

Full Length Research Paper

Prevalence of obesity: Related risks and side effects

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Obesity is an increase in body weight beyond the limitation of skeletal and physical requirements, as the result of excessive accumulation of body fat. The aim of this study is to evaluate obesity-related dietary behaviors and to scrutinize the use of anti-obesity drugs and their long term effectiveness versus the risks and side effects associated with these treatments. Through this research we are seeking to explore recent discoveries in order to propel the forces contributing to obesity and towards developing strategies for its treatment rather risking precious lives. For this purpose, we had conducted a survey including a total of 540 sample out of which 270 eligible individuals were judged on their eating behavior's and on the contrary, 270 married individuals were questioned about their health weight history. It concluded that, the younger generation is not particularly concerned with the future consequences associated with obesity, while the married people face several problems associated with it.

Key words: Obesity, dietary behaviors, orlistat, sibutramine, therapies.

INTRODUCTION

The term "obesity" implies an excess of adipose tissue (fat) and excess adiposity is a health risk (Foster DW, 1992). It is a public health epidemic causing havoc in society and requiring innovative approaches for its long-term reduction (Katzmarzyk, 2002). Obesity is the result of energy intake exceeding energy expenditure, or in a simple way—if one eats more than one need (Sobal J, 1991). Research into individual differences indicates that people who are already obese are not lacking in will power but burdened with responsive appetite systems, and this is probably largely genetic (Ogilvie D et al., 2005). Practice guidelines have recently been released to help health care providers to better manage and prevent obesity among their patients (Lau dC et al., 2007). Indirect methods for estimation include skinfold measurements, weight/height ratios, waist/hip ratios, standard tables, etc. The most widely used measurement is the Body Mass Index (BMI); the ratio of body weight by the square of height. In adults, the normal range is about 20-25; a BMI of 25.1-29.9 is overweight and a BMI of 30 above is obese (Kissebah AH et al., 1989). Recent studies have shown that the complications of obesity correlate with abdominal fat (android, central, or beer

belly) and less with lower body fat (gynaecoid). (Michael D Jensen, 2008). Current investigations suggest that the causes of obesity are multifactorial and include genetic, lifestyle, psycho-behavioral, endocrine, metabolic, cultural, and socioeconomic factors (David S Ludwig et al., 2001). Obesity is a chronic disease and a major health problem (Atkinson RL et al., 1994). It is a health risk and even mild obesity increases the risk of premature death, diabetes mellitus, hypertension, hyperlipidemia, atherosclerosis, coronary artery disease, gout, gall bladder disease, respiratory disease, arthritis and certain types of cancer (Pi-sunyer FX, 1990).

The primary intervention for the management of overweight and obesity is a combination of dietary restriction and lifestyle change. There are currently two categories of anti-obesity drugs – those that act on the gastrointestinal system, and those that act on the central nervous system to primarily suppress appetite. Orlistat being a pancreatic lipase inhibitor while sibutramine promotes through its central action as a serotonin and nor-epinephrine re-uptake inhibitor. Sibutramine promotes a sense of satiety through its central action as a serotonin and norepinephrine re-uptake inhibitor (Padwal RS et al., 2007). It has been suggested that sibutramine has a dual action to facilitate weight loss, an anorectic effect and thermogenic effects (Connoley IP et al., 1999) Maximal weight loss occurs by 6 months with

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sibutramine treatment (Apfelbaum M et al., 1999) and was dose related (IG Smith et al., 2001). Apart from increases in Blood pressure and heart rate the most common side-effects reported with sibutramine are dry mouth, constipation, and headache (Padwal RS et al., 2004).

Orlistat does not directly act on appetite; rather it decreases fat absorption by binding to pancreatic lipase. It has a long-term efficacy for weight loss (Hauptman J et al., 2000). The most commonly experienced side effects are diarrhoea, flatulence, bloating, abdominal pain, and dyspepsia (Li M et al., 2009). There have been a wide variety of different studies examining methods to decrease obesity and increase healthy bodyweight maintenance. A number of psychological interventions have been attempted to help adults who struggle with overweight and obesity (Courtney Newnham-Kanas et al., 2008). Shaw and colleagues (2007) reviewed 36 studies and found that when behavior therapy and cognitive behavior therapy are effective within obesity interventions, they seem to facilitate weight maintenance (Cooper Z et al., 2001). Few surveys were conducted to check the eating behavior's and obesity epidemic's are shorter sleeping time causes eating rhythm abnormalities and increases level of obesity. (Naoko Nishitani et al., 2012). Exercise without dietary changes fails to generate weight loss because in obese individuals increase energy intake may occur following exercise. (Kristin L Schneider et al., 2009). Weight loss combined with regular exercise may be helpful in maintaining functional independence of obese older adults. (Dennis T et al., 2011)

There are a number of prescription drugs types that can cause weight loss (Gadde KM et al., 2009). Non steroidal anti inflammatory drugs are generally used to treat arthritis. They do have inhibitory action and can affect various body systems which may cause your body to reject certain nutrients. Some Non steroidal anti inflammatory drugs that can cause weight loss include: Ibuprofen, Naproxen, Fenoprofen, and Indomethacin. Some anti-depressants are also included in the list that can cause weight loss include: Wellbutrin (Bupropion), Edronax (Reboxetine), Dexedrine/Adderall (Jick H et al. 1998). Obesity is strongly related to age, and there are well-understood metabolic changes occurring around middle age that can account for a significant proportion of this increase. The conditions of married individuals associated with obesity are severe but are not considered by them. Obesity in any age group leads to severity which could be life threatening. A further reason to treat obesity is that it is often not a desirable aesthetic, social and cultural trait. The younger generation is not particularly concerned with the future consequences associated with obesity, while the married people face several problems associated with it.

METHODOLOGY

Sample

A sample of 270 unmarried individuals (108 males & 162 females) and 270 married individuals (96males and 174females) was taken from different areas of Karachi. The individuals were selected on random basis. The analyzed males were in the height range of 5'5"-6'2' and weight range of 170-250lbs, similarly the height range for female were 5'5"-5'8' and weight range 95-170 lbs.

MATERIALS

- Lists of 22 questions were asked on eating behavior of the participants.
- The obesity history, health problems associated, family history and dietary history was asked for the health/weight history of the participants.

PROCEDURE

A questionnaire based on eating behaviors in young adults and health/weight questionnaire in married adults was conducted. This survey asked about typical dietary habits or daily routine of taking meals, weight status, and obesity related behavioral data were asked. They were also asked about any pressure they feel from the society to be as they are. Health/weight questionnaire based survey was conducted among married adults in which they were asked about their obesity history and health problems associated with obesity such as high blood pressure, diabetes, heart diseases, high cholesterol levels, joint or back pain, fatigue, headache and any allergic profile. Total 7 minutes were utilized in this experimental activity. After completion experimenter thanked the subject for the active participation in the study.

Ethical Consideration

This survey was conducted for the welfare of the society; no harm was given to the individuals or participants in the research. Main concepts based on ethical standards for our biomedical research served, among others, as our guiding principles was the respect for the autonomy of individuals, obligation to provide beneficial outcomes and the imperative to distribute the wisdom of benefits and the burden of risk .

RESULT AND DISCUSSION

Adults who are overweight or obese are at increased risk for early mortality (Calle EE et al., 2003) as well as for a

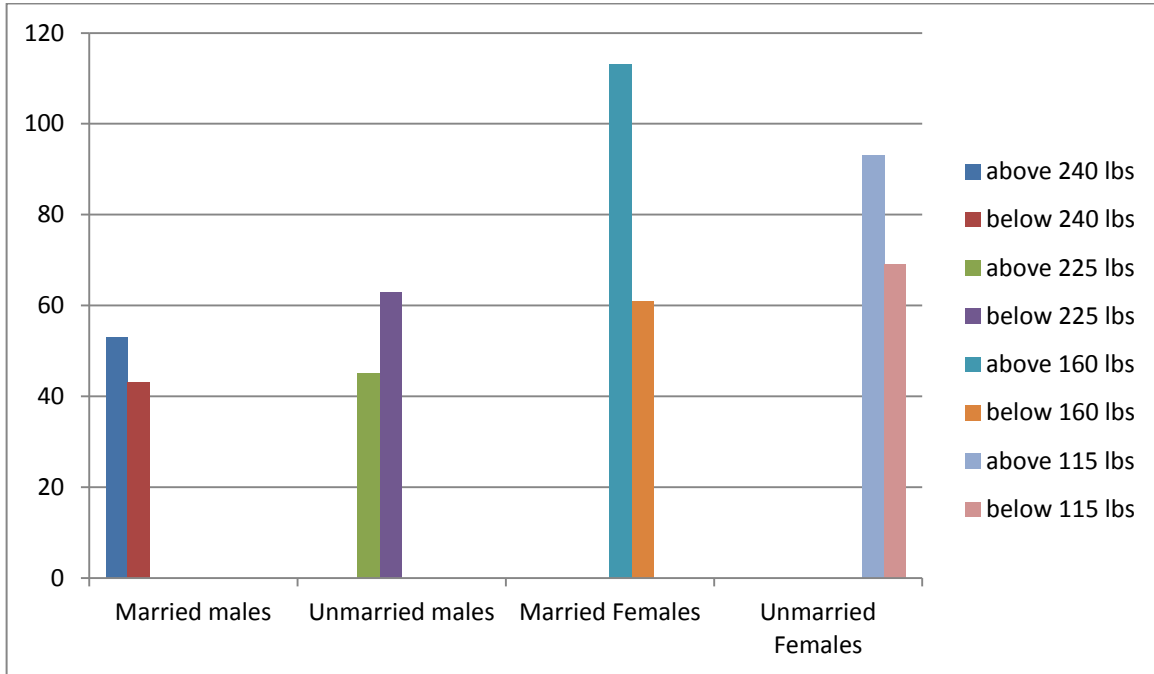


Figure 1. Trend of obesity among married and unmarried individuals.

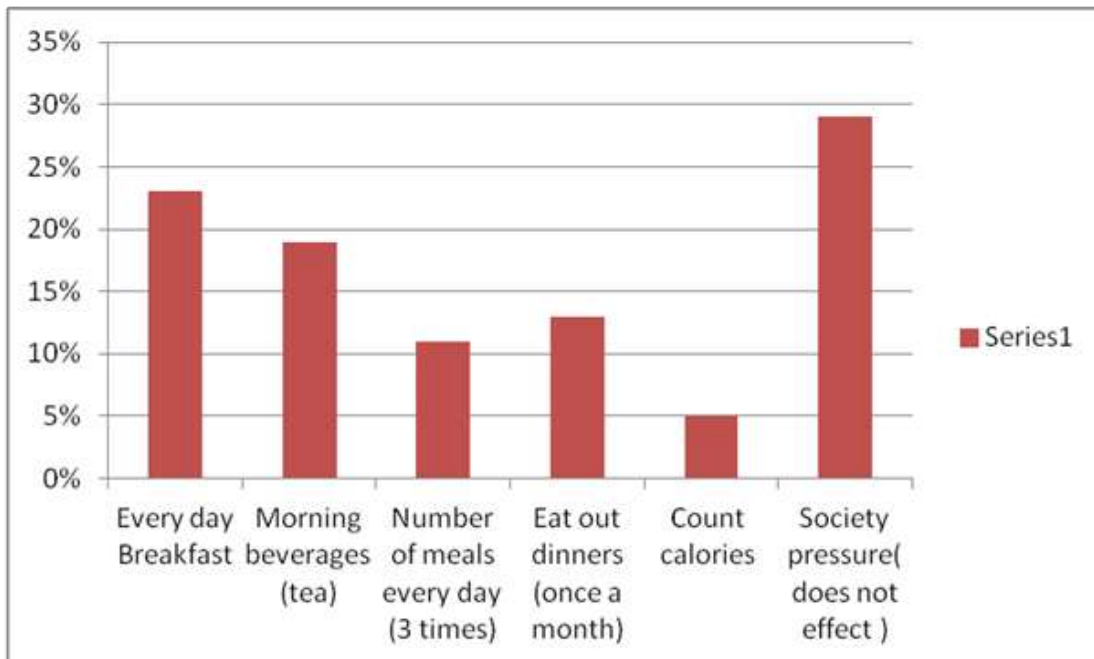


Figure 2. nutritional pattern in unmarried individuals.

variety of medical conditions, including type 2 diabetes, hypertension, dyslipidemia, cardiovascular disease, and

sleep apnea (Field AE et al., 2002) . It can result from several possible genetic and environmental interactions

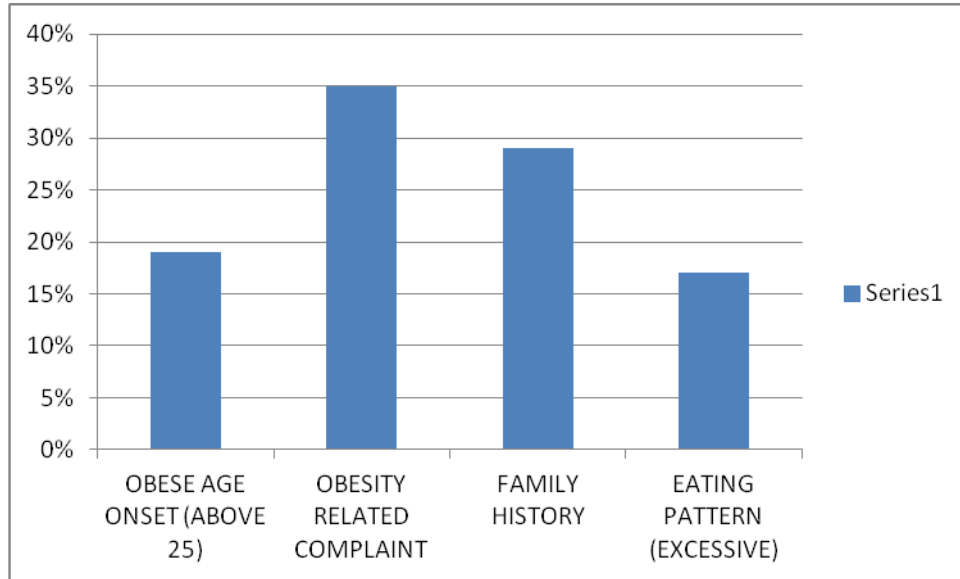


Figure 3. Causes of Obesity in married individuals.

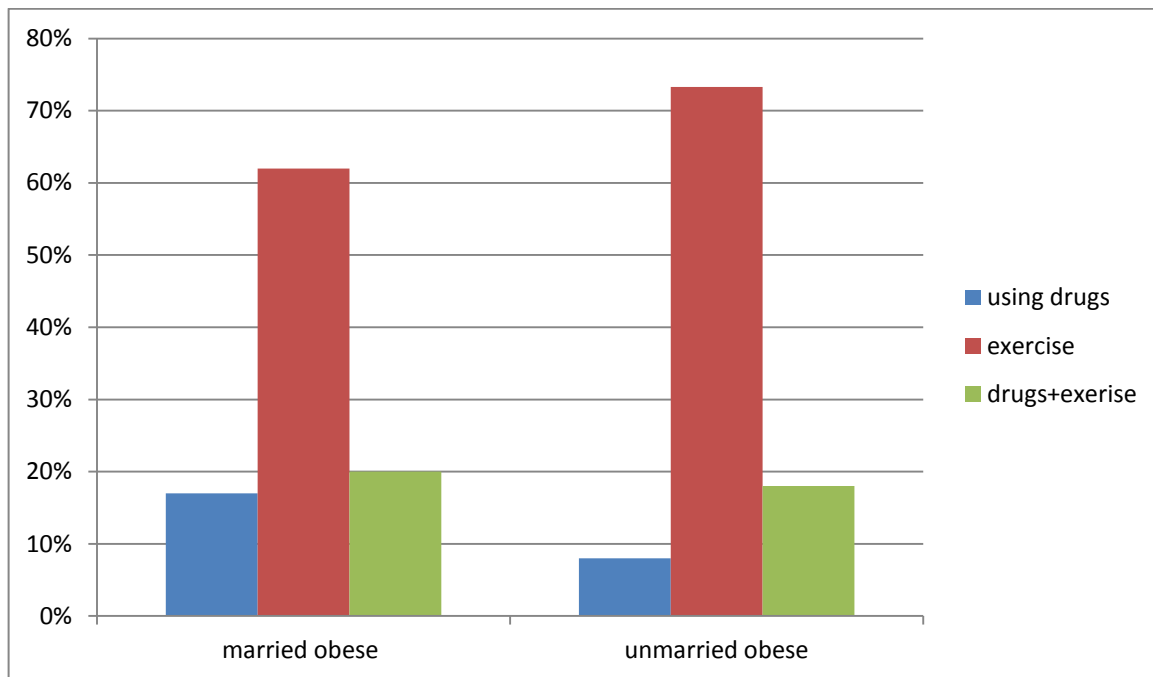


Figure 4. Trend of using pharmacological and non pharmacological treatments in married and unmarried individuals.

(Hill JO et al., 1998) or any indirect association of environmental stress that makes the person more prone to food consumption (Greeno CG et al., 1994). Management strategies for weight reduction in obese individuals include physical interventions, diet, behavioral therapies, and pharmacological treatments. From our

results figure 4 indicates that both in married and unmarried individuals, non pharmacological treatment (Exercise) is preferred over pharmacological (Drug) treatment, however obesity problems are still face by these individuals due to un controlled dietary pattern as shown in figure 2 in unmarried individuals and social and

other health problems play a role in obesity present individuals as shown in figure 3. These strategies may be used alone or in combination for greater efficacy (Ioannides-Demos LL et al., 2005). Drugs used to induce weight loss may reduce appetite or increase satiety, reduce the absorption of nutrients, or increase energy expenditure. In the past drug therapies available have included thyroid hormone, dinitrophenol and amphetamines. More recently a number of newer agents have been trialed though only orlistat and sibutramine were approved for long-term use (≥ 24 weeks). Following the recent withdrawal of sibutramine this leaves only orlistat (Abenham L et al., 1996). While drug provided by many Physician's include Metformin in particular for the treatment of obesity in general practice. A variety of herbal preparations as well for weight loss are available. These herbal preparations and drugs act either by a central mechanism or by a peripheral mechanism.

The results of the studies we synthesized are directly applicable only to the persons included in those studies. The study specifically focus on the eating behaviors of individuals which seems to be disappointing, people being young and happy-go-lucky don't consider their health being at stake or are unaware of the future consequences as it can be seen through Figure 2. Maintaining healthy eating and physical activity habits may help in regaining less weight or keeping it off. As after all "Prevention is better than cure." On the contrary, as in Figure 3, the older participants being obese face a lot of health related problems associated with obesity. Figure 1 shows that marital status was significantly associated with obesity, where respondents who were married had a higher prevalence of obesity compared to those who were still unmarried. Marriage is associated with a significant 2-year weight gain. After adjusting for socioeconomic factors and disease status, quality of life decreased with increasing levels of obesity. Obese patients are more likely to be women than men, had poorer health status, according to our survey. The research examined the association between restraint, hunger, and disinhibition and body weight and size.

Treatment of an overweight or obese person incorporates a two step process: assessment and management. Assessment requires determination of the degree of obesity and the absolute risk status. Management includes the reduction of excess weight and maintenance of body weight. Treatment may include a combination of diet, exercise, behavior modification, and sometimes weight-loss drugs. When physical activity is used in the treatment of obesity, weight losses are modest and average 2–3 kg. The Food and Drug Administration is currently reviewing the potential benefits and risks of sibutramine (A Astrup, 2010). Obesity is clearly undesirable and needs to be tackled.

CONCLUSION

It concluded that, the younger generation is not particularly concerned with the future consequences associated with obesity, while the married people face several problems associated with it.

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