perceived to be an accurate reflection of how the EAT and BITE are understood within an atypical population. Due to the expected complexity of the data analysis process, some of the themes have overlapping aspects within the four focal themes. The interviewees' responses are represented by their initials to comply with the sworn anonymity. Their responses have been reproduced as coherently as possible, without extracting any of the data's original meaning. Bear in mind, that these responses are from participants who obtained clinical scores reflecting high risk for having or developing an ED.

What is an eating disorder?

The participants had a very imprecise perception of what an eating disorder is, and whether or not it is a good thing. They all mentioned that such topics were never spoken or heard of where they lived. When they were given a basic description of the disorder, they seemed to be questioning the need for such a study, as they had never seen this disorder themselves, thus possibly assumed that it clearly isn't an issue worth studying.

Many of the participants appeared almost grateful to be involved in the research process even though they did not understand why it was being conducted. They expressed a sense of feeling special and needed, as they were part of something novel and important.

YB: "No one talks about that stuff. My friends don't like to ... It is definitely a bad thing, like an illness. It is when you eat a lot. Most people with an eating disorder feel sad and lonely because they are fat, so they eat more and get more fat."

Researcher: "If a woman is very fat, does that mean she has an eating disorder?"

YB: "Yes."

Researcher: "And if a woman is very skinny, what does that mean? Does she also have an eating disorder?"

YB: "No, they look nice and healthy. Everyone likes that better, especially guys."

Researcher: "Do you think you have an eating disorder?"

YB: "No! I don't eat a lot."

Researcher: "You said earlier that sometimes you don't eat for a whole day and then you are so hungry you eat a lot at night."

YB: "Yes. But I am not fat."

AK & PK: "I don't know. I think it's a good thing."

Why is this study being done?

YB: "I don't know."

CN: "It (the study) is good for teenagers, 'cause it affects them."

AK: "I don't know. I think it is to be healthy. Not all people are healthy. Here (Gugulethu) there is not many people who are healthy."

PK: "To help people who don't have food, who are suffering."

How did being involved in this study make you feel?

YB: "I was nervous. It was hard to do, 'cause I didn't understand what to write."

CN: "I'm not nervous, I haven't something like this before, but I don't mind talking about this type of thing."

AK: "Nervous. I have never done something like this before."

PK: "I feel good because I have food. Other people don't."

What does this study have to do with me?

YB: "No one talks about that stuff here."

CN: "I didn't really know what to expect, 'cause nothing like this has been done before, well not here anyway (Gugulethu)."

What is the ideal body?

Three names appeared numerous times in response to the question of which celebrity do the participants' think has the ideal body. These included: Beyonce Knowles, Kelly Anderson and Chomee. It is worth noting that these are all black women, whom they describe as fitting into the 'in-between' category that many expressed as the ideal body type. However, there was one participant who described Victoria Beckham, a celebrity infamous for her very slim figure, as having the ideal body.

CN: "I love my body now. And guys say I have a nice body ... if I had to choose a famous person with the best body, I would choose Beyonce."

YB: "... skinny. They look nice."

AK: "The best body is not too fat or thin, in the middle ... I love my body..."

PK: "I like my body ... guys like a girl who is not too fat or too thin."

What does it mean to be healthy or unhealthy?

The participants appeared to equate the intake of food with energy. Therefore, they believed that if they did not eat food, they would not have energy, which would be bad or unhealthy. There seemed to be an overarching desire to be healthy and to eat healthy foods, but a lack of knowledge of what is healthy, and also limited access to these foods. It was taken into consideration that the participants were responding to the interview questions in a socially desirable way, in that an unexpected desire for healthy eating was sometimes apparent.

CN: "At school in biology, we learnt what to eat to be healthy. So I know what I eat is not so great (sweets) 'cause I don't always have energy and of course I need energy to concentrate 'cause exams (matric) are coming up and I need to study."

YB: "... if people are fat 'cause they eat a lot ... It is definitely a bad thing, like an illness ... (skinny girls) they are nice and healthy."

AK: "If you don't eat, then you wont have energy."

PK: “My family always says I must eat more ‘cause otherwise I will have no energy.”

Barriers to communication and accurate interpretation: language, culture and social class

The language, culture and social class of specific groups of people are the very factors that need to be taken into consideration when creating instruments for use in an atypical population. The language of the questionnaires was a debilitating factor for the participants. Even though they all had a basic knowledge of English, it was not their first language. At times, this seemed to stunt the way they verbalized how they experienced to the questions and subsequently attributed meaning to them.

The difference in cultures and level of social-class also created difficulty in the research process. Even when the participants understood the meaning of words and sentences, the questionnaires have been designed with a Western culture and middle-class population in mind. Thus the understanding of the language alone is insufficient to truly understand and interpret the questionnaires in their intended way. There were many instances when participants understood accurately the language of the questions, and yet still misunderstood what the question was asking of them on a whole.

The demographic characteristics of the researcher also had to be considered as a barrier to accurate interpretation and manner of responding. The researcher was a direct contrast from the participants’ characteristics, as they were white, relatively more Westernised, and from a middle-class background. This may have influenced the participants’ responses to a significant degree as they may have viewed the researcher as different to them, as an outsider, thus been more cautious in answering questions.

The following questions and statements posed a problem to the respondents, due to the abovementioned factors. The letters E and B have been used below to refer to questions drawn from the EAT or BITE respectively (see Appendix A for the EAT and BITE questionnaires).

3E, 11E and 14E: Did not understand the word ‘preoccupied’

4E, 24B, 25B, 26B, 27B and 28B: Did not understand the word ‘binge’

- 5E: One respondent believed that this statement was asking whether she cuts her food with a knife and fork, or just eats it whole with her hands.
- 6E, 4B: Did not understand the word 'calorie'
- 7E: Did not understand the word 'carbohydrate'
- 12E: One respondent believed this statement was asking whether she felt her body/muscles burning when she exercised.
- 15E: Their reasons for responding to this statement positively were merely that they were 'slow eaters.'
- 19E: None of the interviewees could provide a reason for why they did not understand this question. For unknown reasons, they answered the preceding question with an explicitly contradictory response to this one.
- 24E: The interviewees stated that they read this question as asking if they prefer to feel empty or full, whereby they stated that the latter is clearly not a desirable and comfortable feeling. Therefore they would respond 'yes' to feeling empty.
- 3B: Same as 19E above.
- 5B: Did not understand what it meant to 'fast' in the context of this question.
- 6B, 7B and 27B: Almost all of the participants, save for a few, did not answer the severity questions in the bite. The interviewees provided the reason that they did not understand how to answer. This seemed to be purely due to format and structure of the severity questions.
- 7B: Did not understand the words 'diuretics' and 'laxatives'. Not only is the language barrier prevalent in this question, these substances and methods of weight loss are not usually practiced in this population. These methods are more relevant in a white, middle-class population.
- 15B: Did not understand the word 'anxious'
- 32B: Did not understand the word 'compulsive'
- 33B: Firstly, it was mentioned that they did not understand the 'fluctuate', and secondly, many of them do not own scales as they say that it is not something seen as a must-have and thus is a waste of money to buy. Therefore many of them have no concept of how much 2.3kgs is.

How did the respondents answer those questions they did not understand?

What suggestions could they provide for adapting the questionnaires to be more relevant to their population:

CN: “I didn’t have a problem understanding ... I think you should ask more about the feelings and not so much on the food and what we do with it. Also, ‘cause when people think about food here (township) it is different because maybe they don’t have food then obviously they think about it a lot. And when you say *food* and *binge on food*, you should ask what type of food, ‘cause for me, I eat a lot but only sweets, so I wasn’t sure what to say.”

AK: “Some words I don’t know what it means.”

(She points out the following: preoccupied, anxious, compulsive, binge, fluctuate and carbohydrates.)

AK: “I just see this, then I know.”

Her method for answering questions that she did not understand involved dissecting the questions into more manageable chunks, and only focusing on the words that she understood. However, this often meant that the question lost its intended meaning. For example, if the questions contained the words “eat a lot” she would immediately respond with a ‘no’, due to the fact that she does not eat a lot. However, the question could have stated that she *avoids* eating a lot, which would then require a ‘yes’ response from her. The questions could be saying opposite things, yet she only responds from her narrow understanding of what is being asked, thus she may respond in a way that she never intended.

PK: “When I don’t know, then I choose *no* and *6* (never).”

This apparent lack of understanding of the questionnaires caused this participant to respond in a way that was possibly not in correspondence to how she really felt. Thus an accurate picture of how she experiences food and eating is not captured by the questionnaire.

Contradictions in questionnaire responses

Recurrent contradictions in questionnaire responses emerged upon analysis. In these cases, the respondents would answer questions in totally opposing ways, even though the questions were essentially asking very similar things. For example, they may answer ‘no’ to the

question ‘Are you a strict dieter?’ but answer ‘yes’ to “Do you feel failure if you break your diet once?’ This could be due to the abovementioned barriers to accurately interpret the questionnaires, as well as their lack of knowledge of eating disorders and their differing perceptions of the ideal body. The following eight sections are separated in such a way to reflect the incongruent responses to groups of similar questions that if understood accurately, should be answered congruently. The questions are provided, as well as the interviewees’ responses from the questionnaire and their comments from the interview.

Secretive behaviour:

The questionnaire items are:

12B: Do you eat sensibly in front of others and make up in private?

22B: Do you deceive other people about how much you eat?

30B: Do you ever eat in secret?

The interviewees answered and explained their answers in the following way:

YB: “I eat a lot when it’s just me, by myself, but I eat normally in front of people, ‘cause I think people, my cousins will judge me when I eat a lot ... But my friends don’t worry about that type of thing, they never want to talk about that stuff.”

12B = Yes 22B = No 30B = No

CN: “I do feel guilty sometimes when I eat a lot, because I don’t hide how much I eat so everyone knows when I eat a lot.”

12B = no answer 22B = no answer 30B = no answer

AK: 12B = No 22B = No 30B = No

PK: 12B = No 22B = No 30B = No

Desire for thinness / terrified fat:

The questionnaire items are:

1E: Am terrified about being overweight

11E: Am preoccupied with a desire to be thinner

14E: Am preoccupied with the thought of having fat on my body

16B: Does the thought of becoming fat terrify you?

The interviewees answered and explained their answers in the following way:

YB: “I definitely don’t want to be fat! Fat people have an eating disorder ... if someone is skinny then they don’t. They (skinny women) look nice and healthy. Everyone likes that (skinny) better, especially guys.”

1E = Usually 11E = No answer 14E = Usually 16B = Yes

CN: “I love my body now, and guys say they like it. I think its because society is changing, like stick (thin) is out, and the best body is not too fat or too thin, like more in-between.”

1E = Always 11E = Always 14E = Always 16B = Yes

AK: “I don’t want to get fat. I don’t like how the lines (fat rolls) look, those lines on fat peoples’ body. I think the best body is not fat or thin.”

1E = Never 11E = Never 14E = Never 16B = No

PK: “I love my body. I don’t want to be fat because I don’t want my clothes to be too tight, they wont fit if I get fat and I don’t have money to buy more clothes ... I think guys like women that aren’t fat or thin.”

1E = Never 11E = Never 14E = Never 16B = Yes & No

Sense of control:

The questionnaire items are:

2E: Avoid eating when I am hungry

4E: Have gone on eating binges where I feel I may not be able to stop

18E: Feel that food controls my life

19E: Display self-control around food

1B: Do you have a regular daily eating pattern?

9B: Would you say that food dominated your life?

13B: Can you always stop eating when you want to?

14B: Do you experience overpowering urges to eat and eat and eat?

19B: Do you worry that you have no control over how much you eat?

21B: Are you able to leave food on your plate at the end of a meal?

The interviewees answered and explained their answers in the following way:

YB: “I do have control with food. I think I am normal, like other girls. I eat normally ...

I always think about food, a lot, that’s why I avoid it. Whenever there is food on my plate, if there is any left when I am full, I will always still eat it. I don’t know why.”

2E = Sometimes 4E = Never 18E = Sometimes 19E = Always

1B = No 9B = Yes 13B = Yes 14B = No 19B = No 21B = No

CN: “I do eat a lot, but only sometimes, not like everyday. Usually if I have a bad day, then I will eat a lot of sweets, but only if there are sweets at home, I went go and buy sweets ... I used to think about food all the time, then it dominated my life, ‘cause I went to a white school.”

2E = Sometimes 4E = Sometimes 18E = Sometimes 19E = Sometimes

1B = Yes 9B = Yes 13B = Yes 14B = No 19B = No

21B = No answer

AK: “I don’t eat if I am full ... I eat when I am hungry.”

2E = Always 4E = Sometimes 18E = Never 19E = Never

1B = No 9B = No 13B = Yes 14B = No 19B = No 21B = No

PK: “I can’t just eat the same time everyday, and the same thing. If there is food at home then I eat it, but there is not always food at home.”

2E = Sometimes 4E = Never 18E = Never 19E = Never

1B = No 9B = No 13B = Yes 14B = No 19B = No 21B = Yes

Vomiting behaviour:

The questionnaire items are:

9E: Vomit after I have eaten

24E: Like my stomach to be empty

26E: Have the impulse to vomit after meals

The interviewees answered and explained their answers in the following way:

YB: 9E = Never 24E = Often 26 = Never

CN: “I used to when I was younger, ‘cause I went to a white school. A lot of girls did it there. It’s kind of like a sign that you have lots of money, so you can afford to throw up ... I thought I was fat then, but not anymore ... I like how I look now, and guys say that I have a nice body.”

9E = Sometimes 24E = Sometimes 26 = Always

AK: “I don’t make myself sick on purpose ... I like having an empty stomach, ‘cause it’s not comfortable when you are full.”

9E = Never 24E = Always 26 = Never

PK: 9E = Never 24E = Never 26 = Never

Dieting behaviour:

The questionnaire items are:

6E: Am aware of the calorie content of foods that I eat

7E: Particularly avoid foods with high carbohydrate content

12E: Think about burning up calories when I exercise

16E: Avoid foods with sugar in them

17E: Eat diet foods

23E: Engage in dieting behaviour

2B: Are you a strict dieter?

3B: Do you feel a failure if you break your diet once?

4B: Do you count the calories of everything you eat when not on a diet?

5B: Do you ever fast for a whole day?

6B: If yes, how often is this?

The interviewees answered and explained their answers in the following way:

YB: “I always eat food with sugar ... Sometimes I don’t eat for a whole day so I lose weight. But then at night I get really hungry so then I eat, usually junk food.”

6E = Never 7E = Never 12E = Never 16E = Never 17E = Never

23E = Sometimes 2B = No 3B = No 4B = No 5B = No

6B = No answer

CN: “I do fast for a day sometimes, ‘cause I’m just too lazy to make something, ‘cause all the food in my house has to be cooked, you can’t just pick it up and eat it. In Lent as well (also fasts) ... I never try and avoid that type of food (carbs) ... I don’t really know what’s in the food I eat, I eat pretty much anything that is at home ... I don’t exercise”

6E = Sometimes 7E = Always 12E = Always 16E = Never 17E = Sometimes
 23E = Always 2B = No 3B = Yes 4B = No 5B = Yes
 6B = Now and then

AK: 6E = Never 7E = Never 12E = Never 16E = Never 17E = Never
 23E = Sometimes 2B = No 3B = No 4B = No 5B = No
 6B = No answer

PK: “Yes it burns (referring to her muscles when she exercises, in response to 12E) ... I eat what is at home ... I do this (fast) when sometimes there is no money to buy food.”

6E = Rarely 7E = Never 12E = Always 16E = No answer 17E = Never
 23E = Sometimes 2B = No 3B = No 4B = No 5B = No
 6B = No answer

Thoughts about food:

The questionnaire items are:

3E: Find myself preoccupied with food

21E: Give too much time and thought to food

11B: Are there times when all you think about is food?

The interviewees answered and explained their answers in the following way:

YB: “I always think about food, when I am hungry and if I am not hungry, but mostly when I am not hungry.”

3E = Rarely 21E = Sometimes 11B = Yes

CN: “I think about sweets a lot, all the time ... I don’t really think about other food though.”

3E = Never 21E = Always 11B = Yes

AK: “If I am hungry, if I haven’t had anything to eat then I think about food.”

3E = Always 21E = Never 11B = No

PK: 3E = Sometimes 21E = Never 11B = No

Binge behaviour:

The questionnaire items are:

4E: Have gone on eating binges where I feel I may not be able to stop

10B: Do you ever eat and eat until you are stopped by physical discomfort?

14B: Do you experience overpowering urges to eat?

17B: Do you ever eat large amounts of food rapidly?

23B: Does how hungry you are determine how much you eat?

24B: Do you ever binge on large amounts of food?

25B: If yes, do such binges leave you feeling miserable?

26B: If yes, is this only when you are alone?

27B: How often is this?

28B: Would you go to great lengths to satisfy an urge to binge?

32B: Would you consider yourself to be a compulsive eater?

The interviewees answered and explained their answers in the following way:

YB: “If I have a bad day or something. And if I am alone, ‘cause my friends don’t feel the same ... sometimes I cant stop, like when I don’t eat at day, then at night I just want to eat a lot ... for one or two days in a week I won’t eat for the whole day and then I just want junk food.”

4E = Never 10B = Yes 14B = No 17B = No 23B = Yes 24B = Yes

25B = No 26B = Yes 27B = Once a week 28B = No 32B = No

CN: “Yes, sometimes, like if the food is there and I don’t have to make it, or at least easy to cook.”

4E = Sometimes 10B = No 14B = No 17B = Yes 23B = No answer

24B = No answer 25B = No answer 26B = No answer 27B = No answer

28B = No answer 32B = No answer

AK: "It is something to do."

4E = Sometimes 10B = No 14B = No 17B = No 23B = Yes
 24B = Yes 25B = No 26B = No 27B = 2 to 3 times a day 28B = Yes
 32B = No

PK: "When there is food ... sometimes I'm hungry but there is no food."

4E = Never 10B = No 14B = No 17B = No 23B = No
 24B = Yes and no 25B = No answer 26B = No answer
 27B = Once a week 28B = No 32B = No

Feelings of guilt:

The questionnaire items are:

- 10E: Feel extremely guilty after eating
 18B: Are you ashamed of your eating habits?
 29B: If you overeat, do you feel guilty?

The interviewees answered and explained their answers in the following way:

YB: "Sometimes ... I don't want to get fat."

10E = Sometimes 18B = Yes 29B = Yes

CN: "I do sometimes, 'cause everyone knows when I eat, 'cause our house is quite small and everyone is usually in the kitchen. I don't want people to think I eat ALL the time."

10E = Sometimes 18B = No 29B = No answer

AK: 10E = Never 18B = No 29B = No

PK: "Yes, 'cause sometimes I am hungry, but if it eat it then my mom cant, 'cause there's none left."

10E = Never 18B = No 29B = No

DISCUSSION

The study yielded valuable data that supported the hypothesis that eating disorder self-report measures are understood in a different way within a black working-class population. In other

words, black working-class females attribute different meanings to the questions in the questionnaires than what is intended. These results raise concern regarding the validity of using such instruments in atypical ED populations.

After phase one of data collection, 8 of the 21 participants obtained scores that reflected symptoms of eating disorders. This supported the findings of previous literature stating that black females have an unexpectedly high incidence of ED's (Caradas et al., 2001; Hooper & Garner, 1986; Le Grange et al., 1998; Wassenaar et al., 2000). These findings often suggest that black females have a higher risk of having or developing eating disorders in comparison to white females. The general explanation for this is the increasing assimilation of Western cultural norms and ideals of attractiveness into previously non-Westernised areas.

This research sought to provide an alternative explanation as to why this group of people was obtaining such unexpectedly high scores. Focus was put on how this ostensibly high-risk population perceives the tests. The central themes emphasized this group's total lack of knowledge of the concept of eating disorders as understood and measured by the questionnaires, their differing views of the ideal female body, as well as the overarching language, cultural and socio-economic barriers that interfered with understanding the intended meaning of the questionnaires. This led to the majority of participants inadvertently giving extremely contradictory responses, such as responding '*always*' to both of the following questions that appear directly after one another in the EAT: "feel that food controls my life" and "display self-control around food".

The findings from this research correspond with the study by Le Grange et al. (2004) whose investigation into eating disorders within similar population groups initially identified the lack of understanding of the instruments, which they believed could influence the results in a way that would reflect a seemingly higher rate of eating disorders amongst this group. Though both the EAT and BITE have been thoroughly tested to ensure validity and reliability, most of these tests were conducted within the population for whom the tests were primarily designed, specifically Westernised, white and middle-class population groups. Thus, an instrument that is able to measure distinctly black working-class symptoms of maladaptive eating patterns and attitudes needs to be designed and tested within this population (Wassenaar et al., 2000). This culture-specific measure should take into consideration the language of the group, as well as the traditional practices regarding types of food eaten, the actual eating of the meal,

the cultural ideals of beauty and what they consider to be normal and abnormal eating patterns and attitudes towards food.

There were two limitations in this study. Firstly, only four respondents could be interviewed, as the sample was notably difficult to get contact. Nevertheless, the interviewees were those who obtained the high-risk scores, thus their insight into their responses was regarded as the most valuable. Secondly, the characteristics of the researcher, being relatively more Westernised, white and middle-class, were opposite to those of the participants, which may have influenced their responses in that they thought to answer in a way they believed matched the researcher's outward appearance. It would be interesting to match the characteristics of the researcher to those of the participants, and note whether the responses remain the same.

This almost untouched ground leaves much scope for future research into eating disorders and the ability to accurately identify the symptoms in this atypical population. This study has taken the first step by gaining valuable knowledge into the validity of the instruments used to identify the disorders' symptoms in atypical populations. The findings lead to the next step, which entails designing and testing a new culture-specific instrument that asks questions relevant to the black female and working-class population. Although this group may not have the high incidence rate found amongst the typical population, symptoms of maladaptive eating patterns and attitudes are nevertheless present and warrant investigation.

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