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Johnson Mbabazi
Teesside University, j.mbabazi@tees.ac.uk

Dorothy Irene Nalweyiso
Teesside University, renado2001ug@yahoo.com

Fiona MacGregor
Teesside University, f.macgregor@tees.ac.uk

Jeff Breckon
Teesside University, J.Breckon@tees.ac.uk

Edward Kunonga
Teesside University, E.Kunonga@tees.c.uk

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A Qualitative Study of the Experiences of Obesity, Body Image, and Mental Health of British-Born Afro-Caribbean Male Students at a West Yorkshire University in England

Abstract

Obesity, body image, and depression are all biopsychosocial phenomena that are frequently misunderstood across cultures. Body dissatisfaction is a psychological aspect of obesity that has been associated with disordered eating, low self-esteem, and depression. Nevertheless, body image dissatisfaction may affect non-obese individuals too. Those with a positive body image are more likely to participate in physical activity than those with a negative body image. Individuals who are satisfied with their body image are more likely to possess high self-esteem, confidence, and healthy eating habits. Obesity prevention among the black population is increasingly important. This study sought to examine the perceptions and experiences of British-born Afro-Caribbean male students at a West Yorkshire University in England regarding obesity, body image, and mental health. Twelve participants took part in 45-minute semi-structured interviews. The data was transcribed verbatim and analyzed using thematic analysis. Results revealed four major themes: "healthy lifestyle monitoring," "body image attitude," "experiences of attempting to maintain weight," and "reasons for weight change." Clinically obese individuals exhibited dissatisfaction with their body image. Depression was found to be strongly related to dissatisfaction with one's body image. Obesity is stigmatized and associated with low self-esteem in many societies in the United Kingdom, which impacts mental health. Future health promotion programs should teach obese individuals who are dissatisfied with their body image to deal with emotions like shame, guilt, and pride. Furthermore, individuals should adopt healthier eating habits and increase their physical activity, which is a broad strategy to reduce the incidence of obesity.

Authors

Johnson Mbabazi, Dorothy Irene Nalweyiso, Fiona MacGregor, Jeff Breckon, Edward Kunonga, Barry Tolchard, Rosemary Dawson, Jennifer Teke, Josette Bettany Saltikov, George William Kagugube, and Lawrence Achilles Nnyanzi

A qualitative study of the experiences of obesity, body image, and mental health of British-born Afro-Caribbean male students at a West Yorkshire university in England

Introduction

The Health Survey for England 2021 estimates that 25.9% of individuals in the UK are obese, while an additional 37.9% of adults in England are overweight but do not meet the criteria for obesity (National Health Service [NHS] Digital Health Survey for England, 2023). Moreover, Afro-Caribbeans make up 25% of cases in the UK (Higgins and Dale, 2009; Sikorski et al., 2011; Lincoln, Abdou, and Lloyd, 2014). Afro-Caribbeans born in Britain have higher rates of obesity-related diseases like hypertension, diabetes, and heart disease (Higgins and Dale, 2009; Agha and Agha, 2017). Obesity is often referred to as having a body mass index (BMI) of 30 or more or higher than that (Purnell, 2018). Overweight is defined as having a BMI between 25 and 30 (Weir and Jan 2022). The survey, published in December 2022, found that men are more likely than women to be overweight or obese (68.6% of men, 59.0% of women) (NHS Digital Health Survey for England, 2023). People aged 45–74 are most likely to be overweight or obese. Globally, the standardised prevalence rates of obesity among the ethnic minority groups show that British-born Afro-Caribbean men have the highest prevalence of obesity at 20.9%, as compared to 23% in the general population (Mehta et al., 2015; Mulugeta, 2020). Obesity costs the NHS a massive £6 billion annually, and this is set to rise to over £9.7 billion each year by 2050 (GOV.UK, 2022). Leeds has a larger British-born Afro-Caribbean population (Leeds Observatory, 2018). Obesity is a complex multisystem condition with several health consequences that can have long-term and short-term adverse effects on the physical and mental health of an individual (Djalalinia et al., 2015; Fruh, 2017).

Obesity is a major public health issue because it raises healthcare costs and increases mental and physical health risks (Hruby and Hu, 2015). Body dissatisfaction, depression, anxiety, low self-esteem, and low life quality are linked to obesity in the UK (Weinberger et al., 2016; Alegra et al., 2018). With obesity comes poor mental health, making it difficult for an individual to recognise and appreciate one's talents as well as physical abilities (Conway and Rene, 2004; Sarwer et al., 2016; Thaker, 2017; Piché, Tchernof and Després, 2020). Body weight depends on genetic, environmental, and psychosocial factors (Gurnani, Birken, and Hamilton, 2015). Barriers to energy intake and expenditure determine obesity (Hill, Wyatt and Peters, 2012). Obesity is an independent risk factor for mental health diseases;

therefore, an increase in the prevalence rates of obesity correlates with an increase in mental health challenges (Sarwer and Polonsky, 2016). Mental illness has been defined as a pattern of behaviour or psychological function that occurs in an individual that is unexpected in normal development and often leads to distress, disability, or even self-harm (Stein, Palk and Kendler, 2021). Recent research from the Mental Health Foundation and the London School of Economics and Political Science reported that mental health challenges cost the UK economy at least £117.9 billion annually (LSE) (London School of Economics and Political Science, 2022).

Mental health concerns are increasing with the tremendous obesity rates every year (Moussa *et al.*, 2019). The mental and psychological burden that goes along with experiencing obesity as a condition could be significant (Sarwer and Polonsky, 2016). Many obese individuals also have challenges with their mood, their self-esteem, the quality of their lives, and their perceptions of their bodies (Robinson et al., 2020). This emotional distress certainly has a role in seeking treatment as well as public health experts' attention. In light of these factors, the majority of interdisciplinary care teams for obesity include mental health professionals who are able to evaluate and treat these concerns in individuals as necessary (Foster, Sanchez-Collins and Cheskin, 2017). An obese population in the UK is affected by depression, especially those with a BMI > 30 kg/m2 (Rajan and Menon, 2017; Moussa *et al.*, 2019). For example, a study by Avila *et al.* (2015) demonstrated that outpatients receiving psychiatric care in Maryland and London, UK, had a BMI almost double that of the control groups. The study demonstrated that 39% of adults were overweight or obese, leading to mental illnesses (Sikorski *et al.*, 2011; Lincoln, Abdou, and Lloyd, 2014). This highlights that individuals who are obese are more likely to get depressed over time, and that people who are depressed are also more likely to be obese.

Moreover, obese individuals are 55% more likely to develop depression than those who are already depressed (Luppino et al., 2010). Obesity and poverty are linked in two red-light areas (Harehills and Chapel Town), where most individuals are British-born Afro-Caribbean and are becoming increasingly dissatisfied with their body image (Leeds Observatory, 2018). African male culture's body size preference makes obesity prevention difficult (Padgett and Biro, 2003; Gardner, 2014; Zaccagni et al., 2020). Body image is a multidimensional construct that includes how one sees, thinks, feels, and behaves related to their body’s appearance, cultural perceptions, and shape (Voelker, Reel and Greenleaf, 2015). It is also a global-neutral construct, depending on different cultures. Obese, happy Afro-

Caribbean men are seen as wealthy and confident, while thin men are poor and insecure (Jacob et al., 2021).

Recent research indicates that health promotion education intervention programmes in high-income countries can manage obesity, body image, and psychological consequences (Shoneye et al., 2011; Smith, Fu and Kobayashi, 2020; Jacob et al., 2021). Nevertheless, the participation of minority ethnic groups, especially British-born Afro-Caribbeans, may be limited by doubts about health, cultural relevance, and traditional African ways (Shoneye et al., 2011; Memon et al., 2016). In addition to feelings, beliefs, and behaviours, body image includes perceptions and attitudes about one's body and appearance (Hosseini and Padhy, 2019; Burychka, Miragall, and Baos, 2021). Individuals' perceptions of their bodies are influenced by interpersonal, cultural, and body type factors (Abrahám et al., 2017). Body dissatisfaction affects mental body image (Heider, Spruyt, and De Houwer, 2018). Individuals subjectively decide if they like or dislike their bodies. Diet dissatisfaction does not always equate to body dissatisfaction (Quittkat et al., 2019). These are common assessment methods. Studies show that changing one's lifestyle reduces risk and promotes healthy development (Kumar and Preetha, 2012; Ferrer and Klein, 2015).

Moreover, to increase physical activity, healthy eating, and positive body image, the behaviour change wheel model (BCW) is needed (Michie, van Stralen, and West, 2011; Mbabazi et al.,2022b). It can help with education, persuasion, motivation, training, and empowerment (Michie, van Stralen, and West, 2011). Co-designing interventions like exercise and diet helps public health experts uncover healthy behaviour theory (Tay et al., 2021). BCW is a methodological framework that can help facilitate behaviour change at the individual and intrapersonal levels (Michie et al., 2011). It links psychological behaviour change theories to heuristic decision-making (Strough, Karns and Schlosnagle, 2011). Considering that a large portion of human behaviour could be interpreted as decision-making, it seems to make sense that gaining knowledge of and having some level of influence over those decision-making processes should be an integral part of any strategy aimed at changing behaviour.

The application of the Behaviour change wheel (BCW), which employs the Capability, Opportunity, Motivation, Behaviour (COM-B model), is required in this study to combat obesity, mental health disorders, and body image dissatisfaction. The BCW uses the COM-B model, which views behaviour as influenced by an individual's capability (knowledge and skills), opportunity (social and physical environment), and motivation (thoughts, habits, and feelings) (Michie, van Stralen, and West, 2011; Ojo *et al.*, 2019). Using

the BCW, intervention activities are linked to theoretical constructs (Ojo *et al.,* 2019). This study used the BCW and associated COM-B methodology to develop a culturally sensitive obesity, body image, and mental health self-management programme as well as a support programme for male British-born Afro-Caribbeans. In addition, this study examined male Afro-Caribbean university students' perceptions and experiences of obesity, body image, and mental health.

Rationale and Significance of the Study

Obesity is a major public health problem in England and globally. In adults, overweight and obesity are associated with life-limiting conditions, for example, mental health, body image dissatisfaction, type 2 diabetes, cardiovascular disease, and some cancers, as well as osteoarthritis (Abdelaal, le Roux and Docherty, 2017). Globally, the standardised prevalence rates of obesity among the ethnic minority groups show that British-born Afro-Caribbean men have the highest prevalence of obesity at 20.9%, as compared to 23% in the general population. Obesity costs the NHS a massive £6 billion annually, and this is set to rise to over £9.7 billion each year by 2050 (Mehta et al., 2015; Mulugeta, 2020). Managing obesity as a condition also implies indirectly combating mental health challenges and reducing NHS costs.

Several studies have reported that obese adults are most likely to suffer from a wide range of mental illnesses, for example, major depression, bipolar disorder, and panic disorder or agoraphobia (Mehta et al., 2015; Rajan and Menon, 2017; Mulugeta, 2020). Nevertheless, the majority of the studies generalise their findings, and there is a paucity of empirical research on the British-born Afro-Caribbean population regarding obesity, body image, and mental health. Recent research from the Mental Health Foundation and the London School of Economics and Political Science reported that mental health challenges cost the UK economy at least £117.9 billion annually (LSE) (London School of Economics and Political Science, 2022).

Moreover, assessing mental health challenges as a result of body image dissatisfaction among obese British-born Afro-Caribbean adults is of great importance as it enables the right interventions to be recommended in terms of social, educational, and health needs. This empirical study fills in the gap in the ethnic minority British-born Afro-Caribbean population by exploring the perceptions and experiences of obesity, body image, and mental well-being among male British-born Afro-Caribbeans. It also improves government policies on obesity and mental health. This study uses BCW because it provides a theoretical framework that

helps behavioural change intervention designers to identify intervention functions and policy categories that can bring about change (Michie, van Stralen and West, 2011). Furthermore, theory-driven interventions could be employed in procedures or interventions that are based on a clear theoretical framework, including an understanding of the relationship between an intervention and its benefits.

Aim

The aim of this research study was to explore experiences of obesity, body image, and mental health among British-born Afro-Caribbean male students at a West Yorkshire university in England.

Objectives

1. To critically explore how male British-born Afro-Caribbean students at West Yorkshire University in England understand obesity.
2. To critically investigate how obesity relates to body image among male British-born Afro-Caribbean students at West Yorkshire University in England and how they view body image in relation to obesity.
3. To identify how body image due to obesity relates to mental health among male British-born Afro-Caribbean students at West Yorkshire University in England.

Methods

This study calls for understanding the perceptions and experiences of obesity, body image, and mental well-being among male British-born Afro-Caribbeans through their subjective accounts. This research employs a qualitative research methodology. In keeping with the BCW model, it captured the experiences and views of male British-born Afro-Caribbeans about obesity, body image and mental well-being and employed semi-structured, in-depth interviews as the method of data collection. In addition, the study inclusion criteria were being male, British-born, and Afro-Caribbean university students, having been born in the UK, and being 18 or older. Students who were unable to speak English were excluded from this study. This was to establish individual perceptions or views on how individuals view their body size, body image, and mental well-being (Zaccagni et al., 2014; Montgomery Sklar, 2015). The study was limited to male British-Afro-Caribbean university students at West Yorkshire University in England.

Sampling and recruitment

The recruitment process began upon receiving ethical approval from the Leeds Metropolitan University Ethics Committee in 2012. This study used purposive sampling (Moser and Korstjens, 2018). To have access to the sample group, an appointment was made with the chairman of the Afro-Caribbean society at their meeting room at the Broadcasting Place of Leeds Metropolitan University. The chairman introduced the researcher to the Afro-Caribbean population through his existing networks. Furthermore, the researcher gave the chairman of the Afro-Caribbean Society the participant information sheet (PIS), invitation letter, and consent form to take part in the study. The PIS had information about the study and the contacts of the researcher. Those who were interested in participating in the study contacted the researcher directly to schedule the interview meeting and return the consent form. This allowed the researcher to gain access to more participants (Palinkas et al., 2015). Only those who returned the signed consent form were recruited in the study (Morgan et al., 2020). Data was collected until saturation was attained.

Data collection and interview guide

The interview guide was informed by obesity, body image, and mental health literature. Semi-structured, open-ended questions were used to conduct interviews, followed by probe questions to elicit further responses (Jamshed, 2014; DeJonckheere and Vaughn, 2019). Each interview was 45 minutes long and was conducted using a dictaphone (Rutakumwa et al., 2020). Nevertheless, the researcher was in a quiet room at the Leeds Metropolitan University campus, and all interviews were conducted using face-to-face interviews. A quiet room kept the atmosphere professional with no noise interruptions, thus keeping the participant focused (Dicicco-Bloom and Crabtree, 2006; Peters and Halcomb, 2015). The interviews aimed to investigate the experiences of how male British-born Afro-Caribbean students at a West Yorkshire university in England understood obesity, body image, and mental health in relation to obesity.

The questions were designed to assess the effects of obesity on body image and mental health among British-born Afro-Caribbean male students at West Yorkshire University in England. The researcher evaluated their body size to determine if they were obese or dissatisfied with their body image, including their mental health. The characteristics (see table 1) of the participants were that they were aged between 18 and 35 years, first-generation black immigrants, health students (participants 8, 9, 10, 11, and 12), and art

students (participants 1, 2, 3, 4, 5, 6, and 7). Five students (participants 8, 9, 10, 11, and 12) were undergraduate students, and seven art students (1, 2, 3, 4, 5, 6, and 7) were postgraduate students. How different participants defined obesity and how different participants viewed themselves when stressed with low confidence, low self-esteem, or depression were explored and used to determine how they influenced mental well-being. Twelve British-born male Afro-Caribbean students from West Yorkshire University in England took part in the qualitative research study and provided detailed, in-depth, and rich information. A summarised table illustrating data collection composed of samples as well as detailing the number of participants is shown in table 1.

Table1: Summarised characteristics of the participants

Age group	18 to 35 years		
Total number of participants	12		
Course	**Health students** (participant 8, 9,10,11,12)	**Arts students** (participants 1,2,3,4,5,6 and 7)	
Level of study	Four students (participant 8, 9,10,11,12) were undergraduate students	Seven art students (1,2,3,4,5,6 and 7) were post graduate students	
Characteristics in views	**A:** Obesity is defined as being overweight with a BMI greater than 25. **B:** Stated high energy intake and low energy utilisation as causes of obesity.	**A:** Defined obesity as a person who is overweight and whose weight negatively affects their health. **B:** Stated upbringing, junk food, lack of exercise, poverty, and consumption of sugar as causes of obesity.	
Comments	- There was no major difference in answers in terms of how participants related their views of body image in relation to obesity as compared to the art students. - Art students' the main reason why they needed to have a good body image was to avoid obesity related diseases, boast confidence, self-esteem, a void stress, depression, and for female attraction.	- There was no major difference in answers in terms of how participants related their views of body image in relation to obesity as compared to the health students. - Health students that the main reason why they needed to have a good body image was to avoid obesity-related diseases, boast confidence and self-esteem, avoid stress and depression, and for female attraction.	
Comparisons of both Health and Arts students	The difference is that the health students had a more clinical perspective on what they thought were the causes of obesity; namely an imbalanced high energy intake and a low energy utilization, as opposed to the art students, who stipulated the major causes of obesity were due to a lack of healthy lifestyle factors such as poor dieting, a lack of exercise, fast foods, and poverty.		

The majority of the participants that took part in the project were from the faculty of art, and others came from the school of health sciences. The reason behind the differences in academic backgrounds was to get a balanced and unbiased view on the research aims and objectives. The views of health students and art students differed about health and obesity. This explains the disproportional selection, with seven arts students and five health students. It was important to state that all participants were male, British-born, Afro-Caribbean students at a West Yorkshire University in England (undergraduates and postgraduates).

The interview schedule was developed using three participants out of a total of 15 participants as a pre-test. Data was gathered from 12 face-to-face interviews conducted in a quiet place on the university campus using a dictaphone, and transcripts were transcribed to investigate and capture participants' lived experiences. Transcripts were read several times by the primary researcher to immerse themselves in the data. In addition, it was advantageous to systematically annotate the transcripts, conceptualise the data, segment the data, analyse the data, and write up the results. Twelve participants were a sufficient sample size to achieve rich data saturation (Ando, Cousins, and Young, 2014; Moser and Korstjens, 2018), and no new themes emerged. In addition, this meant the data was enough to answer the research question. The average length of the interview was 45 minutes. The data collection ended with the collection of 12 interviews.

Data analysis

The study attempts to bracket off his assumptions while analysing the data as an inside researcher. Sutton and Austin (2015) argue that the researcher should investigate alternative interpretations and place emphasis on his subjectivity. "A useful approach to obtaining detailed and comprehensive accounts from interviews is to express ignorance," according to Seidman (2006); thus, the researcher encouraged participants to "say the obvious" by portraying a naive stance. The researcher made sure the analysis kept the verbal accounts' original content (Sutton and Austin, 2015; Braun and Clarke, 2022). All interviews were audio-recorded in English and transcribed verbatim. An inductive approach was used during data analysis to allow the researcher to broaden the analytic field of vision by first familiarising himself with the dataset, as suggested by Braun and Clarke (2022), to explore experiences related to perceptions and experiences of obesity, body image, and mental well-being among British-born Afro-Caribbean male students at a West Yorkshire University in England.

On A3 paper, questions for the interview schedule that were in line with the research objectives were written to generate both semantic codes and latent codes from the data. The data for the analyses of semantic or latent codes (see figure 2), subthemes, and themes (see table 2) were generated from each interview schedule question answered by each participant. Looking at every participant's submission response in the interview transcripts (Braun and Clarke, 2022), this was done for the 12 participants. Data was analysed using thematic analysis, using the six-stage protocol recommended (Braun and Clarke, 2022; Byrne, 2022), manually on A3 paper. Analysing the data manually allowed the researcher to be attentive to participants' language, nonverbal communication, and pauses (Denham and Onwuegbuzie, 2013). A reflective logo and a memo were also recorded. Memorising helps researchers conceptualise raw data into abstractions that explain study findings in their context (Birks, Chapman, and Francis, 2008). In addition, there were 12 interviews for which data saturation was reached, so it was more effective to thoroughly analyse the data manually, which means analysing text and tagging specific parts of the feedback with themes.

Thematic analysis fits with different theoretical frameworks as it aims to identify both patterns of meaning and participants' subjective meanings (Flick, 2014). Braun and Clarke's (2022) six stages include familiarization, generating initial codes, searching for themes, integrating them into broader themes, defining themes, and producing the study (see figure 1). To establish credibility, sustained engagement in the field was maintained over a year-long period. To increase the reliability of the data (Forero et al., 2018), 12 follow-up interviews were conducted with eight participants who were willing to add more detail to their accounts. Further, six participants agreed to read their interview transcripts and provide feedback, affirming the transferability of data between the research participants and the researchers. The researcher, who was responsible for the data collection, would regularly share the transcripts, codes, and themes with the supervisor. In their monthly discussions, the researcher and supervisor would similarly interpret the data, which resulted in refining the themes into four main categories. These were the experiences of British-born Afro-Caribbean male students at a West Yorkshire university in England with obesity, body image, and mental well-being. The following were the main questions:

What is your perception of an ideal body image? Are you happy or satisfied with your body image? Do you maintain a good body image with regular exercises or good nutrition? If so, how often? What are your experiences of trying to maintain weight? What are the reasons of trying to change your body weight? What are your perceived influences on body image concerns?

This study analysed transcripts thematically. Most thematic analysis frameworks have six steps: familiarising yourself with the data, generating initial codes, searching for themes,

reviewing themes, defining and labelling themes, and publishing the results (Braun and Clarke, 2022; Kiger and Varpio, 2020).

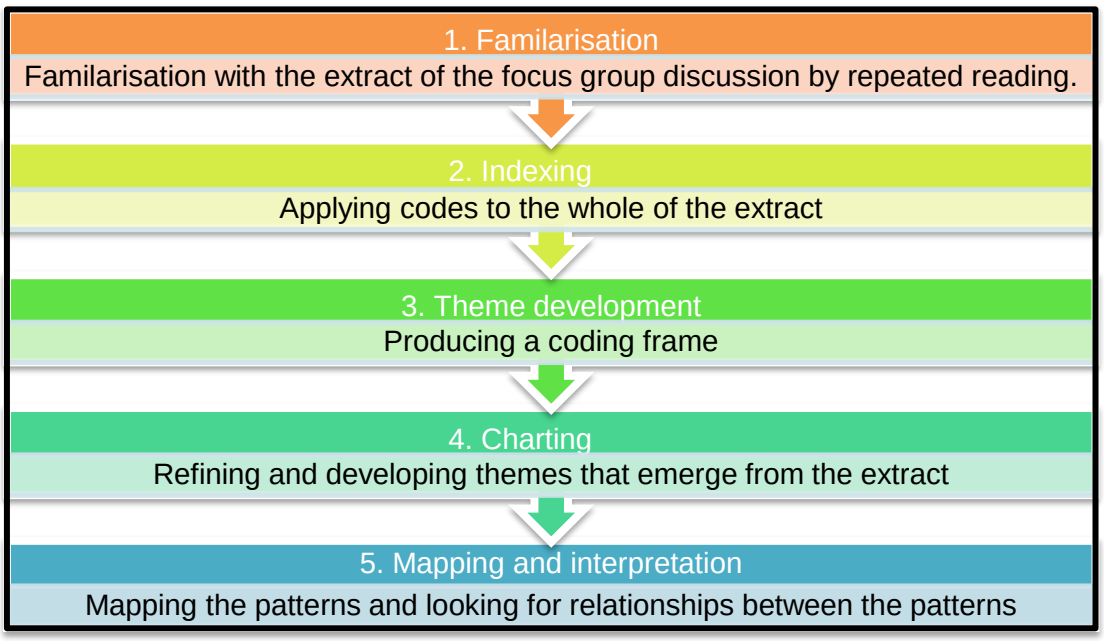

Figure 1: Steps involved in thematic analysis. Adapted from (Braun and Clarke, 2022)

Themes were derived from in-depth interview transcripts by reading a data set and identifying patterns in meaning. For comparing differences and similarities, the codes were sorted into categories, sub-themes, and themes. Codes, subthemes, and themes were used to identify categories.

Results

The results were summarised and organised by theme. Healthy lifestyle monitoring, body image attitudes, experiences of trying to maintain weight, and reasons for changing weight were themes. The interpretation relied on verbatim quotes. Subthemes, semantic and latent codes were summarised below**.**

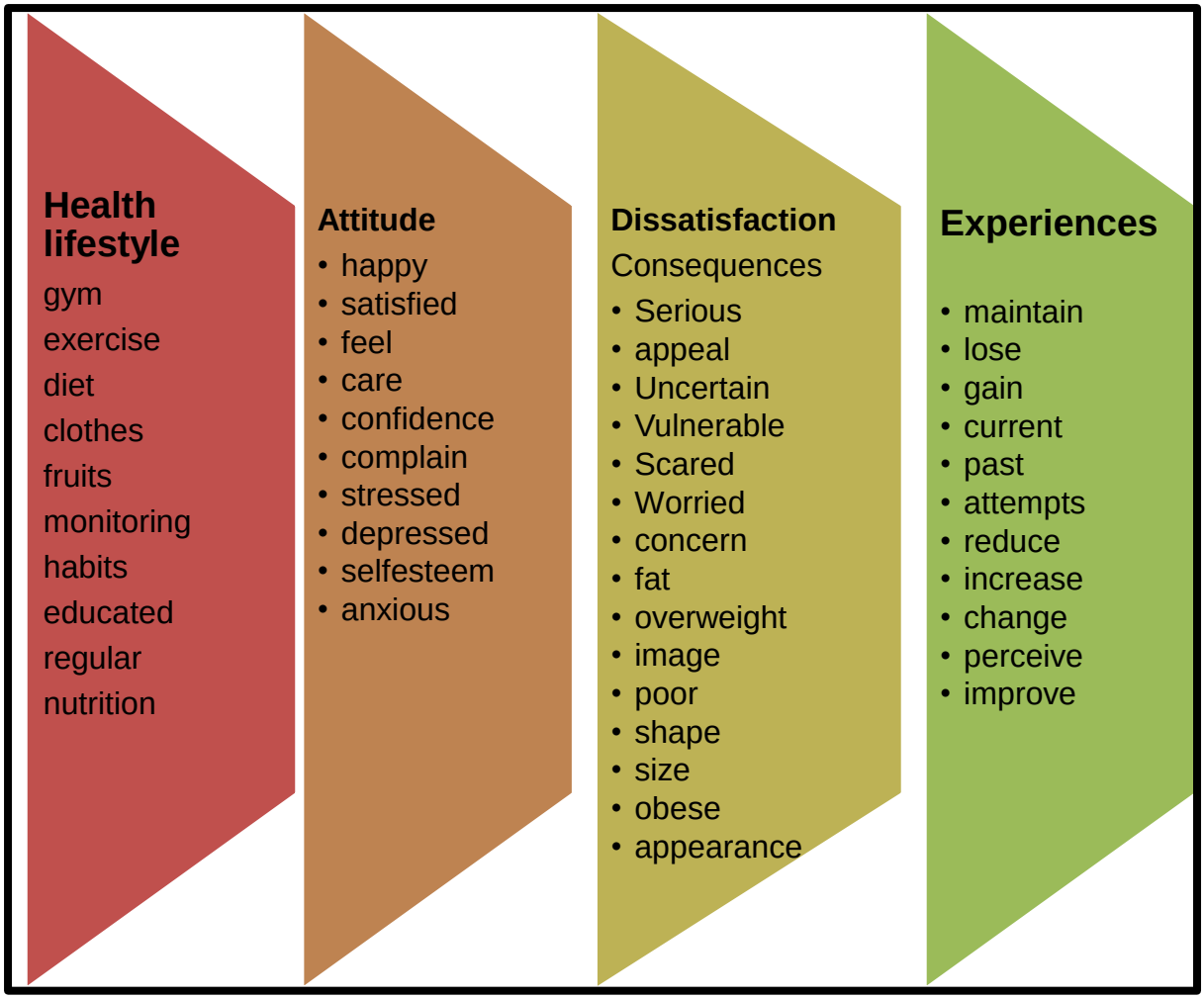

Figure 2: Indexing – Applying codes from all transcripts

The preliminary themes were chosen in part based on word repetitions. The words "happy," "satisfied," "feel," "care," "confidence," and "stressed" appeared several times, emphasising the importance of attitude. Consider the following scenario:

Participant 9 stated:
"I'm quite happy with the way I look." I don't really feel anything needs to change or be improved. "I'm quite happy about that". "I really don't care, but I feel OK. I'm feeling pretty confident. That's ok''.

The use of key words such as "worried, concern, fat, overweight, image, shape, size, obese, and appearance" were obtained.

Comparing participant experiences revealed codes and themes. When people were asked if they were happy with their body image, they used words like "maintain, lose, gain,

current, reduce, increase, and change" as key words. After grouping the codes, four main themes emerged after further reading. Below are the steps.

The diagram below showed how codes were grouped into themes

Two sections are shown in Figure 2. The method section includes male participants' lifestyle choices, such as frequent exercise, poor diet choices, and eating KFC or McDonald's. According to the challenge section, male participants are, unhappy with their body size, shape, weight, and image. Common codes include worry, unhappiness, low self-esteem, and weight gain or loss. This helps to makes it easier to interpret d.

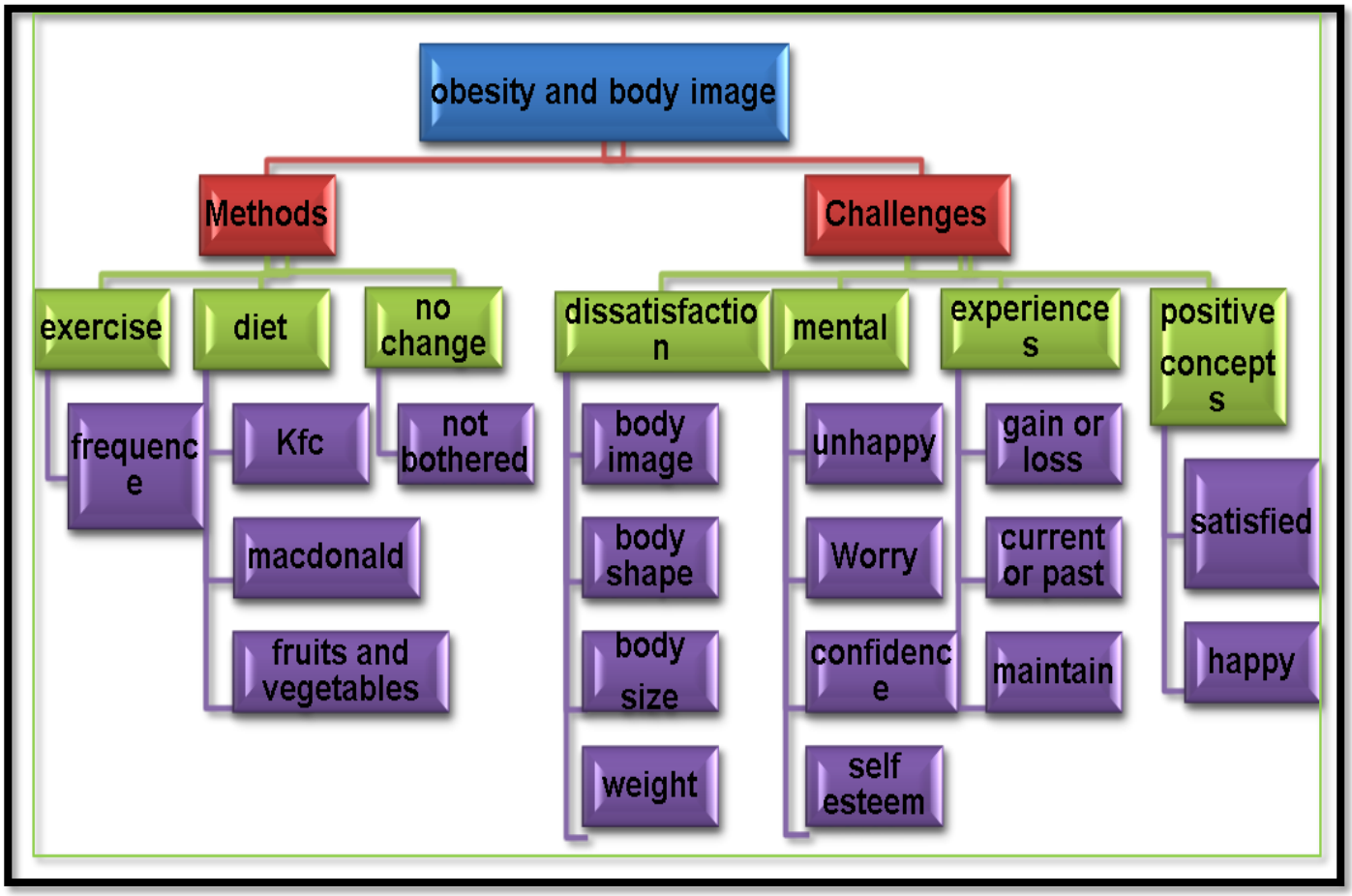

Figure 3: Initial theme development from transcripts

Healthy lifestyle monitoring

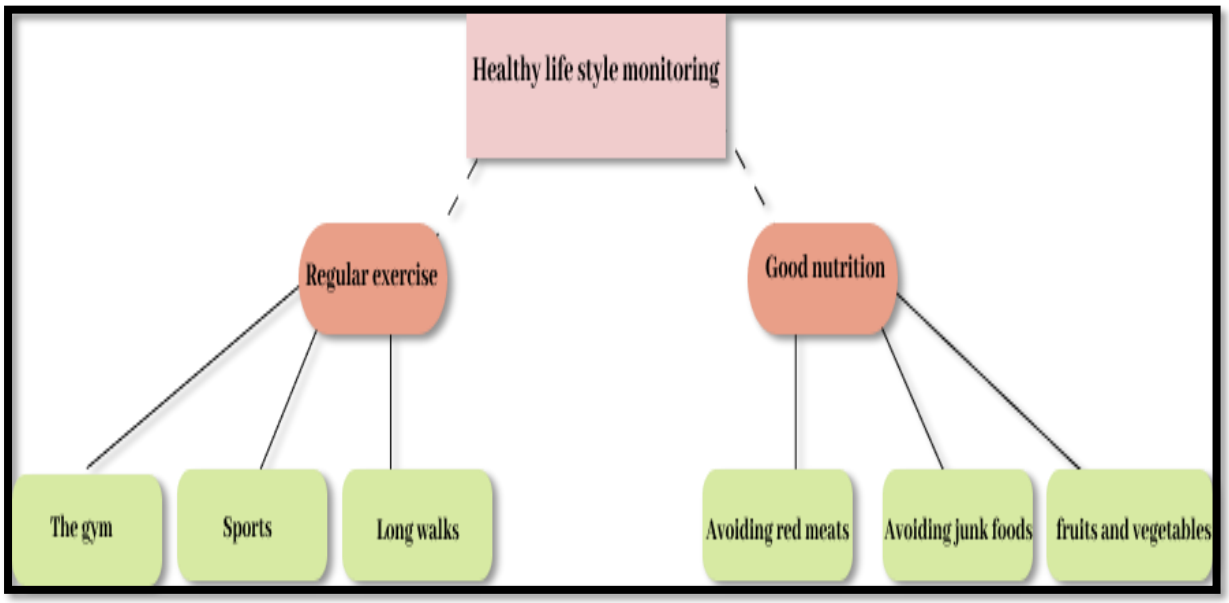

Figure 4: Thematic map showing how participants maintained a healthy lifestyle

Exercise and good nutrition helped interviewees maintain a positive body image. Some went to the gym 3–4 times a week and learned about health. They knew the dangers of obesity and prioritised their health.

For instance, participant 1 remarked:
‘’I maintain a good body image through good nutrition, regular exercise, avoiding harmful habits, making informed and responsible decisions about health, and seeking healthy assistance, when necessary, but I also tend to go to the gym 3–4 days a week. I avoid eating junk food such as KFC and McDonald's, and I tend to eat lots of fruits and vegetables’’.

Other problems arose from time to time, when it seemed that psychological and social pressures were at work, which could have changed the participant's perception of reality.

For example, participant 1 stated:
‘***’Body image as always has been important to me as my parents have helped my diet kind of, as it has also been down to sports as they have also said to me so much the health side of things not so much body image …; the main reasons why I stay health is the way I feel good, the fact that am personally satisfied way I look as opposed to how others see me how I look’’.***

Diet and body image are linked by the participants. His parents may have influenced his healthy food choices and self-esteem. The participant has no intention of changing his appearance, but he loses weight healthily. This is how health promotion can indirectly combat obesity.

Participant 2 remarked:
'' I do some exercises every now and again but, in all fairness, not as much I should do.; for example, I stopped playing football that I used to do frequently every weekend because of pain in my legs that hurt and joint pains could be as a result of my weight. I will have to try and practise again when I feel better with pain every week back to playing as it is summer to''.

Due to insufficient exercise and possibly a poor diet, the participant has no routine to maintain a normal BMI of 18–25 kg/m2. Even though sedentary lifestyles are well known, no plans exist to change them. A participant adds:

''it is a bit of pressure to change my body image but am not really bothered about my weight; even my Mrs never actually said it but if she wants to say it then I have to work on it even more''

Obesity's health risks are ignored. Both participants (1 and 2) value exercise, diet, and a positive body image. Participants tend to individualise their actions and experiences without considering society or the environment. This may indicate a strong sense of personal responsibility among this minority ethnic group, which could combat obesity-related diseases like diabetes and heart disease. Because the individual doesn't expect help, compulsive behaviour may result.

Participant 3 stated:
"***Yes, keeping not eating too much fat food yet again as fat is ideal for energy and our diet and going to the gym regularly 3-4 times a week has helped me maintain overall my good body structure I mean shape, size. I do go to the football club that train on Saturdays and Sundays and I don't miss, that helps as well''.***

Theoretically, this participant lives a healthy lifestyle (dieting, exercising), but it's debatable practically. The participant needs to know how to maintain his body image through diet and exercise by setting realistic goals.

Participant 4 noted:

''Yes, I go to the gym, but I do default a lot." What happens is that I tend to force myself to walk around fields to relax, walk around public gardens three to four times a week. "I avoid red meat because it can cause cancer, so I watch what I eat to be safe".

This participant contradicts himself about body image but worries about cancer. He doesn't say why he wants to lose weight or why he's self-conscious.

Participant 5 commented:

"I play a lot of sport; I play a lot of rugby, but I think that indirectly helps me keep my shape and body image fair, and I am advised what to eat because I play a lot of rugby at university; I play for Carnegie." "I am generally satisfied with my body weight and body image overall''."

This participant uses sports to stay in shape, but questions remain about his diet. He's not interested in changing his body image.

Participant 6 remarked:

"Yeah, I go to the gym three times a week, I try to avoid junk food, and I eat healthy, which requires more cooking at home." "I put cocoa butter on my skin. I sometimes wear tight shirts to bring out my shape and clothes that bring out all the muscular lines' attractiveness". "I look in the mirror to see if I have improvements in my muscles''.

This participant is body-conscious, exercises daily, and cooks healthy meals. If he occasionally ate junk food, it's unclear if this is a realistic diet.

Participant 7 stated:

"Absolutely, I go to the gym and exercise on a regular basis, about 3-4 times a week, which is beneficial primarily for health reasons and to avoid social exclusion as body image is now important in British society, particularly in the media."

Participant worries about his physical appearance and media and social exclusion.

Participant 8 remarked:

"I maintain my body image because I work so hard to stay in shape and fit by exercising, going to the gym, and playing football, and I limit how many calories I eat per day because I eat a lot of vegetables and fruits." I train myself to stay fit in the gym to be fit for football. So, I am a football fanatic, as I only keep fit in the gym for football''.

Both participants know and practise healthy eating and exercise. Similar accounts are given.

Body image Attitude

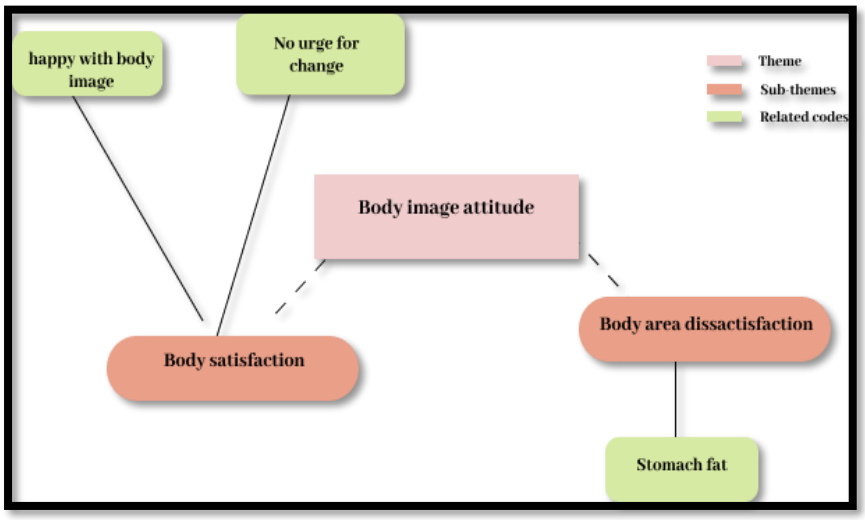

Figure 5: Thematic map showing the attitude of the participants to their body image

Interviewees discussed body image and desired changes. Themes include:

Body satisfaction

In general, most participants were happy with their body image:

Participant 9
''I'm quite happy with the way I look. I don't really feel anything needs to change or anything. I'm quite happy about that.... I really don't care but I feel OK. I feel like kind of confidence. That's ok''.
''I do always look in mirror to check how I look, and which clothes will fit me best and which one I have been told suit me such that I dress again such that those complements boost more and more confidence''.

Participant 8

''No there is nothing I want to change about my body as I consider myself fit and health am happy, I have 6 packs, muscles and a good body shape and with lots of confidence about myself''.

Participant 7
''I have been conscious the way I look I have always tried to look after my body I guess it has probably been out of the society for such a long time am left with no choice but to care about my body particularly in Britain to try avoiding being obese because my self-esteem will suffer''.

Quotes show that over half of them want to change body parts. Societal or psychological pressures might cause these contradictions.

Participant 1
''some men have big tummies (central adiposity) they tend to have no attractive shapes making their overall image poor and their family tell them they have no confidence, low self-esteem, stressed, depressed and anxious''

Participant 5 agrees with participant 1

The participant likes their body. This sub-theme links to body area dissatisfaction.

Body areas dissatisfaction

In terms of body dissatisfaction, four of the male participants wished to change some parts of their bodies. Most men were unhappy with their arms and stomachs.

Participant 3 stated:
''Well yes, my stomach I have some fat I have not been to the gym lately, but I will go back after my commitments such that I lose the fat and I will run in the evenings to try maintaining body shape and size''

Participant 4 remarked:
''Yes, if you're a male with ''6 packs'', somebody with a little bit of muscles, somebody with generally straight and relatively tall'.

Participant 5 noted:
''The perfect body image is somebody that is not obese, somebody that is got a lower amount of body fat, people with 6 packs, we aim to look like men of look time ago who had less body fat yet strong because that is the health image''.

Participant 12 commented:
"I am indiscipline to be honest not bothered how my body image. In truth I lack motivation and hence why my weight gets out of control".

Experiences of trying to maintain weight

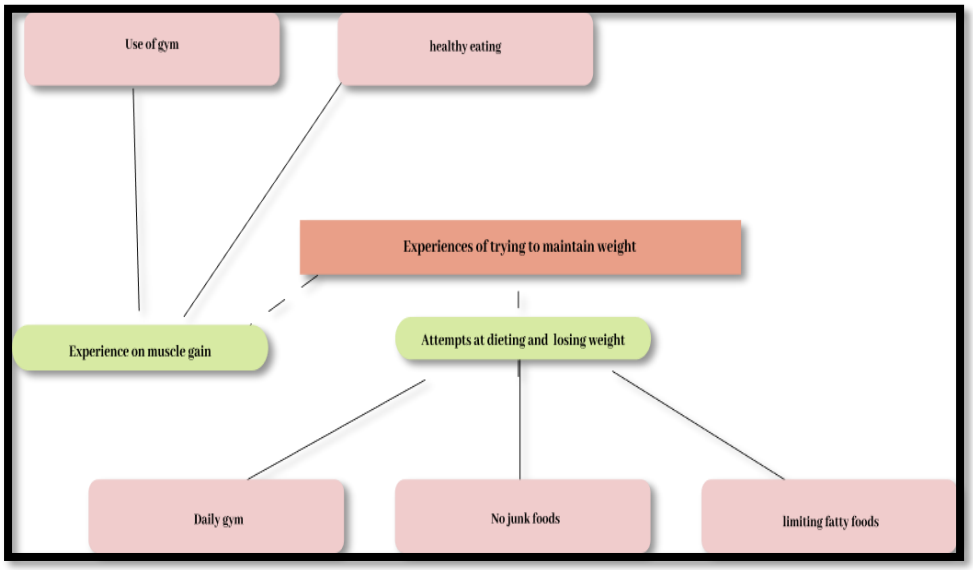

Figure 6: Thematic map discussing how participants tried maintaining weight

Participants were asked how they tried to maintain weight (s). The answers can be categorised as weight-losers and muscle-gainers.

Attempts at dieting and losing weight

Men discussed this problem mainly. Six out of nine men had tried weight-loss methods. Exercise, healthy eating, and reducing food intake were popular for example.

Participant 1 said:
''A good body image is maintained through good nutrition, regular exercise, avoiding harmful habits, making informed and responsible decisions about health and seeking healthy assistance when necessary' 'I tend to gym everyday 3-4 days a week, I avoid eating junk food like KFC, Macdonald etc and I tend to eat lots of fruits and vegetables' 'Yes, keeping not eating too much fat food but yet again as fat is ideal for energy and our diet''

The participants preferred healthy weight loss methods.

Experiences of muscle gain

Four participants had tried to gain muscle. One male student said they gained weight by going to the gym. Men mostly used physical activity and diet control.

Participant 7 remarked:
''Yeah, I gym 3 times a week, I try to cut down on junk food, I tend to eat healthy meaning more cooking at home. I. I sometimes on these tight shirts to bring out my shape and wear clothes that bring out all the muscular line attractiveness I can bring out as much as possible. I look in the mirror to see if I have improvements on my muscles''.

Men tried to gain weight more than they tried to lose weight, according to the participants. Young adults most often cited eating healthily and exercising to reach their goals.

Reasons for changing weight

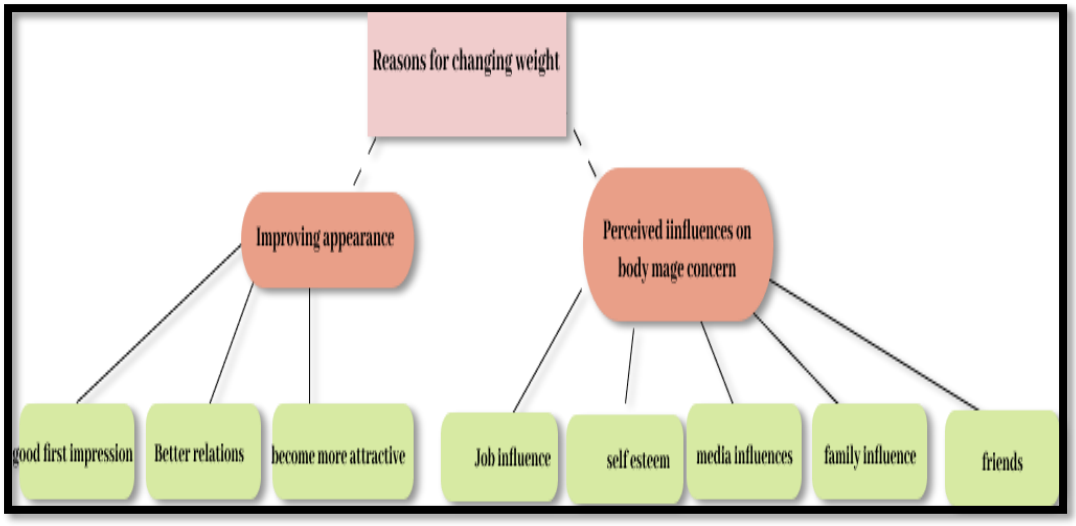

Figure 7: Thematic map exploring reasons why participants desired a weight change

Participants who tried to lose weight cited improving appearance as their main motivation. Participant 3 said:

Participant 3 stated:
''Yes, it is important to me because I do not want someone to look at me for the wrong reasons if you show you take care of your body, your healthy they will have first impression that if you can look after yourself then you can look after them particularly women can be attracted to you for me that is important as every man needs a woman to be complete in life''.

This emphasises judgement.

Participant 3 remarked:
'' I also good for job interviews if they see you looking good with good body image, they will know you will be very hard working as a good body image has to be maintained as requires a lot of hard work''

Also, the participant values relationships. Overall, participants' appearances were the main motivator for weight loss.

Perceived influences on body image concern

Body shape awareness, the media, and parents are common influences on body image concerns. Self-motivation was most participants' main influence on changing body shape. For example:

Participant 3 stated:

'' I would say more media than family. Friends to as media influences people's perception especially in England''.

''Depending on what job you got like models, if you are a male model and paid you should have an overall good body structure. Afro-Caribbean mean a little bit want 6 packs''.

''I think it's just for myself probably and to find some clothes, if I could. Because I feel confident, boosts my self-esteem and happiness''.

Body image is the main reason interviewees try to change their appearance. The media, family, and friends should make it clearer what their weight-loss roles are. Conclusively, most participants also tried to lose weight and gain muscle. Participants said improving appearance drove body image changes, not media ideals. Peers and parents influence body shape less.

Table 2: Summary of main findings of generated semantic codes, latent codes, subthemes and themes

Themes	**1. Healthy lifestyle monitoring**	**2. Body image Attitude**	**3.Experiences of trying to maintain weight**	**4. Reasons for changing weight**
Subthemes	-I maintain a good body image through good nutrition. -I maintain my body image with regular exercise. I gym 3-4 times a week, avoiding harmful habits, making informed and responsible decisions.	***-Body satisfaction:*** I'm quite happy with the way I look. -I don't really feel anything needs to change or anything. - I'm quite happy about that.....'' I do always look in mirror to check how I look, and which clothes will fit me. ***Body areas dissatisfaction.*** -Some men have big tummies/central adiposity they tend to have no attractive shapes. -Well yes, my stomach I have some fat I have not been to the gym lately.	- ***Attempts at dieting and losing weight:*** '-I tend to gym everyday 3-4 days a week, I avoid eating junk food like KFC, Macdonald etc. I tend to eat lots of fruits and vegetables. ''Yes, keeping not eating too much fat food yet again as fat is ideal for energy and our diet. ***Experiences of muscle gain*** '-Yeah, I gym 3 times a week. - I try to cut down on junk food; I tend to eat healthy meaning more cooking at home. -I sometimes wear tight shirts to bring out my shape and wear clothes that bring out all the muscularity.	-Yes, it is important to me because I do not want someone to look at me for the wrong reasons. -if you show you take care of your body, your healthy they will have first impression....'' ***Perceived influences on body image concern*** ''I would say more media than family''. Friends to as media influences people's perception especially in England''. ''Depend on what job you got like models, if you are a male model and paid you should definitely have an overall good body structure''. Afro-Caribbean mean a little beat want 6 packs.

Discussion

This study aimed to explore the experiences of obesity, body image, and mental health among British-born Afro-Caribbean male students at a West Yorkshire university in England. To provide evidence on the perception of obesity in this population, a qualitative study was conducted, and data was collected using interviews. A total of 12 participants were purposefully recruited and interviewed. The study found that participants were not satisfied with their body image and thus expressed shame, a lack of self-esteem, and a lack of confidence.

These findings were consistent with previous research (Aparicio-Martinez et al., 2019; Durkee et al., 2019). For example, sexual attractiveness, obesity-related issues, confidence, happiness, self-esteem, and peer pressure were identified as major motivations for losing weight (Aparicio-Martinez et al., 2019; Durkee et al., 2019). According to some research (Okop et al., 2016; Naigaga et al., 2018), Afro-Caribbean men who may be classified as obese or overweight are seen as wealthy and cheerful, whereas those who are thin are perceived as poor and lacking in confidence. This group may have adopted British culture, which stigmatises obesity and poor body image (Okop et al., 2016; Naigaga et al., 2018).

A similar study by Davis et al. (2021) investigated the impact of BMI on body dissatisfaction and eating habits among Caribbean university students. Despite the study's female majority, they found male body image dissatisfaction in the Afro-Caribbean community. Studies have shown that while many men want a "six-pack stomach," they also want huge arms (Hatoum and Belle, 2004; Montgomery, 2015). As stated previously in the literature review, males associate a good body image with muscle, six-packs, confidence, self-esteem, and sexual attraction. These findings differed from those of Davis et al. (2021) in that they emphasised personal relationships, masculinity, body dissatisfaction, healthy lifestyle monitoring, body image, and attitude.

In addition, males often try to lose weight by dieting and eating fruits and vegetables (Pem and Jeewon, 2015). A similar conclusion was reached by Bouzas, Bibiloni, and Tur (2019), who found that men used current multi-method approaches to combat obesity, especially dieting and exercise. A lot of questions arise about whether they are realistic. Participants in this study mentioned other factors influencing weight and body image. Sources of influence mentioned included body awareness, the media, and parents. Self-motivation was cited as the most important factor by most participants.

According to some studies, celebrities who have a positive body image are idolised, as seen by widespread media attention in the United Kingdom (Morris and Katzman, 2003; Sansone and Sansone, 2014; Ho, Lee and Liao, 2016). Participants in this study who idolised celebrities with a perfect male body image had lower self-esteem because of body image dissatisfaction than those who idolised friends or family (see appendix). According to Puhl and Heuer (2010) and Weinberger et al. (2016), understanding the problem is better than changing the individual. The findings show that families are seen to instil confidence in individuals about their body image, which leads to body satisfaction.

Moreover, Miche, Van Stralen, and West (2021) made a tool called BCW that is based on theory and evidence. It enables a diverse range of users to design and select interventions based on policies and behaviour analysis. This demonstrates the need to change interventions and policies that change an individual's behaviour. BCW-based "intervention" equips public health experts with the application of theoretical knowledge on what needs to change to reach the behavioural goal. Using the COM-B model to identify barriers and facilitators towards the adoption of a diet, cognitive function is significant for the Afro-Caribbean individual's ability to manage their weight. This means that behaviour interventions should focus on families to increase body image satisfaction among individuals.

A study by Timlin, McCormack, and Simpson (2021) demonstrated that more barriers prevent healthy dietary change than facilitators. COM-B may be beneficial. The findings of this study will have an impact on a behaviour change-based intervention. Content analysis showed that time, work environment, food preferences, and accessibility were the most MIND diet barriers. Health, memory, organisation, and decent eating were the key facilitators. Public health specialists can help obese people lose weight and avoid body image issues, poor self-esteem, and low confidence through diet control and an active physical lifestyle.

Quittkat et al., (2019) and Thornborrow et al., (2020) argue that cultural bias affects ideal male body image. In this study, some of the young males concentrated on specific muscle groups such as their arms and stomach. This fitted their cultural view of the ideal male body image, which linked muscularity and masculinity (Lefkowich et al., 2017; Thornborrow et al., 2020). For instance, the individual who took part in the study talked about obesity and body image in very specific ways. Consider a participant's view: "Well, yes, on my stomach I have some fat, but I have not been to the gym lately." I sometimes wear these tight shirts to accentuate my shape and show off my muscularity”.

Several participants lack discipline and willpower. They blamed diet and self-control (Shoneye et al., 2011; Salemonsen et al., 2018). Self-discipline won't last if the conflict between pleasure and health isn't resolved (Salemonsen et al., 2018). Study participants valued taking responsibility for their health and changing their circumstances. Previous research (Shoneye et al., 2011; Tylka et al., 2014; Salemonsen et al., 2018) found that participants with obesity, poor body image, and mental health interventions had an ambiguous attitude towards self-responsibility but framed themselves as responsible, educated, and pro-health individuals (Tylka et al., 2014; Salemonsen et al., 2018). Goffman's theory states that people are more likely to be positive when they feel supported (Salemonsen et al., 2018). Anxious or depressed people often worry excessively over their feelings and actions. Self-awareness and self-representation are required, unlike basic emotions (Gray and Frederick, 2012; Haen and Thomas, 2018). This study clearly demonstrates self-representation.

The study participants believed that their obesity was caused by not eating healthy foods and not exercising enough. To be productive, inspired, self-disciplined, capable, or even irresponsible and immoral is to be healthy (Salemonsen et al., 2018). The individual qualities given to overweight or obese individuals highlight the victim-blaming that occurs (Frederick, 2012; Haen and Thomas, 2018). Individual responsibility for one's own health is deeply embedded in our culture and political system, according to Salemonsen et al., (2018) and Kersh (2009). They argue that good health now represents self-control, hard work, ambition, and life achievement rather than just improving one's appearance or lifespan.

Obesity, body image, and depression are all misrepresented (Hosseini and Padhy, 2019). Obesity strains the health care system financially. Due to the rise in obesity-related co-morbidities like type 2 diabetes, the UK should combat obesity (Chan and Woo, 2010; Ryan and Yockey, 2017). Depression causes 50% of long-term medical costs (Karlsson et al., 2006; Katon, 2011; Thom, Silbersweig and Boland, 2019). Rising obesity and depression-related suicides strain national health services, requiring action. This approach reduces obesity-related diseases and the financial burden of maintaining obese and mentally ill patients, especially those with depression (Davillas, Benzeval and Kumari, 2016; Sarwer and Polonsky, 2016). Healthcare professionals treat obesity and depression in multiple ways (Stein et al., 2019). This includes promoting a sociological, psychological, and educational mental health model (Khenti et al., 2016). Personality, social, clinical, health, and developmental perspectives could improve diet and exercise interventions (Friel et al., 2007; Lemstra et al., 2016; Mozaffarian et al., 2018). According to a study (Williams, 2018), black

and South Asian people have higher obesity and depression rates than white people. Reduced physical activity has been suggested as a possible cause (Booth, Roberts, and Laye, 2012; Lavie et al., 2019; Mbabazi et al., 2022a). Women, obesity, and depression have been studied more (Blasco et al., 2020). Sociology and psychology are new. Male obesity leads to depression, low self-esteem, anxiety, and shame, especially in Afro-Caribbean men. These findings argue with this empirical study.

Trustworthiness, strengths and limitations

To improve trustworthiness, it's critical to address issues like credibility, reliability, transferability, and confirmability (Nowell et al., 2017). By consistently and systematically analysing data, utilising codes, subthemes, and themes (Sutton and Austin, 2015), and categorising the data in the interpretation process (Nowell et al., 2017; Kiger and Varpio, 2020), the credibility, confirmability, and dependability of the findings were increased. Understanding the researcher's potential influence during the data collection process is linked to reflexivity (Ives and Dunn, 2010; Castleberry and Nolen, 2018; Reid et al., 2018). This qualitative research project on male British-born Afro-Caribbean West Yorkshire University students' understanding of obesity and body image was going to be difficult. Obesity and body image are gendered issues. Some researchers' critique of qualitative research is "anything goes" due to their positivist stance (the logic of inquiry should be homogeneous and testable) (Kiger and Varpio, 2020).

Conclusion

This study investigated male British-born Afro-Caribbeans' perceptions and experiences of obesity, body image, and mental well-being. Stigma, shame, and a sense of guilt for failing to live a healthy lifestyle and maintain a good body shape contribute to poor mental health. Shame, guilt, and pride are self-conscious emotions that play a key role in regulating an individual's thoughts, feelings, and behaviours. As a result, it is vital to handle these emotions in everyday life. When the individual, the clinical experts, and the public health experts focus on weight reduction therapy interventions, it is easy to overlook the individual who is overweight or obese. Future health promotion programmes need to educate participants on feelings like shame, guilt, and pride, as well as their involvement in food consumption and physical inactivity, so that people who are overweight or obese can control their food intake and physical activity. It is suggested that recovering good self-esteem and dignity will enable individuals to take personal responsibility for improving their quality of life. It is critical to

address both individual and systemic weight stigma, as well as accountability for making decisions for male British-born Afro-Caribbean individuals. Furthermore, future health promotion programmes should teach obese people who are unhappy with their body image how to deal with emotions such as shame, guilt, and pride. Furthermore, individuals should adopt healthier eating habits and increase their physical activity, which is a broad strategy to reduce the incidence of obesity. A BCW with the COM-B model at its centre, intervention activities, and policy classifications could characterise behaviour-changing interventions and policies. How far the BCW can assist in developing successful interventions should be investigated.

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Appendix

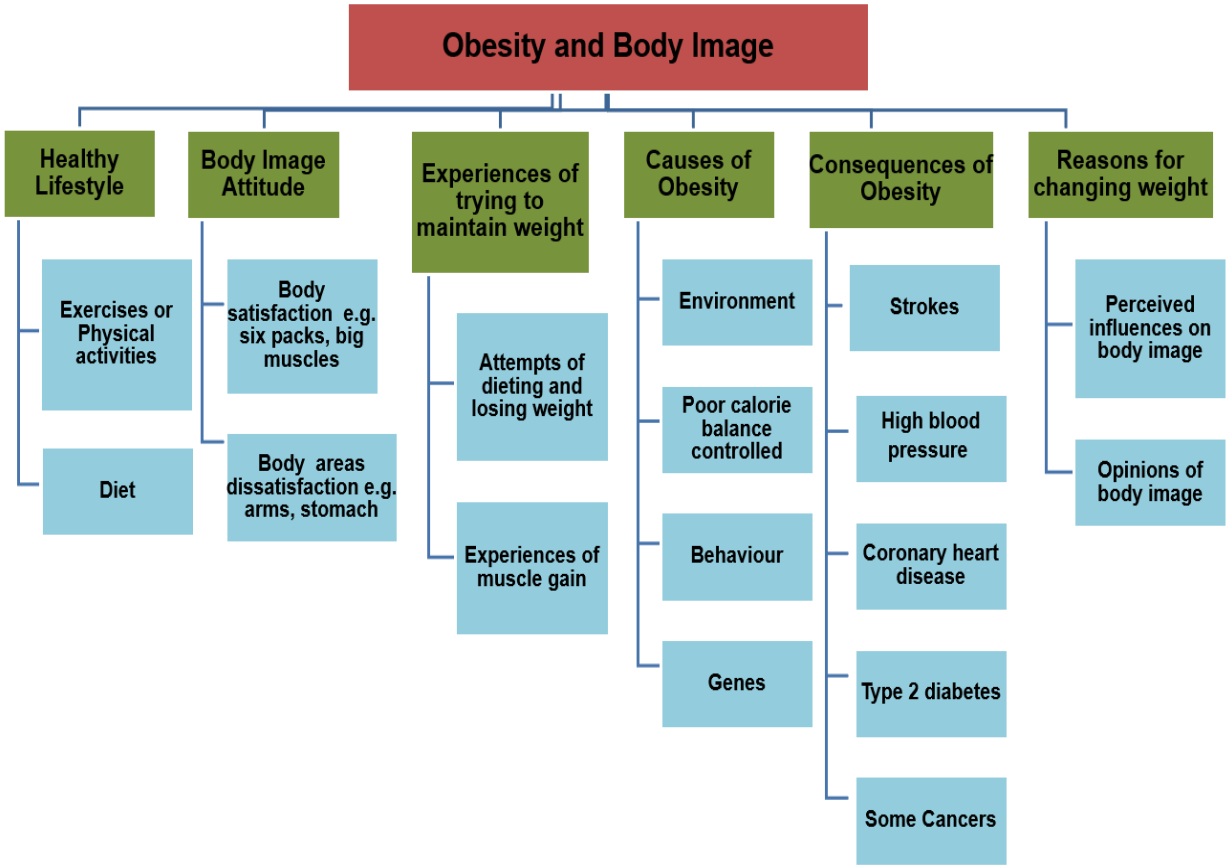

Figure 8: Conceptual model of body image in relation to obesity