



QUALITY OF LIFE (QOL) OF OBESE PEOPLE: AN ANALYSIS

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ABSTRACT

The main focus of this article is to the improvement of Quality of Life (QOL) of obese people. The world has experienced enormous health improvement in the last century, particularly in its later half (1950's to 2015). Despite the overall improvement, however, we also have to acknowledge that developing countries benefited unequally from the above health gains, with many countries continue to have high mortality rate, where in some parts of the world the burden of ill health in the form of infectious and parasitic diseases are still prevalent. The normal scientific explanation for obesity has been the imbalance between energy intake and energy expenditure. When input is greater than expenditure, excess fat will accumulate. However, understanding the physiological basis alone is not adequate, as it can be seen today that obesity has become a pandemic, there is a trend towards global obesity or globosity. The most prevalent and immediate consequence from obesity, however, may be its negative impact on quality of life. Further research is needed to identify those individuals who are at greatest risk of progressing from decreased quality of life to clinically significant impairment in physical, social, vocational, or mental status.

Keywords: Quality of Life (QOL), WHO, BMI, Obese people, Diseases.

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INTRODUCTION

Obesity, in the past was perceived to be the problem of the rich, but recent studies have reported that the problem of obesity is a worldwide problem and rural population is no less affected. Self-perceived health and weight appropriateness is an important component of weight-loss and eating behaviors and may be mediated by local, social and cultural patterning. In addition to the quality of life assessment, it should therefore be an important focal point for the design and implementation of clinical and public health policies.

The world has experienced enormous health improvement in the last century, particularly in its later half (1950's to 2015). Despite the overall improvement, however, we also have to acknowledge that developing countries benefited unequally from the above health gains, with many countries continue to have high mortality rate, where in some parts of the world the burden of ill health in the form of infectious and parasitic diseases are still prevalent. Communicable disease is an avoidable disease and avoidable mortality, but due to unequal access to healthcare and preventive remedies within a country can lead to notable number of death as a result of lack of access to effective treatment [1-3].

Obesity is defined as excess body fat [4]. On the other hand overweight means the body weight is above ideal weight

or standard weight for height. A person may be overweight but not necessarily over fat, this is common among athletes or football players [5]. However, normally a person who is grossly overweight will most likely be over fat. The World Health Organization (WHO) defined obesity as those people with the body mass index (BMI) of equal or greater than 30, and overweight as those whose BMI are between 25.0 to 29.9. At the physiological level obesity can be referred to as a condition of abnormal or excessive fat accumulation in adipose tissue to the extent that health may be impaired [4-7]. The normal scientific explanation for obesity has been the imbalance between energy intake and energy expenditure. When input is greater than expenditure, excess fat will accumulate. However, understanding the physiological basis alone is not adequate, as it can be seen today that obesity has become a pandemic, there is a trend towards global obesity or globosity [8]. In western countries the prevalence of obesity is beyond control despite the knowledge and research they have accumulated [9, 10]. Being obese is associated with increased blood pressure, elevated total cholesterol, abnormal lipoprotein ratios, hyper insulinemia, and type 2 diabetes [11]. The most prevalent and immediate consequence from obesity, however, may be its negative impact on quality of life [12].

Unfavorable psychological factors, lower self-ratings of health, and worse health-related behavior can be found in overweight and obese individuals. Obese individuals are more likely to be dissatisfied with their body shape and size [13,14]. Weight stigma increases vulnerability to depression, low self-esteem, poor body image, maladaptive eating behaviors and exercise avoidance [15]. Thinness is a beauty ideal in both Europe and the US, so being overweight or obese may contribute to body dissatisfaction and low self-esteem that increases the risk of depression [16]. Some obese people report social anxiety, whereby they are embarrassed to go out because they may not 'fit' into a chair in a restaurant or an airplane, for example. Being obese reduces their self-esteem and the effect on their social life leaves them isolated and vulnerable [17].

An increasing number of people are facing the burden of obesity, which is defined as a body mass index (BMI) of ≥ 30 kg/m². This worldwide epidemic is a concern to health professionals, because obesity is closely linked to risk factors associated with impaired health, shortened life expectancy, and reduced health-related quality of life (HRQoL). Our meta-analysis focuses on the impact of obesity on HRQoL. HRQoL is of relevance as an outcome measure in obesity, when treatment options are evaluated in terms of risks and benefits with regard to the health, well-being, and general functioning of the patient. HRQoL may differ among subgroups of obese persons, who seek surgical or non-surgical treatment, or who do not seek treatment for their overweight. Some studies demonstrated greater impairment of HRQoL in people seeking treatment, especially treatment of greater intensity [15-18].

Recent reviews have described the potential adverse effects of obesity on quality of life [1,2]. Impairments have been reported in physical functioning, including general health [3-6] and bodily pain [7], as well as in psychosocial status [8]. In the latter domain, as many as 20% to 30% of individuals who seek weight reduction have been found to suffer from binge eating [9, 10] or depression [11, 12].

Over the past 20 years, numerous instruments have been developed to assess quality of life [1, 2, 13, 14]. This article briefly reviews the meaning of this term and then examines measures that are likely to be the most useful with obese persons. Four sets of instruments are examined. The first consists of generic, broad-spectrum measures that assess multiple domains including physical, social, and vocational functioning. The second set consists of condition-specific measures that assess symptoms or experiences that are most likely to occur in patients with obesity (e.g., stigmatization, body image concerns, food preoccupation). The third and fourth sets of instruments assess depression and binge eating, respectively. We believe that these two complications should be evaluated, in addition to the more general construct of quality of life.

Health-Related Quality of Life

Quality of life has become a buzz word in medicine, psychology, and society at large. The term is used to describe events that range from satisfaction with one's work or leisure activities to the physical and economic burden imposed by specific illnesses [15]. Katz [15] has aptly conveyed the breadth of this construct, defining quality of life as a "loosely related body of work on psychological well-being, social and emotional functioning,

health status, functional performance, life satisfaction, social support, and standard of living, whereby normative, objective, and subjective indicators of physical, social and emotional functioning are all used." The present review focuses on health-related quality of life (HRQOL). This domain typically assesses patients' limitations in physical, emotional, social, or vocational functioning, using either general constructs or those developed to capture dysfunction associated with specific diseases.

The HRQOL measures reviewed here were selected on the basis of their [1] relevance to obesity; [2] psychometric properties (i.e., high reliability and validity); [3] acceptance by researchers (i.e., widespread use); and [4] ease of administration (i.e., low cost and patient/administrator burdens). Although no instrument is ideal, there are several good options for use with obese individuals.

Generic Measures of HRQOL

Generic measures assess multiple domains of functioning including mobility, self-care, and physical, emotional, and social functioning. They may be used with a wide range of patient populations [17]. These instruments allow investigators to compare the degree of impairment or suffering associated with different illnesses, as well as relative improvements in functioning in response to treatment. They may, however, lack precision in measuring outcomes that are specific to the concerns of obese individuals (e.g., poor body image, food preoccupation).

Medical Outcomes Study

The most commonly used *generic* instrument is the Medical Outcomes Study questionnaire. It was originally developed to measure health outcomes as part of a 2-year observational study of more than 22,000 adults [18]. The questionnaire was modified in 1989 [19] and again in 1992 to the current 36-item Short-Form General Health Survey (SF-36) [20].

The SF-36 assesses eight health domains:

- 1) limitations in physical activities because of health problems;
- 2) reductions in usual role activities attributable to physical or emotional problems;
- 3) limitations in usual role activities because of physical health problems;
- 4) bodily pain;
- 5) general mental health (i.e., psychological distress and well being);
- 6) limitations in role activities because of emotional problems;
- 7) vitality (i.e., energy and fatigue); and
- 8) general health perceptions [20].

Six of the eight domains load on factors that assess either physical health (physical functioning, physical role, and bodily pain) or behavioral health (mental health, emotional role, and social functioning) [21]. Of the 36 items, 39% evaluate activity levels [22]. Time for completing the questionnaire is 5 to 10 minutes.

The SF-36 has well-established internal consistency, test-retest reliability, and validity [20,23], as demonstrated in a variety of patient populations throughout the world [24]. In obese populations, increasing impairment (particularly on scales assessing physical dimensions) has been reported with increasing weight [4, 21-24].

Improved functioning has been observed with weight loss (principally on scales assessing physical health) [8,13]. Most studies of weight loss have been with surgical interventions [1,13,14], although investigations of lifestyle modification [7,15] and pharmacotherapy [16] have recently appeared.

The Nottingham Health Profile. The Nottingham Health Profile (NHP) was developed in England in 1975, based on interviews with 768 patients with a variety of chronic medical conditions. The current version was published in 1981. The instrument contains 45 subjective statements divided into two parts. Part I includes 38 items that assess distress in the following six domains:

- 1) energy;
- 2) physical mobility;
- 3) emotional reaction;
- 4) pain;
- 5) sleep; and
- 6) social isolation.

Part II assesses the degree to which 1) health ion; 2) ability to perform jobs around the house; 3) social life; 4) home relationships; 5) sex life; 6) hobbies; and 7) holidays [19]. The instrument takes 10 to 15 minutes to complete.

The NHP has adequate internal consistency and strong validity [17–19]. It has been translated into many languages and used in diverse medical and patient populations. The NHP has not been widely used with obese individuals, although two studies found improvements on the scale after surgically induced weight loss. The instrument seems to capture treatment-related changes with other medical conditions.

The Sickness Impact Profile

The Sickness Impact Profile (SIP) is a 136-item general health status questionnaire that is widely used in the United States and Europe [16–18]. It emphasizes observable behavior (e.g., “I sit during much of the day”) and does not contain subjective evaluations of well-being. The SIP measures two primary dimensions: physical functioning (body care and movement, walking, and mobility) and psychosocial functioning (emotional behavior, social interaction, alertness behavior, and communication). It requires 30 minutes to complete. Therefore, it is more burdensome to patients than the previously described instruments. Although a shorter 68-item version of the SIP has been constructed [19], it is not yet widely used and awaits further validation.

The SIP has strong internal consistency and test-retest reliability ($r=0.81$ to 0.97), but only modest criterion validity with other clinical measures of disease ($r=0.38$ to 0.48) [16]. It has been translated into several languages and used in a variety of medical populations [11]. As with the NHP, few studies have used the SIP with obese individuals [12, 13].

Obesity-Specific Measures of HRQOL

In contrast to generic measures, condition-specific instruments are designed to capture symptoms or experiences associated with a specific disorder. There are, for example, quality of life instruments designed specifically for patients with diabetes, arthritis, and asthma, to name but a few. Several instruments have been developed for obesity [3–6,19]. An obesity-specific measure has the potential advantage of capturing

experiences that are frequently reported by obese individuals, such as feeling socially uncomfortable when swimming in public, shopping for clothes, or applying for a job. Such experiences are not assessed by generic measures of HRQOL or by mood inventories. In addition, condition-specific measures tend to be more sensitive to change than are generic measures [10,11]. The main disadvantage of obesity-specific instruments is their limited empirical validation, which is due primarily to their having been only recently developed, and problems affect the various domains.

Eating Disorders

Approximately 20% to 30% of obese individuals who seek weight loss report problems with binge eating [9, 10, 19], usually in association with a depressed mood or related complications [9–14]. Binge-eating disorder (BED) is characterized by the consumption of large amounts of food in a discrete period of time and by the patient’s report of loss of control during the episode. The overeating is not followed by compensatory behaviors (such as vomiting or laxative abuse), thus distinguishing BED from bulimia nervosa. Marked distress must occur in at least three areas, including eating very rapidly, eating until uncomfortably full, eating when not hungry, eating alone, or feeling guilty after a binge [16]. Binge eating is a reliable marker of symptoms of depression. By contrast, multiple studies have shown that mood is essentially normal in obese individuals who do not suffer from binge eating [18]. To assess the impact of obesity on general quality of life, we recommend the SF-36 because of its brevity, ease of administration and coverage of both physical and psychosocial domains. In addition, it provides norms for numerous age groups and patient populations. We also recommend the use of the BDI-II and QEWP-R to assess depression and binge eating, respectively. These latter complications are frequently observed in obese patients who seek treatment.

Current findings indicate that a substantial portion of obese individuals in the general population experience undesired physical or social consequences of their weight that diminish their quality of life in one or more areas [18,10]. These complications typically do not require professional attention, but nevertheless, are likely to detract from the individual’s optimal enjoyment of work and leisure activities. Further research is needed to identify those individuals who are at greatest risk of progressing from decreased quality of life to clinically significant impairment in physical, social, vocational, or mental status. We believe these individuals are most likely to be encountered in clinical settings and to have a body mass index 40 kg/m^2 [11, 19].

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