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# Experiences of Barriers and Motivators to Weight-Loss among Saudi People with Overweight or Obesity in Qassim Region - A Qualitative Study

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## Abstract

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**BACKGROUND:** Obesity has become a global health threat. Saudi Arabia ranks among the countries with high obesity and overweight rates. This study aims to explore experiences of Saudi people with overweight or obesity with a particular focus on the perceived barriers and motivators to weight loss.

**MATERIAL AND METHODS:** We used a qualitative approach to recruiting a purposive sample using maximum variation sampling technique. Those who had previously attempted weight loss at least once were included in the study. In-depth interviews were conducted, transcribed and/ or audiotaped. Interviews continued until saturation was reached. The qualitative content analysis was performed.

**RESULTS:** A total of 19 males and 18 females participated in this study with a mean Body Mass Index (BMI) of 32.6 kg/m<sup>2</sup>. Their main triggers to weight loss were concerns about overall health and the desire to improve their looks. Declining motivation, lack of family support and unhealthy eating during social gatherings were perceived as the main barriers. Motivating factors included concerns about health, family support, and availability of exercise facilities.

**CONCLUSION:** Factors responsible for a successful weight-loss is context-specific. This study has shown several barriers as well as motivators, which play an important role in weight reduction and maintenance.

## Introduction

Over the past three decades, the world has witnessed an alarming escalation in the rates of obesity and overweight [1]. Estimates show that the prevalence of obesity has doubled since 1980. In 2014, more than 1.9 billion adults aged 18 years and older were overweight, among whom 600 million were obese. The increasing prevalence of obesity is mainly related to sedentary lifestyle, dietary habits, and the effects of environmental changes [2, 3]. These alarming facts have made obesity as one of the central health care issues to the extent that the World Health Organization (WHO) has declared it as an epidemic [4]. The related consequences manifesting

as high vulnerability to morbidity and mortality complicate the situation [5]. The huge spending associated with obesity-related medical problems compromises health care allocations in national and regional budgets [6]. Prior evidence, however, shows that it is controllable. A large descriptive study about obesity and overweight indicates that weight loss can successfully be achieved and maintained through healthy diet & physical activity [7].

The Gulf countries (Saudi Arabia, Kuwait, United Arab Emirate, Bahrain, Qatar and Oman) have the highest rate of obesity worldwide [8]. The latest national health survey of 2013 conducted in collaboration with the Institute for Health Metrics and Evaluation estimates the prevalence of obesity in Saudi Arabia at 28.7% [9].

Obesity is a complex state that results from the interaction of multiple factors including genetic, biological, social, behavioural, cultural, and environmental. Behaviors such as high intake of calories and lower levels of physical activity contribute to its development. The accelerating rates of obesity have been partly linked with unhealthy behaviours such as excessive snacking and increased portion sizes [10]. A recent study has shown that a combination of cultural practices and economic prosperity has contributed to the development of an obesogenic environment in Saudi Arabia [11]. Another study has shown that traditional clothing, foods, hospitality norms and limited outdoor activities were considered as barriers to weight loss among Saudi females [12].

Qassim region is situated in the centre of Saudi Arabia. A previous study on the regional variation in the prevalence of obesity among Saudi children and adolescents found out that the central region has a higher prevalence (21%) compared to the southwest and the Northern regions [13].

Obesity exposes individuals to a higher risk of Non-Communicable Diseases (NCDs). However, this risk is considered to be modifiable & preventable [3]. Consequently, and given the current global situation, the prevention of obesity has become one of the world's top five health priorities set by the Lancet NCD Action Group and the NCD Alliance [14].

Evidence indicates that there is a need to understand the local socio-cultural and environmental factors to develop successful weight loss programs [15]. The available data about weight loss interventions or the factors determining their success are insufficient, generally for Saudi Arabia and Qassim in particular. In this study, we aimed to explore the participants' experience of barriers and motivators for weight loss in the Qassim region to gain deeper insight into distinct factors central to the success of weight loss interventions. Thus, contributing to mitigate the existing information gap. The exploratory nature of this study necessitated the use of a qualitative approach. Despite the local pool of evidence available on obesity in Saudi Arabia, a qualitative approach has rarely been used. Weight loss interventions typically target modifications in the individual behaviour related to diet and physical activity. Many behaviour change theories have been described in the literature to provide a conceptual framework for their determinants and causal factors. Our research study was particularly informed by the Social Cognitive Theory (SCT), which explains human behaviour as reciprocal interactions between personal, social and environmental factors [16]. We hope that the results of this study will help inform decisions making processes about weight loss interventions and provide a basis for further research into this field.

## Material and Methods

### Study Design

This is a qualitative research study having an exploratory purpose primarily. This approach was used to gain an understanding of underlying reasons, opinions, barriers, and motivations of individuals with overweight or obesity regarding their weight control attempts.

### Participants, Sampling and Recruitment Process

Purposive sampling was used to recruit participants. The aim was to recruit individuals who were overweight or obese, and who had attempted to lose weight at least once. Buraidah, the capital city of the Qassim region, making about half of the region's population, was the focus of the study. The required study sample was drawn using the maximum variation sampling technique to ensure heterogeneity. A sampling grid of the potential major factors (age, gender, education & co-morbidity) was created. The target was to recruit at least one person from each group. This technique was used to reduce bias and ensure that the study sample included groups of different combinations of variables. Participants were approached directly and asked about their interest in participation in the study. Weight eligibility was determined by three different methods; self-reporting in the majority of cases, extracting information from patient records, or using a scale and a BMI calculator, particularly for the overweight participants. Furthermore, multiple recruitment strategies were used to reach as broad a range of individuals as possible. Participants were selected from a variety of sources including outpatient clinics, parks and fitness clubs. Interviews were arranged during daytime at a mutually convenient time and place for both the interviewer & participants. However, interviews were conducted in the evenings particularly for participants recruited from fitness clubs and walking tracks in public parks. These participants were likely to be physically active. However, this recruitment was purposively done. Physically active people would probably disclose valuable information particularly about motivators for leading and maintaining physically active lifestyles. Those who had a history of bariatric surgery or were unable or unwilling to describe their experiences were excluded from the study. Considering the cultural values in Saudi Arabia and gender preferences, care was taken to ensure that interviews were conducted by a person of the same gender. Interviewing continued till data saturation was reached, which occurred after 37 participants were interviewed (18 women, 19 men). Saturation was determined by the point at which no new information was generated from interviews.

### ***In-Depth Interviews***

One-to-one semi-structured interviews were conducted between January and July 2016. These were audio-taped with the consent of interviewees. Preliminary data were obtained from participants concerning their gender, age, level of education, and co-morbidity status (chronic diseases like diabetes, hypertension, ischemic heart disease and hyperlipidemia).

Researchers obtained the ethical approval from the Regional Research Ethics Committee of the Qassim region. Before starting the interviews, participants were apprised about study goals and inclusion criteria. The interviewers introduced themselves and studied goals, received written informed consent, and selected an appropriate place for the interview. The participants were assured of the confidentiality and were given the option to refuse to answer any question or quit at any time during the interview. All interviews were recorded and/or written verbatim. In the end, participants' permission was obtained for calling him/her for further information or clarification. Data were collected by using an interview guide. Questions were open-ended and intended to elicit information about the participants' personal experience of barriers and motivators of weight loss. The development of the interview questions was based on the main research question about the perceived barriers and motivators, and they were informed by prior research in the region [17]. The interview guide consisted of two sections. The first section was introductory and included background questions. The second section encompassed questions about initiating a weight loss program, barriers, motivators and a final advice to other people based on the participants' personal experience. Probing was used for further clarification.

### ***Data analysis***

The study used an inductive approach to generate meaning from the collected data to identify patterns. Data were analysed using the qualitative content analysis. Initially, all interviews were listened to and/or read to get a general sense of the collected material that was followed by descriptive coding. During this stage, raw textual data from the interviews were summarised to generate as many codes as necessary to cover all content. Finally, codes were grouped into categories, and three major themes emerged from the data: personal, social, and environmental barriers and motivators. All data were analyzed by hand. No further validation of the analysis was performed.

## **Results**

Participants were in the age range of 21–57 years. All had a BMI over 25 K/m<sup>2</sup>; the mean BMI was

32.6 K/m<sup>2</sup>. Participants' demographic characteristics are summarized in Table 1.

All participants had attempted to lose weight several times in their lives. Although weight loss was their ultimate goal, they reported two main triggers that motivated them to start their weight loss program. These included concerns about overall health and wellbeing (n = 27.77%) and the desire to have an ideal body image (n = 16.45.7%). Equally, the female participants also reported the same triggers though for the male participants the primary trigger was a concern for their health and wellbeing. (n = 17.85 % of males).

**Table 1: Participants Characteristic (N = 37)**

Participants Characteristic	N = 37
Mean Age (Min- Max)	37.59 years (21-57)
Mean BMI (Min -Max)	32.6 (25.20- 46.80)
Obesity Status	
Pre-obese	13 (35.1%)
Obese class I	13 (35.15%)
Obese class II	8 (21.6%)
Obese class III	3 (8.1%)
Gender	
Male	19 (51.4%)
Female	18 (48.6 %)
Education	
Basic	18 (48.6%)
Higher	19 (51.4%)
Comorbidity	
Yes	23 (62.2%)
No	14 (37.8%)

Despite the initial motivation to reduce weight, the majority of participants stated that their efforts were inconsistent and often interrupted for extended periods of time. Declining motivation, lack of family support, lack of time, and failure to achieve the desired goal were perceived as common reasons for discontinuing weight loss efforts. These factors will be further explained under barriers to weight loss.

Barriers and motivators in this study were classified under the three major headings: personal, social, and environmental.

### ***Personal barriers***

Interviews revealed multiple factors related to individual behaviour. Increased appetite was perceived as a major barrier to the success of weight loss. Some participants reported extreme difficulty in controlling their appetite.

“Whenever I see food I feel like [crave for] eating” (Male, High Education, BMI: 31.0).

Healthy eating, however, was not a priority for overeaters. Limited choices of healthy foods available at grocery stores near to their home, and lack of time (and motivation) needed to prepare healthy meals were the main reasons. “First of all, you cannot easily find stores offering healthy foods. Although there are some stores that sell low-calorie food, they are not close to where I live. Additionally, preparing healthy food at home requires a lot of time” (Female, High Education, BMI: 27).

As a commitment to healthy eating patterns was weak, skipping meals and eating out became the alternatives. Participants perceived the pervasive fast food marketing in the Kingdom coupled with low nutritional awareness among the public as the real challenge in controlling weight.

"Fast food and soft drinks are commonly consumed by people who could be the leading cause of obesity" (Female, High Education, BMI: 28.7).

Lack or reduced motivation to diet was also reported. Incorrect assessment of weight status prevented some participants from initiating efforts to reduce weight. Among the surveyed, some reported perception of their weight as normal, and hence didn't attempt to lose weight.

"I feel that my weight is within the normal range" (Male, High Education, BMI: 32.5).

Moreover, some participants commented that dieting had a negative effect on their mood and reported experiencing unpleasant feelings once they started doing it:

"I feel depressed when I start dieting" (Male, Basic Education, Hypertension, BMI: 46.8).

On probing further, one participant added that feeling depressed was not associated only with the initiation of the diet program. However, it lasted longer while dieting and eventually led to the disruption of the weight loss program:

"When I feel depressed I discontinue my weight loss program" (Female, Basic Education, BMI: 36.7)

On the other hand, some participants linked disturbances in their weight reduction program with stress and commented that they find it difficult to adhere to their program when they are under stress.

"When I'm under the pressure of study, I stop dieting" (Female, High Education, BMI: 27)

The impact of adverse personal habits like smoking was also highlighted. Some participants indicated that their schedules were too busy to follow a special program.

"Being a smoker, I felt some difficulty in exercising" (Male, Basic Education, Hypertension, BMI: 32.1)

A gender-related barrier was also reported in this study. Some women indicated that childbearing and childrearing hindered their efforts to lose weight.

"Before pregnancy and childbirth I used to exercise regularly, however, after I became a mom I found it very difficult to continue my program. I just can't find the time as before" (Female, Basic Education, BMI: 39.5).

### **Social barriers**

Many participants reported social gatherings as an important barrier to adhering to the weight loss program. They found it difficult to resist sweets, dates and other types of desserts offered in these gatherings. The occurrence of these gatherings and social events more frequently than they used to be in the past, further exaggerated their negative impact.

"In our social gatherings, a variety of foods and desserts are served" (Female, basic education, BMI: 33.3).

"Eating with groups (family or friends) may encourage unhealthy eating" (Female, Basic Education, Hypertensive, BMI: 25.2).

Furthermore, some participants pointed out that lack of family support demotivated them.

"My family would not encourage me to lose weight" (Female, High Education, BMI: 33.4).

### **Physical environmental barriers**

Regular physical activity is essential for keeping a healthy weight. Participants were asked about their physical activities, and what were the perceived barriers to a physically active lifestyle. Walking was seemingly the most popular type of physical activity reported by participants. Although neighbourhood sidewalks and parks are widely available, personal safety remained an issue for some participants. The activity of females participants was particularly influenced by some factors. Some mentioned that access to workout facilities is limited. Others added that joining gyms and fitness clubs is fairly costly. "few and expensive available facilities for exercising" (Female, Basic Education, BMI: 36.7).

"Ladies need more accessible and safe walking tracks" (Female, High Education, BMI: 28.7).

The weather was also perceived as a barrier to being active. The weather in Qassim is hot and dry during summer, rainy during winter and in either situation, it makes outdoor activities troublesome.

"It is difficult to walk in hot weather" (Female, Basic Education, Hypertensive, BMI: 38.8)

"Weather changes such as when it is hot or dusty often interrupts my weight loss program" (Male, Basic Education, Hypertension, Dyslipidemia BMI: 26.9).

### **Motivators**

Discussions with participants revealed a group of factors that were perceived as enablers for weight reduction.

### **Personal motivators**

Some participants initiated a weight loss program owing to their ill health. Doctor's advice to patients with chronic disease such as hypertension and joint problems often prompts them to lose weight and make other healthful lifestyle changes.

"Following the birth of my third child, my weight increased significantly, and I began to suffer from joint pains. Due to the pain, I could not stand during prayers. My doctor told me that I must reduce my weight. So, I started a diet plan" (Female, Basic Education, Joint Pain, BMI 35.9).

"Having chronic medical problems like hypertension and knee pain motivated me to start my weight loss program" (Male, Basic Education, Hypertension, BMI: 46.8)

"My motive to start dieting was joint problems" (Male, basic education, Hypertension, BMI: 32.1).

"I felt that I am disabled by obesity, I cannot clean my body properly" (Male, Basic Education, Hypertension, BMI: 46.8).

"As it is said: why we should live the last 20 years of our lives suffering from diseases" and the other saying "why should we dig our graves with our teeth" (Male, High Education, BMI: 34.5).

Concerns about body shape and general appearance were a strong motivator. Participants reported that their efforts to reduce weight were triggered by their dissatisfaction with body size and their desire to pursue the ideal weight.

Clothing was also an issue. Smaller size clothing is more easily available in markets compared to plus-size clothing.

"Having thin body will give me more options in clothing" (Male, Basic Education, BMI: 26.6).

Interestingly, one female participant pointed out that clothing can be used as a good strategy to reduce weight.

"When shopping for clothes, I buy smaller size outfits and tell myself it is a motivation to lose weight and fit into them" (Female, High Education, BMI: 27).

Being aware of the nutritional value of various types of food and their calorie content was perceived as helpful motivators.

"Knowledge of different foods and their calories could be the most important motivator" (Male, High Education, BMI: 32.5).

However, for some participants, this awareness did not always result in making healthy decisions.

"I sometimes inquire about the calorie content of the food I eat, but, I don't always use that information when making choices about what to eat" (Female, Basic Education, Joint Pain, BMI 35.9).

Losing weight for some participants was triggered by their desire to act as a good role model, self-satisfaction about producing significant weight reduction, or keenness to lead an active lifestyle.

"I want to be a role model for my family" (Female, High Education, BMI: 28.7).

"My activities are restricted by my heavyweight" (Male, Basic Education, BMI: 42.5).

"Achieving my goal in weight reduction motivated me to continue" (Male, Basic Education, Hypertension, BMI: 46.8).

### **Social motivators**

Social support is the key to maintaining weight reduction efforts. Participants commented that the encouragement they received from family and friends was very helpful. Also, positive experiences with weight loss inspired some participants to begin a regular weight loss program.

Social support: "I feel that people encourage each other, especially for walking" (Female, High education, Diabetic and Hypertensive, BMI: 38.8).

"Experiences of friends in weight reduction were encouraging for me" (Male, High education, BMI: 32.5).

### **Physical environmental motivators**

The wide availability of sidewalks and neighbourhood parks made group exercise easy and convenient. "Availability of walking tracks has encouraged me to walk" (Male, High Education, BMI: 25.8)

At the end of the interview, participants were asked about what advice they would offer others for weight reduction, based on their own experience. Their responses reflected a comprehensive and correct understanding of the basics of an effective weight loss program.

Majority of participants recommended performing regular exercise, "we need to exercise regularly". Also considered important were to avoid bakery food and desserts, fast foods, soft drinks, high-fat diet and overeating, "dietary habits should be modified to eat more vegetables and fruits, and avoid high fat/calorie diet".

They also advised being educated about the benefits of having ideal body weight and diet contents and calories. Some participants advised not to aim for short programs of weight reduction. While others stated that, it is important to have a target weight in mind. Follow up with a physician was also stated by some as a facilitating action.

## Discussion

In the present study, some barriers and motivators related to weight reduction and its maintenance were identified. Motivators were mainly the concerns of individuals about the impact of weight on their health and wellbeing and the desire to have a good body image. On the other hand, the participants identified several personal, social and physical barriers that hindered their efforts to lose weight.

Weight loss programs primarily include lifestyle modifications in the form of dietary changes and physical activity. Adherence to weight loss programs has been recognised as an essential component for successful weight loss [18]. A previous study conducted in Saudi Arabia showed that adherence to dietary changes was higher compared to exercise adherence [19]. Variation in adherence could be explained regarding setting high weight loss goals, lack of social support, full-time employment, or stress. Similar findings were reported in other studies [20]. Poor adherence has also been associated with increased rates of weight regain [21]. Analysis of possible barriers to initiating and or maintaining weight loss is hence essential for providing an in-depth understanding of factors necessary for long-term adherence.

Unhealthy eating behaviour is a well-known barrier to weight loss. In our study, participants listed such behaviour as an important barrier: Having uncontrollable appetite, excessive consumption of fast food and overeating when feeling stressed were reported as examples of factors leading to unhealthy eating. The Saudi society has witnessed observable dietary changes over the years. Local studies reported overconsumption of calorie-dense foods compared to vegetables and fruits [22, 23]. Another study revealed high rates of unhealthy eating practices among female nursing students in Saudi Arabia such as watching television while eating, not sharing meals with family, and excessive consumption of soft drinks and junk food [24]. Furthermore, the wide availability of the fast food restaurants which often offer high caloric meals at an affordable cost has adversely resulted in promoting unhealthy eating practices. The combination of excessive intake of unhealthy food and reduced physical activity seemingly contributed to the severity of the problem of obesity in the Saudi society [9].

The habit of overeating during social occasions has also been reported which agrees with a previous study [12]. The Saudi culture often enables weight gain through serving calorie-dense foods during these occasions. The common tradition is to serve Arabic coffee with dates or something sweet such as sugary desserts, chocolates or other savouries [25]. Most of these social gatherings take place during evenings and nighttime with meals

typically served at late hours. A significant evidence base suggests that excessive nighttime eating increases the risk of obesity and adverse health effects [26, 27]. Difficulties in changing eating habits were reported as one major barrier in culturally different parts of the world [28]. The relationship between the individual's mental state and controlling weight has also been highlighted in this study. Stressed people are more prone to weight gain as reported by some authors [29]. Low morale related to work pressure or due to experiencing depressive symptoms upon beginning a diet is thought to hinder weight-loss efforts. It is necessary for those who seek weight loss to initially focus on their mental wellbeing. In this context, social support is considered key to weight loss success.

Not having enough time due to busy work schedules, childcare responsibilities mentioned by some women, expensive gyms, and unfavourable weather conditions in Qassim have also been mentioned as common hindrances to adherence to regular exercise. Apparently, some of these barriers are directly related to the individual's ability to manage time, while others related to the uncontrollable physical environment. A previous study which collected data from three big cities in Saudi Arabia revealed significantly lower levels of physical activity among adolescents with obesity compared to non-obese [30]. Simple personal approaches could be followed to promote physical activity such as incorporating exercise into the individual's daily routine, having a walk with the family, using stairs instead of elevators, etc. However, the implementation of community-wide interventions for promoting physical activity has gained substantial attention worldwide over individual-oriented approaches [31]. Evidence suggests three major sets of solutions to overcome barriers to physical activities in a community: informational strategies for enhancing knowledge and attitudes towards advantages of physical activity; behavioral strategies for equipping the public with a range of skills needed to support and maintain behavior change; and environmental strategies for providing safe and accessible facilities for exercise [32].

Despite the barriers mentioned, some important motivators were described by study participants. These motivators could play a significant role as predictors of success of the weight loss programs. For instance, an internal motivation which is often stated as the initial trigger for weight loss has been recognised as a predictor of effective weight loss in the literature [33]. Highly motivated people are more likely to adhere to their goals and maintain long-term weight loss.

Awareness about one's ill-health is another strong motivator for weight loss. A previous study supports this finding and indicates that strict doctor's instructions and firm personal decisions taken



following a serious health event can motivate people to start on a weight loss plan [34]. Furthermore, evidence shows that higher degrees of weight loss and maintenance were observed among people driven by their medical condition [35]. Dissatisfaction with one's body size and desire to improve physical shape are common motivators. Interestingly, research on the relationship between motivation and physical activity has shown that people who are motivated to follow a physical fitness program in order to enhance their body image rather than to enhance their health are more likely to suffer from lower self-esteem, higher level of problematic eating, and greater social anxiety [36, 37].

Social support is yet another important element of almost all weight loss programs. The natural network surrounding an individual made up of family members, and friends represent the main source of social support. In the present study social support has been recognised as a motivator, while the lack of it was identified as a barrier. Similar findings were shown in the literature [38]. Receiving a higher level of support from a spouse, friend or other family member has helped some participants to initiate and continue their weight loss program. A previous study comparing the differences between a group of individuals who have effectively controlled their weight and another group who failed to maintain their weight loss showed a greater social support to the former group [33]. Furthermore, social support was found to be associated with fewer drops out from weight loss programs [39]. On the other hand, lack of social support has been recognised as a barrier in this study. Similar results were found in the literature indicating the negative impact that results from lack of social support on both physical activity and adopting a healthy diet [40].

This study has some limitations. While interviews produced rich data about barriers and motivators to weight loss, yet it lacked in-depth inquiry into the participants' past attempts to lose weight. Another limitation was lack of data validation. Verification of data analysis either through respondent verification or peer review is one way to safeguard against the subjectivity and bias in qualitative research. However, it is time-consuming and was not performed in this study.

In conclusion, effective weight loss depends on multiple factors. This study showed that concerns about the impact of weight on health and wellbeing, and the desire to have an ideal body image were the main motivators, while the barriers included low nutrition awareness, social overeating at social occasions and lack of exercise facilities. It is critical to understand the context within which those factors operate. A deeper understanding of the factors motivating or demotivating people with overweight or obesity to lose weight in Saudi Arabia will help devise targeted interventions to reduce the burden of obesity and its complications at both individual and public

levels. Future research is necessary to test the feasibility and effectiveness of such interventions. Also, more studies are needed using the qualitative approach to explore the factors determining the success of weight loss programs at the community level, particularly from the perspective of health planners in Saudi Arabia.

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