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THE SOCIAL STIGMA ATTACHED TO OBESITY: RISK FACTORS AND COPING STRATEGIES

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Abstract
The medical effects of obesity are well-documented and well-publicized. But, just as obesity may be associated with a variety of health issues, it can also bring a less well-understood effect: stigma and discrimination. The social consequences of being overweight and obese are serious, pervasive and throughout our culture, and is evident at different levels across lines of gender, race, ethnicity and socioeconomic status. Overweight and obese individuals are often targets of bias and stigma, and are vulnerable to negative attitudes in multiple domains of living including places of employment, educational institutions, medical facilities, the mass media, and interpersonal relationships. Along with implications to physical health, obesity often carries a stigma that negatively impacts the social, emotional, and psychological functioning of those who are overweight or perceive themselves as overweight. This paper seeks to review on causal attribution of obesity and its social consequences. Interpersonal sources, multiple domains and coping strategies are also captured. In light of the immense burden of obesity on health care systems and also on the individuals' quality of life, it is recommended that stigma-reduction interventions should focus on educating students at all levels of educational system and the general

public about size acceptance and further challenge negative attitudes. Also, prevention programs with information campaigns might have a high potential in increasing awareness about stigmatization.

Key words: Obesity; Overweight; Social stigma; Coping strategies; Domains

Introduction

Obesity or overweight is a social health problem. To The American Heritage Dictionary of English Language (2007), obesity is the condition of being obese; increased body weight caused by excessive accumulation of fat. Obesity the dictionary contends carry with it a devastating social stigma. Children, especially are described as being "at risk for overweight" if their body mass index (BMI) is within the range of 85th-94.99th percentile (manipulated for sex and age), and "overweight" if their BMI is at the 95th percentile or higher (Mei, Grummer-Strawn, Pietrobelli, Goulding, Goran & Dietz, 2002; Ogden, Carroll, Curtin, McDowell, Tabak & Flegal, 2006). Although BMI categories of weight according to Puhl and Latner (2007) are important for identifying health risks among children, it is not clear from existing research to what extent BMI cut-offs are meaningful for understanding weight stigma in youths.

Puhl and Latner (2007) have examined the relationship between degree of obesity and exposure to stigma among children, the youth and adults which we will examine in this review. However, because studies do not universally distinguish between *overweight* or *obese* or use additional descriptors to describe weight (e.g., fat or heavy), we use the terms *obesity* and *overweight* interchangeably to describe the condition of excess weight, in line with Puhl and Latner's descriptors.

Stigma generally refers to negative attitudes and behaviours that affect our interpersonal interactions and activities in a detrimental way. Obese individuals are highly stigmatised and face multiple forms of

prejudice and discrimination because of their weight (Puhl & Brownell, 2001). Weight stigma has been assessed in children and adolescents with a variety of different methods, including experimental laboratory studies, self-reported playmate preferences, ratings of line-drawing silhouettes and target figures, semantic differential ratings of target figures, peer and friendship nominations, qualitative interviews, and adjective attribution tasks that ask children to ascribe a variety of positive and negative characteristics to pictures or photographs of targets with different body sizes (Bell & Morgan, as cited in Puhl & Latner, 2007). Cramer and Steinwert (1998) cite storytelling methods and identification of pictures of various body sizes as an additional approach for studying children.

A thorough understanding of weight stigma and its impact may be important to document the social and psychological consequences of obesity, and may be central to revealing the totality of effects of excess weight on health and well-being. Those most exposed to stigma, for instance, may be vulnerable to psychological effects such as depression and social effects such as economic hardship and isolation, which in turn may link obesity with a health outcome like heart disease. Consequences of bias such as isolation or social withdrawal could contribute to the exacerbation of obesity through psychological vulnerabilities that increase the likelihood of over-eating and sedentary activity. While such links with health can only be postulated at present, it is clear that bias, prejudice, and discrimination are part of everyday life for overweight individuals. This has real effects on real people and merits further attention.

A stigmatized person possesses some attribute, or characteristic, that conveys a social identity that is devalued in some particular social context (Crocker, Major & Steele, 1998). Such individuals are ascribed deviant labels and face negative effects from discrimination and prejudice (Crocker & Major, 1989). The stigma of obesity is very strong. Individuals

will go to great lengths to prevent weight gain, and the possibility of becoming obese is considered a disastrous outcome. One survey reported that 24% of women and 17% of men said they would give up three or more years of their lives to be the weight they want; some women reported that they were choosing not to become pregnant because of fears of fatness (Garner, 1997). Others assume the enormous risk of smoking cigarettes in hopes of remaining slim. These examples highlight ideals of thinness in North American society where the message that it is good to be thin and bad to be fat is so widespread that expressing negative attitudes toward obese people has become an accepted form of prejudice (Falkner, French, Jeffery, Neumark-Sztainer, Sherwood & Morton, 1999: Kilbourne, 1994).

The causality of obesity has been attributed to biological, genetic, and non-controllable causes to the extent that one's physiological make up and the family lineage are important determinants in causing obesity. The attributions according to Sigelman (as cited in Puhl and Latner, 2007) about control and causality are related to negative stereotyping of overweight targets in young children. Sigelman carried out a study of elementary school children (N = 99) and indicated that they were less likely to blame an obese peer for being heavy if they were provided with information suggesting the target had little responsibility for her obesity, although this information would not change their liking of the peer. Amoah (2003) touching on the social pressures that may be partly responsible for the increasing rates of obesity stated that Ghanaians generally associate fatness with beauty in women and success in both men and women. He said men in Ghana are known for their preference for fuller women to thin women. In this wise affluent people are eating more leading to over nutrition. Also media representation of HIV/AIDS in which people are considerably emaciated also makes it difficult if not undesirable for people to lose weight for fear of being stigmatised, he concluded.

Stigma may come in several forms, including verbal types of bias (such as ridicule, teasing, insults, stereotypes, derogatory names, or pejorative language), physical stigma (such as touching, grabbing, or other aggressive behaviours), or other barriers and obstacles due to weight (such as medical equipment that is too small for obese patients, chairs or seats in public venues which do not accommodate obese persons, or stores which do not carry clothing in large sizes) (Obesity, Bias & Stigmatisation, 2010). The report further states that in an extreme form, stigma can result in both subtle and overt forms of discrimination, such as employment discrimination where an obese employee is denied a position or promotion due to his or her appearance, despite being appropriately qualified. Overweight and obese individuals are often targets of bias and stigma, and they are vulnerable to negative attitudes in multiple domains of living including places of employment, educational institutions, medical facilities, the mass media, and interpersonal relationships (Obesity, Bias, and Stigmatisation, 2010). This stems from the contention that overweight and obese persons are lazy, unmotivated, lacking in self-discipline, less competent, noncompliant, and sloppy (Puhl & Brownell, 2001, 2003). These stereotypes are prevalent leaving overweight and obese persons vulnerable to social injustice, unfair treatment, and impaired quality of life as a result of substantial disadvantages and stigma.

Sandberg (2007) analysed 1,925 articles from Swedish daily newspapers from 1997 to 2001 and found that obese people were often presented as stupid, ugly, naïve, irresponsible, lazy, greedy, without manners, and repugnant. Overweight people, according to the author, have been compared to parasites within discussions of health-care givers. Furthermore, news items that have presented successes in weight loss regimens have also contributed to victim-blaming and the stigmatisation of overweight individuals. People who have lost weight have described their

previous selves as weak and uncontrolled. It can be deduced from the foregone that stigma associated with obesity is dehumanising and has untold psychological stress on victims. If avenues are not found for the relief of these stressors, and the obese individuals mainstreamed into all fabrics of societal development, some talented and motivated beings would be left on the flip side of events which might have a toll on the economy. Through a review and evaluation of existing theoretical and empirical literature, this paper examines reasons and risk factors for the stigma of obese individuals as well as ways to reduce bias. Specifically, the paper primarily focuses on discussing the under listed issues;

a. Accounts of the Causes of Obesity
b. Stigmatisation/Victimisation of Obese Individuals: Interpersonal Sources and Domains
c. Consequences of Weight Bias
d. Coping Strategies to Weight Bias.

Accounts of the Causes of Obesity

Magness (2010) laments that a careful and an objective look at the data on obesity indicate that the war on obesity is being lost. With many diet and exercise programs failing to produce significant results, the question becomes "were we designed for obesity and diabetes?"

Physicians' Account

Physicians view obesity as largely a behavioural problem caused by physical inactivity and overeating (Foster, Wadden & Makris, 2003). A study of British health-care professionals (N = 255) found that providers perceived overweight people to have reduced self-esteem, sexual attractiveness, and health. Providers believed that physical inactivity, overeating, food addiction, and personality characteristics were the most important causes of overweight (Harvey & Hill, 2001). In a British

qualitative study, primary care physicians (N = 21) reported beliefs that obesity was caused by an unhealthy diet and lack of exercise and that it was the responsibility of the patients themselves to manage their weight (Epstein & Ogden, 2005). Adding their finding to the subject, Elendu and Dike (2010) attributed overweight in the adolescent to a decline in their physical activity level.

The Epigenetic and the Thrifty Gene Hypothesis Account

Magness (2010) related that the geneticist James Neel proposed the thrifty gene hypothesis in 1962 to partially explain the rise in Type 2 diabetes in the world. The central core of this theory is that through natural selection we evolved to be efficient at food storage and utilisation. In Neel's (as cited in Magness, 2010) original hypothesis, he stated that ancient humans went through a cycle of feast and famine. The people who had bodies that were better at fuel storage or utilisation were more likely to survive during the famine portion of the cycle. Thus over many generations, we developed genetically to be exceptionally efficient at the intake and utilisation of fuel as this was beneficial and possessed adaptations throughout the majority of human life. However, during the last century the transition to an overabundance of food and limited physical activity has created a situation where our previously advantageous thrifty genes now make us susceptible to diabetes and obesity. The contention is that physical activity was integrally linked to food procurement so that the humans who were more capable physically of surviving the hunt or gathering food, would survive and pass down their genetics. During both feast and recovery from exercise, in Magness' view, the physiological response is to increase blood glucose, insulin, and muscle glycogen levels while decreasing fatty acid oxidation. Similarly, during famine and exercise, blood glucose, insulin, and glycogen levels decrease, while fatty acid oxidation increases. This shows the intricate linking behind the physiological mechanisms

needed during feast or famines and that needed during exercise. It makes sense then that when combined the selective pressure for natural selection is increased.

What impact has famine on birth rates? During famine, individuals have lower body fat levels and this impact female reproduction (Prentice, Hennig & Fulford, 2008). Therefore it is likely that fertility plays a larger role in the natural selection than previously thought. Humans not adapted to better fuel storage and utilisation would be more likely to lose significant fat to the point that reproduction would be impaired. While on the other hand, those better adapted would not lose reproduction ability and would pass on the genotype to the subsequent generation. Concluding on who possess the thrifty genes, Stoger (2008) hypothesised that we all have thrifty genotypes, not just obese individuals.

If we all have thrifty genes, then why is obesity seemingly more heritable in certain groups and individuals than others? The answer comes from having a thrifty epigenome. Research shows that epigenetic changes largely occur when the baby is in development, for instance, through the mother's nutrition. It is thought that this occurs to match the unborn baby to its outside environment. Thus, if the baby is in development during a famine, the genes related to food storage will be up regulated to prepare it for the famine environment it is about to enter. Problems occur, when the outside environment no longer matches the environment the baby was prepared to enter. This so called mismatch concept states that disease, such as diabetes or obesity, likely occurs when the mismatch between expected environment when epigenetic changes are high does not match the outside environment later in life (Godfrey, Lillycrop, Burdge, Gluckman & Hanson, 2007).

Evidence for this mismatch concept can be seen in the Ravelli et al. (as cited in Magness, 2010) study which looked at the consequences of a

famine in the Netherlands in 1944-45. They found that obesity was much higher in those whose mothers went through famine during their first two trimesters of pregnancy. In line with this, the Stoger (2008) "thrifty epigenome" hypothesis stress that, we are pre-programmed with a certain metabolic profile, and when our food intake and physical activity does not match this profile, obesity and diabetes is likely to occur. This would explain why certain groups of people or individuals, especially the Pima Indians, for example, seem to overreact and become obese at a much higher rate than others. They went from an expected environment filled with physical activity and a traditional diet, to a high calorie diet with little activity. The rapid rise in obesity in a matter of two generations would also partially be explained by this new evidence. Stoger concluded that the genetics of obesity are not like other diseases where a single gene variant is the major player. Instead, obesity is a polygenic problem, meaning that the interaction between numerous genes may contribute to the issue.

Stigmatisation/Victimatisation of Obese Individuals: Interpersonal Sources and Domains

Social marginalisation and stigmatisation of obesity in children and adults have been extensively documented, with evidence that overweight and obese individuals face social disadvantages in multiple domains of living, including employment, education, healthcare, and interpersonal relationships (Brownell, Puhl, Schwartz, & Rudd, 2005; Puhl & Brownell, 2001). Research suggests that overweight and obese youths are victims of bias and stereotyping by peers (Kraig & Keel, 2001; Neumark-Sztainer, Falkner, Story, Perry, Hannan, & Mulert, 2002), educators (Bauer, Yang & Austin, 2004), and even parents (Crandall, 1995; Davison & Birch, 2004). This is particularly concerning during childhood and adolescence and could hinder their social, emotional, and academic development and exacerbate adverse medical outcomes that they already face, such as impaired glucose

tolerance, insulin resistance, hypertension, dyslipidemia, and long-term consequences for cardiovascular and liver morbidity (Daniels, 2006; Weiss & Caprio, 2005).

Interpersonal Sources of Weight Stigma

The components of interpersonal sources of weight stigmatisation are the peers, educators, and parents.

Peers

Several studies have demonstrated that negative attitudes toward overweight and obese peers begin as early as age 3. Specifically, 3-12 year olds were significantly more likely to ascribe negative characteristics to overweight targets including; mean, stupid, ugly, loud, lazy, sad, sloppy, lying, getting teased, and having few friends, dirty, cheats, more lazy, less popular, less happy, and less attractive (Brylinksy & Moore and Wardle et al., as cited in Puhl and Latner, 2007). Children overwhelmingly preferred the thin target for a playmate. Obese adolescents reported that peers commonly stereotyped them as being lazy, unclean, eating too much, unable to perform certain physical activities (e.g., dancing), not having feelings, unable to "get a boyfriend", lazy, self-indulgent, less attractive, having lower self-esteem, less likely to be dating, sexually unskilled, and deserving of heavier and less attractive partners (Reagan, as cited in Puhl & Latner, 2007).

Educators

Puhl and Latner (2007) contend that the common occurrence of weight stigmatisation occur in the school setting where teachers and educators add to the sources of weight bias. High school teachers in a study believed that obese persons are untidy, less likely to succeed than are thinner persons, more emotional, and more likely to have family problems (Neumark-Sztainer et al., 2002). Many teachers did not associate obesity with common stereotypes, but over half believed that obesity is often caused by a form of compensation for lack of love or attention, and 43%

strongly agreed that most people feel uncomfortable when they associate with obese people. Physical Education (PE) teachers (N = 105) perceived overweight children to have poorer social, reasoning, physical, and cooperation skills than average-weight children have (Greenleaf & Weiller, 2005). Obese students were significantly less likely to be accepted to college despite equivalent application rates and academic performance to nonobese peers (Canning & Mayer, as cited in Puhl & Latner, 2007).

Parents

Perhaps the most surprising source of weight stigma toward youths is parents. Puhl and Latner (2007) contend that this perceived parental responsibility combined with obstacles encountered in helping their child achieve successful weight loss may create an atmosphere of frustration and anger in the household. It is possible that parents may take out their frustration, anger, and guilt on their overweight child by adopting stigmatising attitudes and behaviour, such as making critical and negative comments toward their child. Davison and Birch (2004) in a study postulated that fathers with higher education and income were more likely to endorse stereotypes, as were both parents who reported a strong investment in their own appearance. Girls were more likely to display negative stereotypes if their parents emphasised the importance of a thin body shape and weight loss. Weight-based teasing by family members was reported by 47% of very overweight girls and 34% of very overweight boys (Neumark-Sztainer et al., 2002; Puhl & Brownell, 2001). In Crandall's (1995) research examining high school seniors (N = 833-3,386), it came out that overweight girls received less financial support from their parents for college than did average-weight girls, even after controlling for parental income, ethnicity, family size, and education.

Domains of Weight Stigma

Weight stigma is identified in domains of employment, health care, education, interpersonal relationships, and the media.

Employment Settings

In reviewing literature, Puhl and Brownell (2001) summarised research documenting weight-based prejudice and discrimination in employment settings. At that time, emerging evidence demonstrated that overweight and obese workers face stereotypical attitudes from employers and disadvantages in hiring, wages, promotions, and job termination because of their weight. Self-report studies in a survey study of obese women (N = 2,249) indicated 25% reported experiencing job discrimination, 54% reported weight stigma from co-workers or colleagues and 43% reported experiencing weight stigma from their employers or supervisors (Puhl & Brownell, 2006). Being the target of derogatory humour and pejorative comments from co-workers and supervisors, and differential treatment are some of the examples of weight stigma in employment settings. Wage penalty (0.7 to 3.4% for obese men and 2.3 to 6.1% for women) was also cited by Baum and Ford (2004). A study by Tunceli, Li and Williams (2006) estimated the effect of obesity on future employment and concluded obesity was associated with reduced employment for both men and women. Other population-based studies from outside the United States support these findings (Morris, 2007; Viner & Cole, 2005). Research suggests that the most common stereotypes about obese employees include being less conscientious, less agreeable, less emotionally stable, and less extraverted than their normal-weight counterparts (Polinko & Popovich, 2001).

Health-Care Settings

Overweight and obese patients are vulnerable to multiple forms of weight bias in health-care settings. In 2001, Puhl and Brownell summarised a number of studies demonstrating that health-care professionals (e.g., physicians, nurses, psychologists, and medical students) possess negative attitudes toward obese patients, including beliefs that obese patients are lazy, noncompliant, undisciplined, and have low willpower. In a study of

over 620 primary care physicians, >50% viewed obese patients as awkward, unattractive, ugly, and noncompliant. One-third of the sample further characterised obese patients as weak-willed, sloppy, and lazy (Foster, Wadden & Makris, 2003). Physicians also reported that seeing obese patients was a greater waste of their time and those heavier patients were more annoying and less likely to comply with medical advice than patients with lower body weights.

Nurses also have the view that obese patients are lazy, lacking in self-control, and noncompliant. A study by Brown and Thompson (2007) revealed that nurses with lower BMIs expressed more negative perceptions of obesity and others expressed frustration with patients' noncompliance and wanting an “easy way out”. The authors stated that nurses with high BMIs felt self-conscious about their size and reported that patients made rude comments about their weight. On the contrary, Zuzelo & Seminara (2006) found that registered nurses (N = 119) had positive attitudes toward adult obese patients and that nurses were concerned with providing respectful patient care (the response rate to this study was only 16.2%).

Medical students' attitude towards severely obese patients are that they are the most common target of derogatory humor by attending physicians, residents, and students, which occurred most often in surgery and obstetrics-gynaecology settings. Dental students have reported negative attitudes toward obese patients; 30% felt that obese people are lazier, 26% felt they lacked willpower and motivation, 18% were uncomfortable examining an obese patient, and 17% considered it difficult to feel empathy for an obese patient (Magliocca, Jabero, Alto & Magliocca, 2005). The majority of dietetic students (ranging from 71 to 91%) in a recent work (Berryman, Dubale, Manchester & Mittelstaedt, 2006) strongly agreed with the stereotypes that overweight people overeat, are inactive, slow, insecure, shapeless, have no endurance, low self-esteem, and poor self-control.

Educational Settings

Wardle, Volz and Jarvis (2002) reported from a study that obesity was associated with lower educational attainment in both men and women. Additionally, a 2007 study using data from the National Longitudinal Study of Adolescent Health (N = 10,829) reported that obesity undermined the educational attainment of female students. Obese women were half more likely to attend college than non-obese women (Crosnoe, 2007). Karnehed, Rasmussen, Hemmingsson and Tynelius (2006) reported a complimentary study of over 700,000 Swedish men in 2006 and indicated that those who were obese at age 18 had a lower chance of attaining higher education than their normal-weight peers. These findings are supported by another study demonstrating that the relationship between obesity and lower academic achievement was stronger in schools with a lower average body size among students (Crosnoe & Muller, 2004). Puhl and Latner (2007) found that obese students have poor relationships with peers at school, which may interfere with their success in educational settings. In contrast, some studies have found no educational differences between obese and non-obese groups (Patt, Yanek, Moy & Becker, 2004; Viner & Cole, 2005).

Research indicates that teachers report stigmatising attitudes toward obese students (Puhl & Latner, 2007). If biased attitudes unintentionally result in differential treatment of obese students, their educational potential may be compromised. More recently, studies have demonstrated that physical educators also have negative perceptions of obese students. One hundred and five PE teachers studied by Greenleaf and Weiller (2005) also perceived overweight students to have poorer social, reasoning, physical, and cooperation skills compared to non-overweight students.

Interpersonal Relationships

Weight bias can be indicated in interpersonal relationships from romantic partners, family members, and friends, especially toward obese

women. Research suggests that obesity negatively affects dating relationships for women. Puhl and Latner (2007) referencing Sheets and Ajmere in a survey of 554 undergraduates, found that overweight women were less likely to be dating than thinner peers, and that body weight was negatively correlated with relationship satisfaction. In a study (N = 449) on college students to rank order six pictures of hypothetical sexual partners, including an obese partner, a healthy partner, and partners with various disabilities (including a partner in a wheelchair, missing an arm, with a mental illness, or described as having a history of sexually transmitted diseases) (Chen & Brown, 2005), both men and women ranked the obese person as the least desirable sexual partner compared to the others. However, men ranked the obese partner more significantly less preferable than women did. Obese women (but not men) are rated as being less sexually attractive, skilled, warm, and responsive, and less likely to experience sexual desire compared to normal-weight peers (Regan, 1996).

Individuals may also experience weight stigma from family members and friends. In a survey to determine which specific family members stigmatised overweight most often, participants reported being stigmatised by mothers (53%), fathers (44%), sisters (37%), brothers (36%), sons (20%), and daughters (18%) (Puhl & Brownell, 2006).

Media

Puhl and Heuer (2009) described the media as a striking illustration of the social acceptability of weight stigma and comprise of the entertainment, advertising, and news media. The authors stressed that whether it be situation comedies, cartoons, movies, advertisements, or news reports, the media is unkind to overweight people. In advertising and entertainment alike, thin characters are ascribed desirable attributes and dominate central roles. Compared to thin characters on television, heavier characters are rarely portrayed in romantic relationships, are more likely to be the objects of humor and ridicule, and often engage in stereotypical eating

behaviours (Greenberg, Eastin, Hofshire, Lachlan & Brownell, 2003). Sandberg (2007) also described overweight people in the industry as parasites, without manners, greedy, irresponsible, repugnant, evil, unattractive, unfriendly, and cruel. Similarly, thin characters had traits such as sociability, kindness, happiness, and success. Boys were also more likely to associate thin girls with characteristics such as "nice", "smart", "clean", "tells the truth", and "has lots of friends".

Consequences of Weight Bias

Below, we have summarised to what degree, weight stigma may contribute to negative psychosocial (self-esteem, depression, body dissatisfaction, interpersonal relationships, suicidal behaviours), academic, and physical health (eating behaviours and physical activity, cardiovascular health) outcomes.

Psychosocial Consequences

Self-esteem

Studies show that excess weight in children predicts future low self-esteem (Davison & Birch, 2004; Strauss, 2000; Tiggemann, 2005). Also, overweight children whose self-esteem decreases over a 4-year period may be at greater risk of unhealthy behaviours, including smoking and alcohol use, than are overweight children whose self-esteem does not decrease (Strauss, 2000). Research among adolescents found that weight-based teasing was associated with poorer self-esteem among both female and male adolescents (Eisenberg, Neumark-Sztainer & Story, 2003), and that obese children who were most vulnerable to low self-esteem were those who believed that they were responsible for being overweight.

Depression

Like self-esteem, research has tended to show that obese children do not differ in levels of depression compared with those of average weight peers (Brewis, 2003; Eisenberg et al., 2003) but that clinical samples of obese children display higher levels of depression than those of average-

weight control children (Erermis, Cetin, Tamar, Bukusoglu, Akdeniz & Gokson, 2004). One study found that childhood depression predicted development of obesity at 1-year follow-up (Goodman & Whitaker, 2002), Eisenberg et al. (2003) examined weight-based teasing in 4,746 adolescents and found that weight-based teasing was related to increased likelihood of depression, regardless of sex or ethnicity. Carr, Friedman and Jaffe (2007) examined the relationship between obesity and emotional well-being and realised that more 40% of obese individuals with a BMI of 40 kg/m^2 reported being mistreated due to their weight, and this was significantly associated with impaired mood.

Body dissatisfaction.

Body dissatisfaction has been found to be higher in overweight and obese children than in average-weight peers, and this seems particularly true for overweight girls (Wardle & Cooke, 2005). Studies show greater body dissatisfaction among children and adolescents with a higher BMI (Pesa, Syre & Jones, 2000; Strauss & Pollack, 2003). The following findings have also been recorded: Body dissatisfaction may have important implications for self-esteem in obese children (Pesa et al., 2000); Weight teasing is related to body dissatisfaction among boys and girls, regardless of ethnicity and weight category (Eisenberg et al., 2003); Appearance-based teasing from parents and siblings is a significant predictor of body dissatisfaction among middle school girls even after BMI is controlled for (Keery, Boutelle, van den Berg & Thompson, 2005).

Interpersonal relationships

The formation of social relationships is especially salient during the adolescent stage. Negative attitudes about obesity by peers may adversely influence social relationships for overweight children. Puhl and Latner (2007) have documented that obese children are liked less and rejected more often by peers than are average-weight students. In a large-scale investigation of social peer networks among more than 90,118 adolescents

(ages 13-18 years) from the National Longitudinal Study of Adolescent health, Strauss and Pollack (2003) indicated that overweight adolescents were more likely to be socially isolated and were less likely to be nominated by their peers as friends than were average-weight students and that as BMI increased in students, they received fewer friendship nominations.

Dating relationships may also be affected by weight bias in adolescence. Pearce et al (as cited in Puhl & Latner, 2007) contends that obese adolescents are less likely to have ever dated and are more dissatisfied with their dating status compared with average-weight peers. Making reference to Pierce and Waddle's (1997) study of 9-11 year olds, Puhl and Latner (2007) reiterated that overweight children believed that their excess weight impedes their social interactions with peers, and 69% believed that if they lost weight they would have more friends.

Suicidal behaviours.

One of the most alarming consequences of obesity in youths may be the increased risk of suicidal behaviours. Studies have demonstrated that obese adolescents are more likely to endorse suicidal ideation and attempts than are average-weight peers (Falkner, Neumark-Sztainer, Story, Jeffery, Beuhring & Resnick, 2001). For instance, in their study of 9,943 adolescents, Falkner and colleagues demonstrated that obese girls were 1.7 times more likely to report a suicide attempt in the previous year than were thinner peers, even after controlling for grade level and race. Similarly, Neumark-Sztainer et al. (2002) found that 51% of girls who were victims of weight-based teasing from peers and family members had thought about committing suicide compared with 25% of those who had not been teased. Among boys, 13% reported attempting suicide compared with 4% who were not teased.

Academic Consequences

Research on possible differences in cognitive and academic abilities has indicated mixed findings. An investigation of 6-13-year-old children in China reported lower IQ scores in severely obese children relative to

average-weight control children (Li, as cited in Puhl & Latner, 2007). In Thailand, a study of 2,252 students found a lower grade point average in overweight youths in 7th-9th grades, but found no differences in younger children in the 3rd-6th grades (Mo-suwan, Lebel, Puetpaiboon, & Junjana, 1999). The United States study of over 11,000 children found that in kindergarten and 1st grade, overweight children had lower mathematics and reading test scores. Datar et al. (as cited in Puhl & Latner, 2007) thus suggested that obesity may be only a marker, but not a cause, of poor academic achievement.

On the other hand, academic problems may lead to obesity. A 10-year Danish prospective study of 987 3rd graders showed that learning difficulties, below-average scholastic proficiency, and special education needs increased the risk of obesity at ages 20-21 years (Lissau & Sorensen, as cited in Puhl & Latner, 2007). Puhl and Latner maintain, it is possible that neither obesity nor cognitive abilities vary as a function of the other variable but both co-vary as a result from a third unknown factor, such as genetics. Compared with their average-weight counterparts, obese students are more likely to consider themselves as below-average, obese girls are less likely to expect themselves to finish college, and obese boys are more likely to expect themselves to quit school (Falkner et al., 2001).

Physical Health Consequences

Eating behaviours and physical activity

Overweight adolescents who experienced frequent weight-related teasing are more likely than non-overweight youths to engage in disordered eating behaviours such as binge eating and chronic dieting (Neumark-Sztainer et al., 2002). The authors contend that compared with non-overweight girls, overweight girls are more than twice as likely to report vomiting and unhealthy use of diet pills or laxatives. Jackson, Grilo and Masheb (2000) made studies in childhood weight-related teasing and have associated it with the development of frequent binge eating and bulimia

nervosa later in life. A prospective study of 143 adolescent girls suggested that weight-reducing efforts seem to predict and may cause higher stress levels in the future. Findings with adults suggest a relationship between stress and binge eating (Gluck, 2006) and between stress and eating disturbances more generally.

Weight-based victimisation may also have negative consequences for physical activity levels in overweight youths. Recent work demonstrated that peer victimisation toward overweight youths was negatively related to physical activity (Storch, Milsom, DeBraganza, Lewin, Geffken & Silverstein, 2006). The authors concluded that overweight youths may attempt to avoid physical activities if victimisation frequently occurs. This parallels other research that weight criticism during physical activities was related to negative attitudes toward sports and lower levels of physical activity, and that negative comments by teachers about their athletic abilities lead to avoidance of PE classes (Bauer et al., 2004).

Cardiovascular health

A recent study by Matthews, Salomon, Kenyon and Zhou (2005) on whether perceptions of unfair treatment due to physical appearance were related to elevated ambulatory blood pressure among 217 Black and White adolescents revealed that, adolescents who reported unfair treatment because of their weight and physical appearance had elevated ambulatory blood pressure, even after typical determinants of blood pressure, including BMI, sex, race, physical activity, posture, consumption, and mood, were controlled for. It could be that bias experienced by obese individuals creates a vicious cycle in which exposure to and internalisation of stigma increases cortisol and metabolic abnormalities, which in turn further increases abdominal fat and perpetuates obesity, leading to additional stigma.

Coping Strategies

Coping strategies are the array of policies recommended for the management of the condition. Strategies recommended for prevention of childhood overweight, such as changes in television viewing, in the consumption of sweet beverages and fast food, and in parental feeding practices (Dolan & Faith, 2007), focus on definable and observable positive behaviour changes. Coping strategies are needed to enable the victims have a feel of belongingness and relief them of the stresses they go through. The following have thus been suggested:

1. Individually focused approaches of blaming the victim should be avoided as this may increase levels of guilt, humiliation, and hopelessness among victims and their significant others (Puhl & Latner, 2007).
2. Parents should neither ignore nor condone bullying and teasing of their child at school, irrespective of their hope that teasing can motivate their wards to lose weight (Puhl & Latner, 2007).
3. Parents should accompany their wards to see health professionals and monitor the interactions between the two (Puhl & Latner, 2007).
4. Since strong parental connectedness have been found to lead to higher levels of psychosocial well-being, positive family relationships should be established by all parents in support of each other (Magness, 2010).
5. Physical activity and healthy eating habits should be encouraged among the Ghanaian population, especially the urban dwellers since they are the most vulnerable (Lartey, 2005: Luna, 2011: Magness, 2010).
6. School educators need training to increase their understanding of the aetiology of obesity, strategies to address weight teasing, skills to meet needs of overweight students, and awareness of their own

biases (Neumark-Sztainer et al., 2002).

7. Health professionals should come to terms with their own biases, develop empathy, and work to address the needs and concerns of obese patients (Obesity, Bias & Stigmatisation, 2010).
8. Health professionals should offer concrete advice to patients on healthy living practices, e.g., exercise regularly, take home food etc., rather than simply saying, "You need to lose weight" (Obesity, Bias & Stigmatisation, 2010).
9. Friendly and supportive health care environment and facilities should be provided at the health institutions for use by all patients. Mention is made of patient gowns, armless chairs in waiting rooms, differently sized medical equipment and a host of others (Obesity, Bias & Stigmatisation, 2010).
10. Governments should design nutrition-related policies and campaigns unique to the individual communities and see to their enforcement and compliance.
11. Walking and cycling should be encouraged as the dominant method of transportation irrespective of status. Also, the overreliance on technology at home and offices as regards the use of remote control devices to switch on or change operations of television sets, fans, air conditioners, hi-fi systems and so on, should be discouraged and individuals rather encouraged to operate them manually (Lartey, 2005).
12. The government should tighten its import laws on meat (fatty) into the country and encourage backyard gardening and the use of home grown fruits and vegetables (Lartey, 2005).

Conclusion

The stigma attached to obesity by playmates, parents, educators, and others, is pervasive and often unrelenting. The sobering findings in the text have painted a picture of the struggles that individuals with excess weight go through. Unfortunately, however, obese individuals are left on their own to confront and cope with the ongoing injustice which in the long run, could heighten their fears of an equitable life and psychological well-being, in all domains or settings of living. It is however, our conviction that despite the explicit, but uncertain understanding of the causes of obesity, solutions remain with the individual. This notwithstanding, it is plausible that coping strategies used to deal with stigmatising experiences contribute to the psychological well-being of the victims and must be upheld by all to integrate the overweight into all fabrics of life successfully.

Recommendations

In light of the immense burden of obesity on health care systems and also on the individual's quality of life, the following recommendations have been suggested;

1. Stigma-reduction interventions should focus on educating students at all levels of the educational system, and the general public about size acceptance and help challenge negative attitudes.
2. Also, prevention programs with information campaigns might have a high potential in increasing awareness about stigmatization.
3. Further, there should be an urgent need for modification of prejudice among the general public and the adoption of effective coping strategies for the individuals themselves, thus easing effects of perceived weight discrimination.
4. Individuals should seek social support from others who are struggling with weight stigma, or from friends and family members who are supportive.

5. Individuals should participate in the activities of public groups to protest against weight stigmatization to create public awareness.

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