

## السعادة الزوجية لدى الأشخاص ذوي السمنة المفرطة والأوزان المختلفة في الكويت

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**ملخص:** هدفت الدراسة إلى تعرف السعادة الزوجية والعوامل المرتبطة بها لدى 196 كويتيياً من المتزوجين ذوي السمنة المفرطة والأوزان المختلفة. استخدم مقياس السعادة الزوجية للبلهان والناصر (2007). وقد بينت النتائج أن الأزواج من ذوي السمنة المفرطة أقل سعادة زوجية من الأزواج ذوي الأوزان المختلفة؛ حيث إن الأزواج من ذوي السمنة المفرطة يشعرون بدرجة منخفضة من التقبل النفسي والتجانس والكفاءة الجنسية مع الزوج/الزوجة. كما أن الزوجات من ذوي السمنة المفرطة والأزواج (من كلا الجنسين) من ذوي الدخل المتوسط والذين ليس لديهم زوج/ زوجة يعاني من السمنة المفرطة هم أقل سعادة زوجية مقارنة بالمجموعات الأخرى. وتبين أيضاً أن هناك علاقة ارتباطية تنبئية بين بعض المتغيرات كالرضا الزوجي ووجود الشريك من ذوي السمنة والأوزان المختلفة وعدد الأطفال والسعادة الزوجية لدى الأزواج من ذوي السمنة المفرطة، وذلك عند مقارنتهم بالأزواج من الأوزان المختلفة. ولم يتبين وجود علاقة ارتباطية تنبئية دالة إحصائياً حول تأثير السعادة الزوجية على الوزن أو تأثير الوزن على السعادة الزوجية. وقدّم عدد من المقترحات والتوصيات لمساعدة الاختصاصيين الاجتماعيين والمهنيين المتخصصين لفهم السعادة الزوجية والظروف المحيطة بالأزواج من ذوي السمنة المفرطة تمهيداً لتقديم الخدمات المناسبة لهم.

**المصطلحات الأساسية:** السعادة الزوجية، الرضا الزوجي، العلاقات الزوجية، المشكلات الزوجية، المتغيرات السكانية، السمنة، الكويت.

# Marital Happiness among Obese and Non-obese People in Kuwait

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**Abstract:** The study aimed to investigate marital happiness and relevant factors among 196 obese and non-obese Kuwaiti adults. The Marital Happiness Scale for Al-Belhan and Al-Naser (2007) was used. The findings showed that obese people were less happy with marriage than non-obese people; they expressed low level of psychological acceptance, homogeneity and sexual competence with spouses. Obese wives, married couples with moderate income, whose spouses were non-obese, were less happy with marriage. Predictors such as marital satisfaction, an obese or non-obese spouse, and the number of children were found to have an impact on marital happiness among obese people, when compared to non-obese people. No statistically significant correlative relationship was found on either the impact of marital happiness on weight or the impact of weight on marital happiness. Recommendations were suggested to help the social workers and professionals to understand the marital conditions of obese people in order to provide much better and more appropriate services.

**Key words:** Marital happiness, Marital satisfaction, Marital relationship, Marital problem, Demographics, Obesity, Kuwait

Marital happiness is a judgment made by a spouse over time that indicates the sense of well-being or satisfaction that he/she experiences in the marital relationship. A large body of research has found that several determinants may affect marital happiness, including health and emotional problems related to high body weight. Researchers, mainly sociologists, have argued that obesity is a complex multifactorial disease

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that may have a negative effect on the emotional health of marriages and an effect on marital happiness(Ledyard, 2004).

## **Theoretical Framework**

### **Physical Health**

Several perspectives have linked marital happiness and obesity in the literature. Obese individuals are at a greater risk of developing one or more serious medical conditions and of suffering from poor health (Rogers et al., 2003). A study by Sturm and Wells (2001) based on data from 9585 American adults has revealed that obesity is associated with more chronic conditions and worse physical health. Obesity has also been found to predict poor physical health in adults. A study by Janssen (2007) has reported that obesity may contribute to increased morbidity and mortality due to circulatory disease and diabetes. Other studies have found that obesity is associated with heart disease, high cholesterol, menstrual irregularities, diabetes, and complications with pregnancy (Eckel, 1997; Gungor et al., 2005; Weyer et al., 2001).

A meta-analytical research conducted by Robles, Slatcher, Trombello and McGinn (2014) reviewed 126 published empirical articles over the past 50 years and found that poor physical health was related to low marital quality (Effect size  $r = 0.07-0.21$ ). Although researchers argued that complete adaptation to health problems may negate a negative effect of health problems on happiness (Carr & Friedman, 2006), others found that the severity of the conditions, the suffering from one or multiple conditions, the limited amount of daily activities, and the view of married couples of their partners as powerless or incompetent had an impact the level of happiness. According to each dimension, the degree of happiness was found to be lower for people with more serious problems (Mehnert et al., 1990). A study by Galinsky and Waite (2014) using a nationally representative sample of 1464 married adults found that an individuals or a partners poor physical health was associated with negative marital quality in later life. Galinsky and Waite indicated that poor physical health affected the psychological well-being of both spouses as well as the sexual behavior of the couple. Karraker, Delamater and Schwartz (2011) showed that intimacy and exchanging love were important components of marital functions, and these goals were often achieved via sexual interactions, but physical health problems might interfere with sexual activity and might in turn affect marital happiness.

### **Stigmatization of Obesity**

Clinical studies have indicated that obesity is a stigmatized condition associated with marital unhappiness (Sobal et al., 1995). Earlier work on obesity during the 1960s and 1970s reported discrimination against obese people, and some authors (e.g., Allon, 1974), as described by Kallen and Sussman (1984), stated that this discrimination makes obese people “feel they deserve the discrimination and are induced to accept the discrimination as just” (p.14). Research conducted over the past 40 years has shown that obese people are viewed as being responsible for their weight, owing to characteristics such as laziness and lack of self-control (Crandall & Schiffhaur, 1998). Obese people are also viewed as being physically unattractive and undesirable (Puhl & Brownell, 2001). The stigma toward obese people may encompass the actions of denigration, exclusion and mistreatment, and it may also lead to negative self-acceptance by obese people because they are socially devalued (Carr & Friedman, 2005).

Moreover, obese people may be at a greater risk for mistreatment and may have less opportunity to develop a romantic relationship with their partners (Pearce et al., 2002). Obese people may often think that their partners would rate them as less warm or trustworthy. Obese people may believe that they are judged by their spouses as being lower in attractiveness and as being poorer matches to their spouses attractiveness ideals (Boyes & Latner, 2009). Obese people, mainly women, may experience a negative body image during physical intimacy with a spouse. Many studies have found that a negative attractiveness view and body image are associated with poor marital relationships, low sexual esteem, negative sexual experiences, (Wiederman & Hurst, 1998), sexual assertiveness and avoidance of sexual activity (Koch et al., 2004; Wiederman, 2000). The more a woman perceives herself to be less attractive, the more likely she is to report a decline in sexual desire or frequency of sexual activity (Koch et al., 2004), which may negatively affect her marital relationship and happiness. Additionally, other studies have found that women who perceive themselves as being overweight may believe that they have failed to meet the standards of female beauty in society and may often suppress anger and express it in their marital relationships (Benjamin & Kamin-Shaaltiel, 2004).

Studies, however, have found that the more common that obesity is within a social group, the less detrimental is its effect on marital happiness. A result of a national telephone survey of 1980 married adults found that obese men had more marital problems, and obese women reported less marital unhappiness. However, husbands and wives who gained weight had been found to be happier with their marriages (Sobal et al., 1995). Additionally, results from seven focus groups with 50 women have suggested that weight mismatch is a source of vulnerability or a target for marital conflict. When there is a weight or motivation mismatch between a couple, women report negative marital relationship interactions. The association between being obese and marital happiness among married couples derives from the self-appraisal hypothesis (Pinhey et al., 1997), support for the self and others, and sharing similar characteristics and health profiles by both spouses (Carr & Friedman, 2006).

### **Psychological Symptoms**

Epidemiological studies have found a relationship between being obese and having increased psychiatric symptoms, which may negatively affect couples marital happiness. Although demographics may mediate the association between the two variables (Faith et al., 2002), studies have found associations between high body weight, increased risk of past-year psychological symptoms (Scott et al., 2008; Onyike et al., 2003) and life time diagnosis of major depression (Simon et al., 2006). It has been found, for example, that obese females are more likely to experience depression and suicide tendencies than males (Onyike et al., 2003; Carpentel et al., 2000). Moreover, obese African Americans and White Americans experience these symptoms even after socioeconomic status (Carpentel et al., 2000), age, education, marital status, and use of alcohol and drugs are controlled for (Onyike et al., 2003). Other researchers have found a strong association between obesity and mood disorder, anxiety (Simon et al., 2006) and emotional disorder (Scott et al., 2008). In addition, previous studies have reported that when psychiatric symptoms appear, a high degree of marital instability is found among obese people.

A study by Maias, Leal, Lopez-Ibor, Rubio, and Caballero (2004), which was conducted on a group of morbidly obese patients (71 females and 14 males) had evaluated whether the existence or absence of

psychiatric symptoms indicated significant differences in marital adjustment. Among psychiatric and non-psychiatric obese people, significant differences have been found in marital satisfaction, personal issues, communication, conflict resolution, financial management, sexual relations and children and marriage problems. Additionally, a study by Galinsky and Waite (2014) conducted on 1464 obese married couples found that the mental health of each spouse is associated with marital quality. It has also been found that mental health mediates the association between physical health and both negative and positive marital quality. Galinsky and Waite argue that mental health is “a lens through which the individual views the relationship and the partner, coloring them brighter or darker” (p.488).

### **Obesity in Kuwait**

Obesity has been rising in Kuwait since the 1980s. The World Health Organization (2008) estimated that among the Kuwaiti population, almost 49.8% of females and 37.5% of males considered themselves obese. WHO also predicted a substantial increase in obesity in Kuwait to more than 60% of the total population by 2020. Other studies conducted in Kuwait also revealed a high rate of obesity among adults (Badr et al., 2013; AlMajed et al., 2011; Al-Asi, 2003). The most common factors contributing to obesity in Kuwait are overeating unhealthy high-fat foods and sedentary lifestyles (Food Agricultural Organization, 2016).

Free health services in Kuwait are provided to all citizens. Obese Kuwaiti individuals are given free healthcare intervention and behavioral management programs. These services are mainly focused on losing weight and improving the physical health of obese individuals. In the literature, it has been reported that the provision of diet programs and referrals to dieticians are often unsatisfactory for obese patients (Brown et al., 2006; Wadden et al., 2000). The proportion of people who are able to lose weight through dieting programs and keep it off in the long term is low, and even if those people are able to do so, they will be at greater risk of developing eating disorders, health problems, depression, lower self-esteem, weight gain and shame (Matz & Frankel, 2004).

Recently, more professionals and social workers have been focusing on the mental health of obese people rather than on reducing their weight. It has been suggested that an individual's weight reflects his or her

biological responses to specific lifestyle and environmental factors (Matz& Frankel, 2004). Some have argued, for example, that hostile marital interactions and mood disorder history affect obesity-related metabolic responses to high-fat meals (Kiecolt-Glaser et al., 2015). Others have suggested that marital unhappiness is related to an individuals motivation for gaining weight (Wilson & Oswald, 2005). Given the beneficial effect of marriage on health outcome (Robles &Kiecolt-Glaser, 2003), it has been suggested that people who feel happy in their marriages are likely to make good choices about staying healthy (i.e., eating habits and activity level) (Schade et al., 2014).

In Kuwait, social workers face challenges in reducing their judgmental message about weight and in understanding the types of mental health intervention that obese people need. **First**, in general, there is a tendency in Kuwait to regard plumpness as socially undesirable and thinness as a symbol of beauty and womanhood (Kabir et al., 2013). More obese people now tend to consider gastrectomy surgery in response to their failure to lose weight. **Second**, there is a lack of awareness about the role of social workers that should be shifted toward encouraging obese people not to view high body weight as a problem and try instead to adapt to their body size and to lead a normal life with their spouses. Social workers employed at hospitals mostly focus on offering obese patients services related to dieting and nutrition but not to mental health. As stated by the Annual Health Report of the Kuwaiti Ministry of Health (2013), health problems ranked first among the services provided by social work offices in hospitals, followed by psychological and finical problems. **Finally**, there is a shortage of studies describing the marital relationships of obese Kuwaitis to help social workers understand the type of assistance needed by obese people.

There must be an increased recognition in Kuwait and other countries of the importance of addressing obesity as an area related to human differences and social justice rather than simply as a matter of body size. Given the serious mental health and social threat confronting obese people, the priority of the services should shift from merely focusing on dieting programs to concentrating on the enhancement of mental health and reduction of social problems. Such services shall help obese people to have a lesser burden of stigmatization and associated problems that may negatively affect them and their spouses.

## **The Importance of the Study**

Most empirical studies (e.g., Baird & Redfering, 1975; Black, 1989; Collier, 1993; Cunningham, 1986; Kylie et al., 2004; Sidik & Rampal, 2009) on marital happiness and obesity have been limited to one of the partners (usually the wife) in either behavioral or surgical weight-loss programs, or post-treatment (Laferrère et al., 2002). Some studies have focused on marital satisfaction and weight changes (Ballantyne, 2003; Black, 1988; Brownell & Stunkard, 1981; Finch et al., 2005; Hickey, 1985; Poloni, 1986; Slusky, 1993), the quality of the marital relationship and body image (Friedman et al., 1999), and marital quality and dieting behaviors (Markey et al., 2001). In studies conducted in Kuwait, the main interest was in the association of the body mass index with factors related to obesity (e.g., Al-Asi, 2003; Al-Awadi & Amine, 1989; Al-Kandari et al., 2008; Al-Kandari, 2006; Moussa et al., 1999), dietary habits of university students (Al-Isa, 1999), and the effect of diet on obese people with high cholesterol levels (Dashti et al., 2007). The focus of previous studies has mostly been on weight loss and not necessarily on marital happiness. Hence, there remains a gap in the obesity literature regarding the marital happiness among obese people compared with non-obese people.

To address this research gap, the present study focused on addressing happiness in marriage because it is essential to understanding marital interaction, marital conflict, marital problems and divorce proneness (Amato et al., 2007). The present study examined marital happiness in the context of the obesity of one or both partners in marriage to understand the lives of obese people as a diverse group and not as a stigmatized one. A sample of obese and non-obese people was selected to understand the extent to which obese people, compared with non-obese people, experience difficulties and harm in their marital life.

## **The Purpose of the Study**

The present study sought to investigate marital happiness among obese people in Kuwait by examining whether marital happiness differs among obese or non-obese people when demographic and social variables are controlled. The study also examined whether there were differences in marital happiness based on demographics and social characteristics among obese and non-obese people. One of the

assumptions made in this study that was derived from the literature was that variables such as age (Oropesa & Landale, 2004), gender (Davis et al., 2009; White et al., 2004), education, income (Monteiro et al., 2001; Vioque et al., 2000), marital duration (Inoue et al., 1996), previous marriage(s) (Jeffery & Rick, 2002), number of children (Weng et al., 2004), medical problems (Bocchieri & Meana, 2002; Ledyard, 2004), marital relationship, marital problems (Bulanda & Brown, 2007) and marital satisfaction had an effect on the degree of marital happiness. The study was also mainly concerned with identifying the potential mutual relationship that holds between marital happiness and weight and determining the best predictors of marital happiness among obese and non-obese people.

## **Methodology**

### **The Participants**

A quantitative method, a cross sectional design and purposive sampling were implemented in this study to identify marital happiness among obese and non-obese people in Kuwait. A sample of 196 obese and non-obese married Kuwaiti people was surveyed. Half of the participants (98) were obese, and half were non-obese (98). The sample comprised 54 males and 142 females, whose ages ranged from 20 to 62 ( $m=36.98$ ,  $SD=9.98$ ). Table 1 provides summary characteristics of the study sample. The description covers the frequency and percentage of the values of the demographic and social variables.

**Table 1: Characteristics of the Sample**

| <b>Variable</b> | <b>N</b> | <b>%</b> |
|-----------------|----------|----------|
| <b>Age</b>      |          |          |
| Twenties        | 59       | 30.1     |
| Thirties        | 62       | 31.6     |
| Forties         | 75       | 38.3     |
| <b>Gender</b>   |          |          |
| Male            | 54       | 27.6     |
| Female          | 142      | 72.4     |

Cont/ Table 1: Characteristics of the Sample

| Variable                       | N   | %    |
|--------------------------------|-----|------|
| <b>Education</b>               |     |      |
| High School or less            | 28  | 14.2 |
| High School Diploma            | 55  | 28.1 |
| Undergraduate and up           | 113 | 57.7 |
| <b>Monthly Income</b>          |     |      |
| \$700-1999 (Moderate income)   | 33  | 17.9 |
| \$2000-3999 (Middle)           | 49  | 37.7 |
| \$4000 or higher (High income) | 87  | 44.4 |
| <b>Number of Children</b>      |     |      |
| 3 or less                      | 125 | 63.8 |
| 4 or more                      | 71  | 36.2 |
| <b>Previous Marriage</b>       |     |      |
| One time                       | 146 | 74.5 |
| More than once                 | 50  | 25.5 |
| <b>Type of Weight</b>          |     |      |
| Obese                          | 98  | 50   |
| Non-Obese                      | 98  | 50   |
| <b>Marital Duration</b>        |     |      |
| 5 years or less                | 55  | 28.1 |
| 5-10                           | 50  | 25.5 |
| 6 years or more                | 91  | 46.4 |
| <b>Housemaid</b>               |     |      |
| Yes                            | 163 | 83.2 |
| No                             | 33  | 16.8 |
| <b>Childcare Support</b>       |     |      |
| Yes                            | 60  | 30.6 |
| No                             | 136 | 69.4 |

**Cont/ Table 1: Characteristics of the Sample**

| Variable                         | N   | %    |
|----------------------------------|-----|------|
| <b>Husband/wife with Obesity</b> |     |      |
| Yes                              | 103 | 52.6 |
| No                               | 93  | 47.4 |
| <b>Medical Problems</b>          |     |      |
| Yes                              | 71  | 36.2 |
| No                               | 125 | 63.8 |
| <b>Marital Satisfaction</b>      |     |      |
| Dissatisfied                     | 15  | 7.7  |
| Somewhat                         | 42  | 21.4 |
| Satisfied                        | 139 | 70.9 |
| <b>Marital Relationship</b>      |     |      |
| Poor                             | 16  | 8.2  |
| Average                          | 43  | 21.9 |
| Excellent                        | 137 | 69.9 |
| <b>Marital Problems</b>          |     |      |
| Very few                         | 82  | 41.8 |
| Average                          | 91  | 46.4 |
| A lot                            | 23  | 11.7 |

Note. N= 196 obese and non-obese people

The database of the study was limited to Kuwaiti male and female married people. All subjects provided data on their weight (kg) and height (m)<sup>2</sup>. The body mass index (BMI) for each individual was calculated based on the following formula:  $BMI = \text{Weight (in kg)} / \text{Height (in m)}^2$  (WHO expert consultation, 2004). The participants were categorized based on their BMI value to (1) Underweight = <18.5, (2) Normal weight = 18.5—24.9, (3) Overweight = 25—29.9, and (4) Obese = BMI of 30 or greater. Because of our interest in obesity, we divided the participants into two groups: (1) Obese individuals who had a BMI of 30 or greater, and (2) non-obese individuals who had a BMI < 29.9 (underweight, normal weight, and overweight).

## **Data Collection**

Two research assistants distributed the questionnaire packets to people with and without obesity working in different placements. Previously, formal letters were sent to the Ministry of Education and Ministry of Social Affairs in order to obtain their approval of the employees participation in the study. These two ministries were exclusively chosen because of the high numbers of Kuwaitis employed in their different departments. Based on the approval received from the two ministries, only two departments from the Ministry of Education and three departments from the Ministry of Social Affairs were chosen to be part of the empirical study.

Each employee received an envelope that included a cover letter and a questionnaire comprised of three sections: (1) informed consent, (2) demographics and social characteristics, and (3) marital happiness scale. All participants voluntarily participated by filling out the self-administered questionnaires. The research assistants collected the sealed questionnaire packets within one week after delivery date. 230 questionnaires were distributed and 208 were returned to or collected by the two research assistants. The response rate was 90.4%. Additional 12 questionnaires were excluded because of incomplete data. As a result, the final number of participants was 196.

## **Instruments**

### **Demographics and Social Characteristics**

A demographic questionnaire was developed, which included background information about Height, Weight, Age, Gender, Education, Monthly income, Number of children, Number of previous marriages, Marital duration, Housemaid, Childcare support, Husband/Wife with obesity, and Medical problems. Other variables related to social characteristics were also developed, which included Marital satisfaction, Marital problems and Marital relationship. The subjects were asked to describe in general (1) the extent to which they are satisfied with their marital relationship on a scale of 3 (very satisfied), 2 (somewhat satisfied), and 1 (dissatisfied), (2) how good their relationship is compared to most on a scale of 1 (poor), 2 (average), and 3 (excellent), and (3) how many problems they are having in their relationship on a scale of 1 (very few), 2 (average), and 3 (a lot).

### **Marital Happiness Scale (MHS)**

The Marital Happiness Scale (MHS) of Al-Belhan and Al-Naser (2007) was used in this study to measure the degree of happiness in marriage. The scale in general identifies the individuals subjective evaluation of the marriage in terms of feelings of satisfaction, happiness, and pleasure. The MHS is an Arabic version that was designed to measure the current levels of marital happiness among 935 young male and female Kuwaitis between the ages of 18 and 33. The scale included three components: (1) Trust and Psychological Comfort (TPC): a condition of the feelings of pleasure, ease, well-being, love, contentment, and receiving help in times of grief or pain (22 items) (e.g., I feel that my spouse loves me; I regret being married); (2) Psychological Acceptance and Consistency (PAC): the act of accepting, understanding, and meeting the needs of each other (19 items) (e.g., my husband/wife accepts my suggestions to solve problems, my husband/wife understands my feelings); (3) Sexual Adjustment (SA): the state of adapting to, and meeting the sexual needs of ones spouse (9 items) (e.g., we often exchange kisses; I do not experience intimate relations in marriage as I have expected).

The total number of items in the MHS is 50. Participants were asked to rate their responses on each item. The rating of the responses were: 1 (disagree very much), 2 (disagree), 3 (neither agree nor disagree), 4 (agree), and 5 (agree very much). The response of “disagree very much” refers to a low level of marital happiness. Items on the MHS are given in a positive and negative direction, so it is necessary to reverse the individuals item responses when calculating the individuals subscales of the total score.

### **The Reliability of the Marital Happiness Scale**

The present study investigated the reliability of the global Marital Happiness Scale and the three subscales by using the Cronbach Coefficient Alpha. Alpha for the TPC, PAC, and SA scales was 0.88, 0.82, and 0.76, respectively. Alpha for the global MHS was consistent at 0.92. Hence, we concluded that the MHS was reliable for use with Kuwaiti married people with and without obesity.

## **Results**

### **(1) Homogeneity of the Samples Characteristics**

The Chi square analysis was used to test the homogeneity between

the obese and non-obese groups based on demographics. Except for having an obese husband/wife, the obese group did not differ significantly from the non-obese group on Age, Gender, Education, Monthly income, Number of children, Number of previous marriage(s), Marital duration, childcare Support, and Medical problems. Table 2 presents the frequency, percentages, and Chi square for the obese and non-obese individuals based on demographics

**Table 2: Frequency, Percentages, and Chi Square for the Obese and Non-Obese People Based on Demographics**

| <b>Variable</b>           | <b>Obese individual<br/>N = 98 (%)</b> | <b>Non-obese individual<br/>N = 98 (%)</b> | <b>x<sup>2</sup>statistic</b> | <b>P-value</b> |
|---------------------------|--|--|-------------------------------|----------------|
| <b>Age</b>                |  |  | 4.927                         | 0.085          |
| Twenties                  | 52.5                                   | 47.5                                       |                               |                |
| Thirties                  | 38.7                                   | 61.3                                       |                               |                |
| Forties or more           | 57.3                                   | 42.7                                       |                               |                |
| <b>Gender</b>             |  |  | 0.085                         | 0.770          |
| Female                    | 48.7                                   | 51.3                                       |                               |                |
| Male                      | 50.8                                   | 49.2                                       |                               |                |
| <b>Education</b>          |  |  | 2.146                         | 0.342          |
| High school or less       | 46.8                                   | 53.2                                       |                               |                |
| High school diploma       | 43.6                                   | 56.4                                       |                               |                |
| Undergraduate or more     | 55.3                                   | 44.7                                       |                               |                |
| <b>Monthly income</b>     |  |  | 4.109                         | 0.128          |
| Moderate                  | 47.4                                   | 52.6                                       |                               |                |
| Middle                    | 43.2                                   | 56.8                                       |                               |                |
| High                      | 60                                     | 40   |                               |                |
| <b>Previous marriage</b>  |  |  | 1.718                         | 0.190          |
| One time                  | 58                                     | 42   |                               |                |
| More than once            | 47.3                                   | 52.7                                       |                               |                |
| <b>Number of Children</b> |  |  | 3.041                         | 0.081          |

**Cont/ Table 2: Frequency, Percentages, and Chi Square for the Obese and Non-obese People Based on Demographics**

| <b>Variable</b>                  | <b>Obese individual<br/>N=98 (%)</b> | <b>Non-obese individual<br/>N=98 (%)</b> | <b>x<sup>2</sup>statistic</b> | <b>P-value</b> |
|----------------------------------|--------------------------------------|--|-------------------------------|----------------|
| < 3                              | 44.8                                 | 55.2                                     |                               |                |
| > 4                              | 57.5                                 | 42.5                                     |                               |                |
| <b>Marital duration</b>          |                                      |  | 2.908                         | 0.234          |
| < 5                              | 50.9                                 | 49.1                                     |                               |                |
| 6-10                             | 40                                   | 60                                       |                               |                |
| > 11                             | 54.9                                 | 45.1                                     |                               |                |
| <b>Housemaid</b>                 |                                      |  | 0.356                         | 0.551          |
| Yes                              | 48.4                                 | 51.6                                     |                               |                |
| No                               | 52.9                                 | 47.1                                     |                               |                |
| <b>Childcare Support</b>         |                                      |  | 1.537                         | 0.215          |
| Yes                              | 47.1                                 | 52.9                                     |                               |                |
| No                               | 56.7                                 | 43.3                                     |                               |                |
| <b>Husband/wife with obesity</b> |                                      |  | 4.604                         | 0.032*         |
| Yes                              | 58.1                                 | 41.9                                     |                               |                |
| No                               | 42.7                                 | 57.3                                     |                               |                |
| <b>Medical problems</b>          |                                      |  | 0.356                         | 0.551          |
| Yes                              | 48.4                                 | 51.6                                     |                               |                |
| No                               | 52.9                                 | 47.1                                     |                               |                |

Note. The total sample is 196, \* P < .05

The significant difference between obese and non-obese participants regarding having a husband/wife with obesity might be explained by the findings of previous studies. It was found that the familial resemblance of obesity in adults, as measured by the body mass index, is mainly due to socioeconomics and demographics (Zahra et al., 2015; Chen et al., 2014). It was suggested that spousal difference in BMI is associated with factors such as household income, job status, age, family size, and physical activities.

Since the couple tend to share home environment and often perform activities together, then the behavioral changes in one partner may affect the other partner. Therefore, we may find that obese individuals who have a husband/wife with obesity are more than non-obese individuals.

**(2) Differences in Marital Happiness between Obese and Non-obese People**

The analysis indicated significant differences between obese and non-obese groups on global Marital Happiness Scale ( $t = 4.121, p = 0.000$ ) and the two subscales; Psychological Acceptance and Consistency ( $t = 4.739, p = 0.000$ ) and Sexual Adjustment ( $t = 6.250, p = 0.000$ ). However, the analysis did not reveal a significant difference for Trust and Psychological Comfort ( $t = 1.671, p = 0.096$ ). Table 3 presents the means and standard deviations of the Marital Happiness Scale and its subscales.

**Table 3: Means and Standard Deviations of the Marital Happiness Scale and Subscales among Obese and Non-obese People**

| Marital Happiness Scales |      |      |      |      |      |      |            |
|--------------------------|------|------|------|------|------|------|------------|
| Variables                | TPC  |      | PAC  |      | SA   |      | Global MHS |
|                          | M    | SD   | M    | SD   | M    | SD   | M          |
| Obese                    | 3.57 | 0.65 | 3.23 | 0.56 | 3.12 | 0.48 | 3.36       |
| Non-Obese                | 3.72 | 0.59 | 3.62 | 0.60 | 3.61 | 0.63 | 3.66       |

As shown in Table 3, the means of global MH scores and the means of PAC and SA scores for obese people were lower than the means for non-obese people. This means that obese people in general expressed a lower level of marital happiness more than non-obese people did. In particular, they expressed a lower level of psychological acceptance and consistency in their marriage and sexual adjustment more than non-obese people did.

**(3) Differences in Marital Happiness among Obese and Non-obese People Based on Demographics and Social Variables**

**Marital Happiness VS. Demographic and Social Variables among Obese People**

The analysis indicated significant differences in global marital happiness scale as a function of gender ( $t = 2.593, p = 0.011$ ), monthly

income (F (6.109), 2,3.164, p? 0.003), husband/wife with obesity (t = 2.176, p? 0.032), marital satisfaction (F (22.794), 2,9.004, p? 0.000), marital problems (F (10.494), 2,5.024, p? 0.000), and marital relationship (F (12.240), 2, 5.689, p? 0.000). Table 4 presents the means, standard deviations, t and f values of the Marital Happiness Scale and subscales based on demographics and social variables.

Initially, the study used the Levenes Test to check for the Homogeneity of Variance among the groups. Except for marital relationship (f (3.514), 2, 95, p? 0.034), the analysis indicated that there were no significant variances among the groups, such as gender (f (0.738), p? 0.393), income (f (0.013), 2, 95, p? 0.987), husband/wife with obesity (f (0.324), 2, 95, p? 0.571), marital satisfaction (f (1.373), 2, 95, p? 0.258), and marital problem (f (1.744), 2, 95, p? 0.180).

**Table 4: Means and Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Obese People**

| <b>Marital Happiness Subscales</b> |                    |           |                   |           |                  |           |                    |           |
|------------------------------------|--------------------|-----------|-------------------|-----------|------------------|-----------|--------------------|-----------|
| <b>Variables</b>                   | <b>TPC</b>         |           | <b>PAC</b>        |           | <b>SA</b>        |           | <b>Global MHS</b>  |           |
|                                    | <b>M</b>           | <b>SD</b> | <b>M</b>          | <b>SD</b> | <b>M</b>         | <b>SD</b> | <b>M</b>           | <b>SD</b> |
| <b>Age</b>                         |                    |           |                   |           |                  |           |                    |           |
| Twenties                           | 3.80               | 0.59      | 3.84              | 0.56      | 3.73             | 0.57      | 3.79               | 0.50      |
| Thirties                           | 3.63               | 0.52      | 3.46              | 0.59      | 3.53             | 0.70      | 3.54               | 0.49      |
| Forties <                          | 3.74               | 0.68      | 3.64              | 0.61      | 3.60             | 0.57      | 3.66               | 0.56      |
| f (p) value                        | 0.666<br>(0.516)   |           | 2.701<br>(0.072)  |           | 0.818<br>(0.444) |           | 1.657<br>(0.196)   |           |
| <b>Gender</b>                      |                    |           |                   |           |                  |           |                    |           |
| Male                               | 3.93               | 0.54      | 3.78              | 0.58      | 3.68             | 0.51      | 3.79               | 0.46      |
| Female                             | 3.58               | 0.59      | 3.53              | 0.61      | 3.57             | 0.69      | 3.56               | 0.55      |
| t (p) value                        | 3.007<br>(0.003)** |           | 2.196<br>(0.030)* |           | 0.843<br>(0.402) |           | 2.593<br>(0.011)** |           |
| <b>Education</b>                   |                    |           |                   |           |                  |           |                    |           |
| High school <                      | 3.71               | 0.56      | 3.65              | 0.61      | 3.69             | 0.54      | 3.68               | 0.48      |

**Cont/ Table 4: Means and Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Obese People**

| Marital Happiness Subscales |                    |      |                     |      |                  |      |                    |      |
|-----------------------------|--------------------|------|---------------------|------|------------------|------|--------------------|------|
| Variables                   | TPC                |      | PAC                 |      | SA               |      | Global MHS         |      |
|                             | M                  | SD   | M                   | SD   | M                | SD   | M                  | SD   |
| Diploma                     | 3.75               | 0.63 | 3.62                | 0.65 | 3.56             | 0.62 | 3.64               | 0.57 |
| Undergrad >                 | 3.69               | 0.59 | 3.62                | 0.58 | 3.60             | 0.68 | 3.64               | 0.52 |
| f (p) value                 | 0.097<br>(0.907)   |      | 0.079<br>(0.924)    |      | 0.305<br>(0.738) |      | 0.60<br>(0.942)    |      |
| <b>Monthly Income</b>       |                    |      |                     |      |                  |      |                    |      |
| Moderate                    | 3.67               | 0.58 | 3.71                | 0.57 | 3.62             | 0.59 | 3.67               | 0.53 |
| Middle                      | 3.57               | 0.55 | 3.39                | 0.58 | 3.50             | 0.67 | 3.49               | 0.48 |
| High                        | 4.01               | 0.59 | 3.90                | 0.54 | 3.76             | 0.57 | 3.89               | 0.50 |
| f (p) value                 | 4.866<br>(0.010)** |      | 7.712<br>(0.001)*** |      | 1.449<br>(0.240) |      | 6.109<br>(0.003)** |      |
| <b>Number of Children</b>   |                    |      |                     |      |                  |      |                    |      |
| 3 <                         | 3.77               | 0.58 | 3.72                | 0.59 | 3.64             | 0.65 | 3.71               | 0.52 |
| 4 >                         | 3.62               | 0.63 | 3.47                | 0.59 | 3.56             | 0.59 | 3.55               | 0.53 |
| t (p) value                 | 1.184<br>(0.239)   |      | 1.876<br>(0.064)    |      | 0.625<br>(0.533) |      | 1.517<br>(0.133)   |      |
| <b>Previous Marriage</b>    |                    |      |                     |      |                  |      |                    |      |
| One time                    | 3.70               | 0.62 | 3.65                | 0.59 | 3.59             | 0.66 | 3.65               | 0.54 |
| More than once              | 3.79               | 0.51 | 3.57                | 0.64 | 3.68             | 0.51 | 3.68               | 0.49 |
| t (p) value                 | 0.102<br>(0.919)   |      | 0.121<br>(0.904)    |      | 0.700<br>(0.487) |      | 0.038<br>(0.970)   |      |
| <b>Marital Duration</b>     |                    |      |                     |      |                  |      |                    |      |
| 5 <                         | 3.77               | 0.55 | 3.69                | 0.60 | 3.63             | 0.51 | 3.70               | 0.48 |
| 6-10 y.                     | 3.76               | 0.58 | 3.63                | 0.65 | 3.7              | 0.65 | 3.71               | 0.53 |
| 11 >                        | 3.66               | 0.63 | 3.58                | 0.57 | 3.50             | 0.66 | 3.58               | 0.54 |

**Cont/ Table 4: Means and Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Obese People**

| Marital Happiness Subscales      |                  |      |                  |      |                    |      |                   |      |
|----------------------------------|------------------|------|------------------|------|--------------------|------|-------------------|------|
| Variables                        | TPC              |      | PAC              |      | SA                 |      | Global MHS        |      |
|                                  | M                | SD   | M                | SD   | M                  | SD   | M                 | SD   |
| f (p) value                      | 0.425<br>(0.655) |      | 0.145<br>(0.865) |      | 1.299<br>(0.278)   |      | 0.484<br>(0.618)  |      |
| <b>Housemaid</b>                 |                  |      |                  |      |                    |      |                   |      |
| Yes                              | 3.71             | 0.61 | 3.60             | 0.62 | 3.64               | 0.65 | 3.66              | 0.54 |
| No                               | 3.73             | 0.51 | 3.67             | 0.53 | 3.48               | 0.48 | 3.62              | 0.45 |
| t (p) value                      | 0.090<br>(0.928) |      | 0.400<br>(0.690) |      | 0.987<br>(0.326)   |      | 0.009<br>(0.993)  |      |
| <b>Childcare Support</b>         |                  |      |                  |      |                    |      |                   |      |
| Yes                              | 3.78             | 0.47 | 3.69             | 0.62 | 3.79               | 0.64 | 3.75              | 0.42 |
| No                               | 3.69             | 0.64 | 3.61             | 0.56 | 3.55               | 0.56 | 3.62              | 0.56 |
| t (p) value                      | 0.585<br>(0.560) |      | 0.663<br>(0.509) |      | 1.739<br>(0.085)   |      | 0.936<br>(0.352)  |      |
| <b>Husband/Wife with Obesity</b> |                  |      |                  |      |                    |      |                   |      |
| Yes                              | 3.81             | 0.59 | 3.72             | 0.57 | 3.76               | 0.52 | 3.76              | 0.47 |
| No                               | 3.59             | 0.59 | 3.49             | 0.64 | 3.39               | 0.71 | 3.49              | 0.57 |
| t (p) value                      | 1.753<br>(0.083) |      | 1.635<br>(0.105) |      | 2.893<br>(0.005)** |      | 2.176<br>(0.032)* |      |
| <b>Medical Problems</b>          |                  |      |                  |      |                    |      |                   |      |
| Yes                              | 3.73             | 0.61 | 3.61             | 0.61 | 3.62               | 0.63 | 3.65              | 0.54 |
| No                               | 3.72             | 0.59 | 3.64             | 0.61 | 3.6                | 0.63 | 3.66              | 0.52 |
| t (p) value                      | 0.125<br>(0.901) |      | 0.098<br>(0.922) |      | 0.031<br>(0.975)   |      | 0.026<br>(0.979)  |      |
| <b>Marital Satisfaction</b>      |                  |      |                  |      |                    |      |                   |      |
| Satisfied                        | 3.92             | 0.54 | 3.81             | 0.52 | 3.73               | 0.63 | 3.66              | 0.46 |

**Cont/ Table 4: Means and Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Obese People**

| Marital Happiness Subscales |                     |      |                     |      |                    |      |                     |      |
|-----------------------------|---------------------|------|---------------------|------|--------------------|------|---------------------|------|
| Variables                   | TPC                 |      | PAC                 |      | SA                 |      | Global MHS          |      |
|                             | M                   | SD   | M                   | SD   | M                  | SD   | M                   | SD   |
| Somewhat                    | 3.45                | 0.39 | 3.36                | 0.52 | 3.48               | 0.41 | 3.29                | 0.41 |
| Dissatisfied                | 2.63                | 0.54 | 2.60                | 0.51 | 2.73               | 0.77 | 2.65                | 0.51 |
| f (p) value                 | 20.703<br>(.000)*** |      | 17.262<br>(.000)*** |      | 7.707<br>(0.001)** |      | 22.794<br>(.000)*** |      |
| <b>Marital Problems</b>     |                     |      |                     |      |                    |      |                     |      |
| A lot                       | 2.94                | 0.68 | 3.21                | 0.89 | 3.03               | 0.83 | 3.93                | 0.51 |
| Average                     | 3.55                | 0.40 | 3.43                | 0.46 | 3.59               | 0.42 | 3.62                | 0.44 |
| Very few                    | 3.93                | 0.58 | 3.81                | 0.58 | 3.70               | 0.68 | 3.21                | 0.65 |
| f (p) value                 | 12.108<br>(.000)*** |      | 5.768<br>(0.004)**  |      | 5.270<br>(0.007)** |      | 10.494<br>(.000)*** |      |
| <b>Marital Relationship</b> |                     |      |                     |      |                    |      |                     |      |
| Excellent                   | 4.02                | 0.61 | 3.90                | 0.60 | 3.88               | 0.53 | 3.06                | 0.67 |
| Average                     | 3.72                | 0.49 | 3.57                | 0.51 | 3.57               | 0.58 | 3.52                | 0.33 |
| Poor                        | 3.09                | 0.59 | 3.32                | 0.82 | 3.22               | 0.80 | 3.81                | 0.54 |
| f (p) value                 | 13.628<br>(.000)*** |      | 8.858<br>(.000)***  |      | 3.797<br>(0.026)*  |      | 12.240<br>(.000)*** |      |

Note. The total sample is 98. \*  $p > 0.05$ ; \*\*  $p > 0.01$ ; \*\*\*  $p > 0.0001$ ; (TPC) Trust and Psychological Comfort; (PAC) Psychological Acceptance and Consistency; (SA) Sexual Adjustment

As shown in Table 4, the mean of global Marital Happiness scores for obese females was lower than the mean for obese males (3.56 vs. 3.79), which means that the females expressed a lower level of marital happiness in general than did the males. Also, obese people who had no husband/wife with obesity expressed a lower level of marital happiness than people who had husband/wife with obesity (3.49 vs. 3.76).

By using Tukey post-hoc test, the analysis indicated that there was a

significant mean difference between obese people from middle-class and upper class families (Mean difference = 0.40,  $P = 0.005$ ) in favor of the second group. Also, the findings revealed significant mean difference between obese people who were dissatisfied with their marriage and somewhat satisfied (Mean difference = 0.70,  $P = 0.005$ ) and satisfied with their marriage (Mean difference = 1.09,  $P = 0.000$ ) in favor of the last two groups. Further, it revealed significant mean difference between obese people who had average (Mean difference = 0.41,  $P = 0.023$ ) and large amount of marital problems (Mean difference = 0.72,  $P = 0.000$ ) and people who had few marital problems in favor of the last group.

Further analysis was conducted to investigate the mean differences of the Marital Happiness subscales based on the aforementioned variables. A significant effect was found for Gender ( $t = 3.007$ ,  $p = 0.003$ ), Monthly income ( $F(4.866)$ , 2, 3.214,  $p = 0.010$ ), Marital satisfaction ( $F(20.703)$ , 2, 10.500,  $p = 0.000$ ), Marital problems ( $F(12.108)$ , 2, 7.026,  $p = 0.000$ ) and Marital relationship ( $F(13.628)$ , 2, 7.712,  $p = 0.000$ ) in relation to Trust and Psychological Comfort subscale. Also, Gender ( $t = 2.196$ ,  $p = 0.030$ ) Monthly income ( $F(7.712)$ , 2, 4.933,  $p = 0.001$ ), Marital satisfaction ( $F(17.262)$ , 2, 9.414,  $p = 0.000$ ), Marital problems ( $F(5.768)$ , 2, 3.825,  $p = 0.004$ ) and Marital relationship ( $F(8.858)$ , 2, 5.551,  $p = 0.000$ ) were found to be significant in relation to the Psychological Acceptance and Consistency subscale. It was further found that having Husband/Wife with obesity ( $t = 2.893$ ,  $p = 0.005$ ), Marital satisfaction ( $F(7.707)$ , 2, 5.330,  $p = 0.001$ ), Marital problem ( $F(5.270)$ , 2, 3.813,  $p = 0.007$ ) and Marital relationship ( $F(3.797)$ , 2, 2.826,  $p = 0.026$ ) had a significant effect in relation to Sexual Adjustment subscale. Each of these effects is discussed below using the mean scores shown in Table 4 and the analysis of Tukeys test.

**The Trust and Psychological Comfort Subscale:** Obese females scored significantly lower than did obese males (3.58 vs. 3.93). Also, obese people from middle-class scored significantly lower than did people from upper class (Mean difference = 0.44,  $P > 0.008$ ). Obese people who were dissatisfied (Mean difference = 1.28,  $P > 0.000$ ) and somewhat satisfied (Mean difference = 0.11,  $P > 0.000$ ) scored significantly lower than obese people who were satisfied with their marriage. Obese people with too many (Mean difference = 0.93,  $P > 0.000$ ) and average amount of marital problems (Mean difference = 0.63,  $P > 0.001$ ) scored significantly lower

than did people with few marital problems. In regard to marital relationship, the Levenes test for Homogeneity indicated a significant inequality of variance among the groups ( $f(3.422), 2, 95, p > 0.037$ ).

**The Psychological Acceptance and Consistency Subscale:** Obese females scored significantly lower than did obese males (3.53 vs. 3.78). Obese people from middle-class scored significantly lower than did people from moderate class (Mean difference = 0.34,  $P > 0.033$ ) and upper class (Mean difference = 0.53,  $P > 0.001$ ). Obese people who were dissatisfied (Mean difference = 0.76,  $P > 0.009$ ) and somewhat satisfied with their marriage (Mean difference = 0.44,  $P > 0.001$ ) scored significantly lower than people who were satisfied with their marriage. Obese people with a lot of marital problems scored significantly lower than did people with few amount of problems (Mean difference = 0.66,  $P > 0.004$ ). Also, obese people who had poor (Mean difference = 0.75,  $P > 0.003$ ) and average level of marital relationships (Mean difference = 0.38,  $P > 0.005$ ) scored significantly lower than people who had excellent marital relationships.

**The Sexual Adjustment Subscale:** Obese people who were dissatisfied with their marriage scored significantly lower than did people who were somewhat satisfied (Mean difference = 0.75,  $P > 0.027$ ) and satisfied with their marriage (Mean difference = 1.00,  $P > 0.001$ ). Obese people with a lot of marital problems scored significantly lower than did people with few amount of problems (Mean difference = 0.66,  $P > 0.006$ ). In regard to marital relationship, the Levenes test for homogeneity indicated a significant inequality of variance among the groups ( $f(3.514), p > 0.034$ ).

### **Marital Happiness VS. Demographic and Social Variables among Non-Obese People**

The analysis indicated significant differences in global marital happiness scale as a function of marital satisfaction ( $f(24.331), 2, 8.248, p? 0.000$ ), marital problems ( $f(28.741), 2, 9.180, p? 0.000$ ), and marital relationship ( $f(29.534), 2, 9.336, p? 0.000$ ). However, no significant differences were found in global Marital Happiness Scale as a function of all the demographic variables. Table (5) indicates the means, standard deviations,  $t$  and  $f$  values of the Marital Happiness scale and subscales based on demographics and social variables.

**Table 5: Means, Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Non-Obese People**

| Marital Happiness Subscales |                  |      |                  |      |                  |      |                  |      |
|-----------------------------|------------------|------|------------------|------|------------------|------|------------------|------|
| Variables                   | TPC              |      | PAC              |      | SA               |      | Global MHS       |      |
|                             | M                | SD   | M                | SD   | M                | SD   | M                | SD   |
| <b>Age</b>                  |                  |      |                  |      |                  |      |                  |      |
| Twenties                    | 3.41             | 0.64 | 3.08             | 0.49 | 3.13             | 0.48 | 3.23             | 0.49 |
| Thirties                    | 3.67             | 0.58 | 3.40             | 0.50 | 3.06             | 0.32 | 3.46             | 0.41 |
| Forties <                   | 3.62             | 0.67 | 3.23             | 0.61 | 3.12             | 0.55 | 3.38             | 0.54 |
| f (p) value                 | 1.367<br>(0.260) |      | 2.313<br>(0.104) |      | 0.150<br>(0.861) |      | 1.487<br>(0.231) |      |
| <b>Gender</b>               |                  |      |                  |      |                  |      |                  |      |
| Male                        | 3.61             | 0.61 | 3.17             | 0.45 | 3.07             | 0.45 | 3.35             | 0.41 |
| Female                      | 3.54             | 0.66 | 3.25             | 0.62 | 3.13             | 0.49 | 3.36             | 0.55 |
| t (p) value                 | 1.367<br>(0.260) |      | 2.313<br>(0.104) |      | 0.150<br>(0.861) |      | 1.487<br>(0.231) |      |
| <b>Education</b>            |                  |      |                  |      |                  |      |                  |      |
| High school <               | 3.54             | 0.51 | 3.14             | 0.49 | 3.17             | 0.43 | 3.32             | 0.38 |
| Diploma                     | 3.60             | 0.46 | 3.35             | 0.54 | 3.25             | 0.54 | 3.44             | 0.40 |
| Undergrad >                 | 3.56             | 0.76 | 3.20             | 0.59 | 3.02             | 0.45 | 3.32             | 0.58 |
| f (p) value                 | 0.057<br>(0.945) |      | 0.850<br>(0.431) |      | 2.234<br>(0.113) |      | 0.507<br>(0.604) |      |
| <b>Monthly Income</b>       |                  |      |                  |      |                  |      |                  |      |
| Moderate                    | 3.46             | 0.62 | 3.07             | 0.59 | 3.10             | 0.58 | 3.25             | 0.53 |
| Middle                      | 3.54             | 0.51 | 3.24             | 0.43 | 3.19             | 0.39 | 3.36             | 0.37 |
| High                        | 3.66             | 0.72 | 3.31             | 0.62 | 3.05             | 0.46 | 3.42             | 0.56 |
| f (p) value                 | 0.767<br>(0.467) |      | 1.561<br>(0.215) |      | 0.661<br>(0.519) |      | 0.946<br>(0.392) |      |
| <b>Number of Children</b>   |                  |      |                  |      |                  |      |                  |      |
| 3 <                         | 3.56             | 0.68 | 3.25             | 0.54 | 3.14             | 0.43 | 3.37             | 0.51 |

**Cont/ Table 5: Means, Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Non-Obese People**

| Marital Happiness Subscales |                  |      |                  |      |                  |      |                  |      |
|-----------------------------|------------------|------|------------------|------|------------------|------|------------------|------|
| Variables                   | TPC              |      | PAC              |      | SA               |      | Global MHS       |      |
|                             | M                | SD   | M                | SD   | M                | SD   | M                | SD   |
| 4 >                         | 3.58             | 0.59 | 3.19             | 0.58 | 3.07             | 0.53 | 3.34             | 0.48 |
| t (p) value                 | 0.124<br>(0.901) |      | 0.559<br>(0.577) |      | 0.720<br>(0.474) |      | 0.291<br>(0.771) |      |
| <b>Previous Marriage</b>    |                  |      |                  |      |                  |      |                  |      |
| One time                    | 3.60             | 0.67 | 3.21             | 0.51 | 3.20             | 0.52 | 3.38             | 0.52 |
| More than once              | 3.56             | 0.63 | 3.23             | 0.58 | 3.07             | 0.45 | 3.34             | 0.49 |
| t (p) value                 | 0.277<br>(0.783) |      | 0.115<br>(0.909) |      | 1.238<br>(0.219) |      | 0.320<br>(0.750) |      |
| <b>Marital duration</b>     |                  |      |                  |      |                  |      |                  |      |
| 5 <                         | 3.43             | 0.61 | 3.11             | 0.47 | 3.12             | 0.43 | 3.26             | 0.45 |
| 6-10 y.                     | 3.46             | 0.83 | 3.18             | 0.59 | 3.12             | 0.41 | 3.29             | 0.61 |
| 11 >                        | 3.69             | 0.55 | 3.30             | 0.59 | 3.10             | 0.53 | 3.43             | 0.46 |
| f (p) value                 | 1.758<br>(0.178) |      | 1.020<br>(0.364) |      | 0.013<br>(0.987) |      | 1.330<br>(0.269) |      |
| <b>Housemaid</b>            |                  |      |                  |      |                  |      |                  |      |
| Yes                         | 3.55             | 0.62 | 3.21             | 0.63 | 3.11             | 0.48 | 3.34             | 0.49 |
| No                          | 3.66             | 0.74 | 3.27             | 0.55 | 3.11             | 0.47 | 3.41             | 0.56 |
| t (p) value                 | 0.613<br>(0.541) |      | 0.328<br>(0.743) |      | 0.035<br>(0.972) |      | 0.493<br>(0.623) |      |
| <b>Childcare Support</b>    |                  |      |                  |      |                  |      |                  |      |
| Yes                         | 3.50             | 0.57 | 3.13             | 0.50 | 3.08             | 0.45 | 3.28             | 0.44 |
| No                          | 3.60             | 0.68 | 3.27             | 0.58 | 3.13             | 0.49 | 3.39             | 0.52 |
| t (p) value                 | 0.777<br>(0.439) |      | 1.156<br>(0.251) |      | 0.491<br>(0.625) |      | 1.019<br>(0.311) |      |

**Cont/ Table 5: Means, Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Non-Obese People**

| Marital Happiness Subscales      |                   |      |                   |      |                   |      |                   |      |
|----------------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|------|
| Variables                        | TPC               |      | PAC               |      | SA                |      | Global MHS        |      |
|                                  | M                 | SD   | M                 | SD   | M                 | SD   | M                 | SD   |
| <b>Husband/wife with obesity</b> |                   |      |                   |      |                   |      |                   |      |
| Yes                              | 3.48              | 0.63 | 3.23              | 0.54 | 3.00              | 0.44 | 3.30              | 0.51 |
| No                               | 3.64              | 0.65 | 3.22              | 0.59 | 3.20              | 0.49 | 3.40              | 0.49 |
| t (p) value                      | 1.234<br>(0.220)  |      | 0.075<br>(0.940)  |      | 2.021<br>(0.046)* |      | 1.009<br>(0.316)  |      |
| <b>Medical Problems</b>          |                   |      |                   |      |                   |      |                   |      |
| Yes                              | 3.50              | 0.65 | 3.22              | 0.58 | 3.05              | 0.53 | 3.31              | 0.52 |
| No                               | 3.61              | 0.64 | 3.22              | 0.54 | 3.15              | 0.44 | 3.38              | 0.48 |
| t (p) value                      | 0.789<br>(0.432)  |      | 0.001<br>(0.999)  |      | 1.019<br>(0.311)  |      | 0.622<br>(0.536)  |      |
| <b>Marital Satisfaction</b>      |                   |      |                   |      |                   |      |                   |      |
| Satisfied                        | 3.76              | 0.53 | 3.38              | 0.49 | 3.19              | 0.35 | 3.51              | 0.39 |
| Somewhat                         | 3.16              | 0.45 | 2.83              | 0.42 | 3.11              | 0.49 | 3.03              | 0.38 |
| Dissatisfied                     | 2.74              | 0.74 | 2.61              | 0.53 | 2.53              | 0.44 | 2.65              | 0.55 |
| f (p) value                      | 19.56<br>(.000)** |      | 16.12<br>(.000)** |      | 9.789<br>(.000)** |      | 24.33<br>(.000)** |      |
| <b>Marital Problems</b>          |                   |      |                   |      |                   |      |                   |      |
| A lot                            | 2.77              | 0.52 | 2.64              | 0.55 | 2.59              | .47  | 2.69              | 0.47 |
| Average                          | 3.32              | 0.40 | 3.03              | 0.41 | 3.01              | 0.33 | 3.15              | 0.32 |
| Very few                         | 3.85              | 0.59 | 3.44              | 0.51 | 3.26              | 0.46 | 3.59              | 0.42 |
| f value                          | 23.34<br>(.000)** |      | 15.38<br>(.000)** |      | 12.42<br>(.000)** |      | 28.74<br>(.000)** |      |
| <b>Marital Relationship</b>      |                   |      |                   |      |                   |      |                   |      |
| Excellent                        | 3.73              | 0.54 | 3.33              | 0.51 | 3.18              | 0.44 | 3.48              | 0.41 |

**Cont/ Table 5: Means, Standard Deviations, t and f Values of the Marital Happiness Scale and Subscales Based on Demographics and Social Variables among Non-Obese People**

| Marital Happiness Subscales |                   |      |                   |      |                   |      |                   |      |
|-----------------------------|-------------------|------|-------------------|------|-------------------|------|-------------------|------|
| Variables                   | TPC               |      | PAC               |      | SA                |      | Global MHS        |      |
|                             | M                 | SD   | M                 | SD   | M                 | SD   | M                 | SD   |
| Average                     | 3.01              | 0.11 | 2.85              | 0.21 | 3.00              | 0.30 | 2.95              | 0.15 |
| Poor                        | 2.48              | 0.42 | 2.43              | 0.37 | 2.50              | 0.50 | 2.47              | 0.35 |
| f (p) value                 | 26.50<br>(.000)** |      | 15.19<br>(.000)** |      | 9.921<br>(.000)** |      | 29.53<br>(.000)** |      |

Note. The total sample is 98. \*  $p > 0.05$ ; \*\*  $p > 0.0001$ ; (TPC) Trust and Psychological Comfort; (PAC) Psychological Acceptance and Consistency; (SA) Sexual Adjustment

By using the Levenes test, the analysis revealed no significant variances among the groups of marital satisfaction ( $f(1.687, 2, 95, p < 0.191)$ ), marital problem ( $f(1.791, 2, 95, p < 0.172)$ ) and marital relationship ( $f(2.905, 2, 95, p < 0.060)$ ). The analysis of Tukey post-Hoc test indicated that there was a significant mean difference between non-obese people who were dissatisfied (Mean difference = 0.85,  $p < 0.000$ ) and somewhat satisfied (Mean difference = 0.48,  $p < 0.000$ ) and people who were satisfied with their marriage in favor of the last group. A significant mean difference was also found between people who had a lot of marital problems and average amount of marital problems (Mean difference = 0.46,  $p < 0.004$ ) and few marital problems (Mean difference = 0.89,  $p < 0.000$ ) in favor of the last group. Further, the analysis revealed significant mean difference between people who had poor (Mean difference = 1.01,  $p < 0.000$ ) and an average level of marital relationship (Mean difference = 0.53,  $p < 0.006$ ) and people who had an excellent marital relationship in favor of the last group.

Further analysis was conducted to investigate the mean differences of the Marital Happiness subscales based on the afore mentioned variables. A significant effect was only found for Marital satisfaction, Marital problems and Marital relationship in relation to the Marital Happiness subscales: Trust and Psychological Comfort, Psychological Acceptance and Consistency and Sexual Adjustment. Each of these

effects is discussed below using the analysis of Tukey's test and the means presented in Table 5.

**The Trust and Psychological Comfort Subscale:** Non-obese people who were dissatisfied (Mean difference = 1.01,  $p < 0.000$ ) and somewhat satisfied (Mean difference = 0.59,  $p < 0.001$ ) scored significantly lower than did non-obese people who were satisfied with their marriage. Non-obese people with a lot (Mean difference = 1.07,  $p < 0.000$ ) and average amount of marital problems (Mean difference = 0.52,  $p < 0.001$ ) scored significantly lower than did non-obese people with few marital problems. In regard to marital relationship, the Levene's test revealed significant inequality of variance among the groups ( $f(5.157), 2, 95, p < 0.007$ ).

**The Psychological Acceptance and Consistency Subscale:** Obese people who were dissatisfied (Mean difference = 0.77,  $p < 0.000$ ) and somewhat satisfied with their marriage (Mean difference = 0.54,  $P < 0.001$ ) scored significantly lower than did people who were satisfied with their marriage. Obese people with a lot of marital problems scored significantly lower than did people with few problems (Mean difference = 0.66,  $p < 0.004$ ). Also, obese people who had poor marital relationships scored significantly lower than did people who had excellent marital relationships (Mean difference = 0.89,  $p < 0.000$ ).

**The Sexual Adjustment Subscale:** Non-obese people who were dissatisfied with their marriage scored significantly lower than did people who were somewhat satisfied (Mean difference = 0.58,  $p < 0.005$ ) and satisfied with their marriage (Mean difference = 0.65,  $p < 0.000$ ). Non-obese people with too many (Mean difference = 0.67,  $p < 0.000$ ) and average amount of marital problems (Mean difference = 0.25,  $p < 0.026$ ) scored significantly lower than did non-obese people with few problems. Also, non-obese people with poor marital relationship scored significantly lower than did non-obese people with excellent marital relationships (Mean difference = 0.68,  $p < 0.000$ ).

#### **(4) The Effect of Predictor Variables on Marital Happiness among Obese and Non-obese People Predictors and Marital Happiness among Obese People**

A Stepwise -Regression model was used to explore the predictor variables (demographics and social variables as independent variables) that had the most effect on the global Marital Happiness scale

(dependent variables) among obese people. A total of 4 out of 13 predictor variables had a significant correlation with the Global MHS ( $f(19.302, 4, 12.595, p < 0.000)$ ) with 45% of variance.

The results indicated that there were moderate positive correlations between the variables; Husband/wife with obesity ( $B = 0.304, p < 0.001$ ) and Marital satisfaction ( $B = 0.426, p < 0.001$ ) and the global Marital Happiness. It was also found that there were weak negative correlations between the variables related to the Number of children ( $B = -0.067, p < 0.011$ ), Marital problems ( $B = -0.226, p < 0.003$ ) and the Global Marital Happiness.

### **Predictors and Marital Happiness among Non-obese People**

A total of 2 out of 13 predictor variables had significant correlations with Global Marital Happiness Scale ( $f(56.660), 2, 13.246, p < 0.000$ ) with 54% of variance. The analysis revealed strong positive correlation between Marital relationship and the Global Marital Happiness ( $B = 0.508, p < 0.000$ ). Also, moderate negative correlation was found between Marital problems ( $B = -0.316, p < 0.000$ ) and the Global Marital Happiness.

### **(5) The Interrelationship between Marital Happiness and Weight among Obese and Non-obese People**

In order to investigate the effect of marital happiness on weight, the Global Marital Happiness was first used in the Regression Model as an independent variable, and weight was used as a dependent variable. In contrast, in order to investigate the effect of weight on marital happiness, the Global Marital Happiness was used as a dependent variable, and weight was used as an independent variable. The Regression analysis indicated no significant effect of the global marital happiness on weight for the obese groups ( $f(1.500), 1, 21.014, p = 0.224$ ), and non-obese groups ( $f(0.063), 1, 7.128, p = 0.803$ ). Also, no significant effect was found of weight on the global marital happiness among obese people ( $f(1.500), 1, 0.375, p = 0.224$ ), and non-obese people ( $f(0.063), 1, 0.018, p = 0.803$ ). This means that neither the degree of marital happiness is likely to predict weight, nor weight is likely to predict marital happiness among obese and non-obese people.

## **Discussion**

### **Marital Happiness and Predictor Variables**

Marital happiness and its relationship with demographics and social variables among obese and non-obese people in Kuwait were thoroughly examined in this study. The results provided evidence that neither weight brought happiness in marriage nor did happiness in a marriage help in reducing weight. Although some of the results did not provide preliminary support for the hypothesis that marital happiness contributes to weight loss, the results support the necessity of focusing on social and environmental factors that contribute to happiness in marriage rather than focusing on weight.

The findings support the hypothesis that the less prevalence of overweight among a social group, the more detrimental the effects are on marital happiness. Similarly to previous studies (Weller & Dziegielewski, 2005; Jeffery & Rick, 2000), the current study found that being obese and having a non-obese spouse was a potential indicator of unhappy marriage. However, being non-obese and having a spouse with or without obesity was not found to be an indicator of happiness in the marriage. Previous research has shown that for obese people, being with an obese spouse has a significant effect on the marital relationship, romantic relationship and self-support. The degree of anxiety and image disturbance associated with physical appearance might be lower because the spouses share important characteristics with each other (e.g., body size, food habits, activities) (Carr & Friedman, 2006) and receive self and partner support (Weller & Dziegielewski, 2005).

Furthermore, the findings indicated that marital dissatisfaction predicted marital unhappiness among obese people but not among non-obese people. Perhaps the marital dissatisfaction associated with marital unhappiness among obese people is related to the increase of weight during the marriage and the loss of attractiveness. Although the present study did not determine the time at which obesity occurred, a longitudinal study of 169 newly wed couples has shown that a decline of marital satisfaction is related to the increase of both spouses weight during the marriage (Meltzer et al., 2013). It has been suggested that spouses who gain weight might not be as attractive as their partners perceive. The loss of attractiveness might negatively affect the degree of

marital satisfaction and in turn reflect unhappiness in the marriage. This finding challenges the idea that the quality of the marital relationship affects well-being (e.g., Kiecolt—Glaser & Newton, 2001) and suggests instead that satisfaction with the marital relationship affects well-being and is an important motive for maintaining happiness in a marriage. The effect of marital satisfaction on marital happiness was true for only the obese group and not for the non-obese group.

Our results also indicated that the more children obese people had, the less happy they were with their marriage. This finding was found for the obese group rather than the non-obese group. Previous research conducted on Western and non-Western samples (Onyishi, et al., 2012; Margolis & Myrskyl?, 2011;McLanahan, 1987) has documented that having more children in a family decreases the level of marital satisfaction and happiness among parents (Rostami et al., 2014; Rostami et al., 2013). The present study showed that the universality of this finding is probably limited in Kuwait to obese parents and does not apply to the general population of parents. A subjective factor such as self-efficacy may mediate the relationship between the number of children in the family, marital happiness, and obesity. Obese people, unlike their non-obese peers, experience difficulties engaging in physical activity, owing to their weight and medical health conditions (Dombrowski et al., 2012). Caring for more children and having difficulties engaging in physical activity might negatively affect obese peoples self-efficacy (their belief in their ability to engage successfully in physical activity with their children) (Olander et al., 2013). Prior studies have found that self-efficacy is associated with psychological well-being and happiness (Dogan et al., 2013). Because obese individuals believe that they are unable to engage in physical activity, their partners may carry on the full responsibility of childcare, which may add strain and affect the marital relationship and the spouses happiness.

Finally, the results showed that marital problems may predict marital happiness among obese and non-obese people. The more problems a marital relationship had, the less happy were the spouses with their marriage. However, because these results were found among obese and non-obese groups, it might be concluded that marital problems are significant in predicting marital happiness for married individuals in general and not only for obese people. Additionally, the interpretation of

the results may not be related to weight and its related conditions but rather to marital life and its effect on subjective well-being.

### **Marital Happiness and Demographics**

The results provide evidence that obese people, unlike their non-obese peers, are in urgent need for intervention related to marriage. When comparing obese and non-obese people, it was found that obese people were less happy in their marriages than non-obese people. In particular, the relationship between obese people and their spouses was characterized by a lack of psychological acceptance and consistency and was sexually unadjusted, as compared with the non-obese people. As found in previous studies (Galinsky & Waite, 2014; Robles et al., 2014; Macias et al., 2004), obese people were more likely to be less happy in their marriages. However, unlike other studies, the present study found that obesity itself does not appear to be the main factor related to happiness in marriages. Instead, unhappy marriages, as described in the literature (Pearce et al., 2002), might be due to the society's response to or to the stigmatization of those who were different from what is seen as "normal." The stigmatization of weight may lead spouses to interact negatively toward their obese partners, which in turn may lead obese people to feel psychologically unaccepted. The stigmatization may also lead obese people to compare themselves to others with "normal" body size and feel inadequate, which in turn may lead obese people to feel sexually unadjusted.

The present study also strengthens the argument found in the literature that obese people, unlike non-obese people, experience difficulties in their relationships with their spouses. Consistently with the results of previous studies (e.g., Boyes & Latner, 2009; Koch et al., 2004; Pearce et al., 2002; Wiederman & Hurst, 1998), it was found that obese people, mainly women, were more unhappy with their marriages than men. In particular, there was mistrust and psychological discomfort in the relationships between obese Kuwaiti females and their spouses. There was also a lack of psychological acceptance and consistency in their mutual relationships. These findings were absent in the non-obese people. Non-obese men and women did not differ in their perceptions of marital happiness in general and in the three studied domains (trust and psychological comfort, psychological acceptance and consistency, and sexual adjustment).

It is likely that obese females who perceived their relationships with spouses as being less warm and trustworthy were negatively evaluated by their mate, which might have affected their feelings of happiness in marriage. Prior research (i.e., Boyes & Latner, 2009; Regan, 1996) has found that men tend to view obese partners more negatively than they view non-obese partners. These men's views of obese partners derive from their perceptions of partner match/mismatch with their ideals of attractiveness and what constitutes a "nice body." These two ideals in men have been found in previous studies to be strongly correlated with the quality of the marital relationship. Obese females with lower mate value may view themselves negatively and have poor quality marital relationships, which in turn may affect the perceptions of happiness in marriage. It has also been found that weight stigma is generally directed at women (Markey et al., 2004; Puhl & Brownell, 2001), and depressive symptoms related to weight are also found more for females (Needham & Crosnoe, 2005), which in turn may reflect the unhappiness in marriage among obese females rather than males.

The findings also shed light on the significant effect of economics on marital happiness. It was found that obese people with moderate income were less happy with their marriages than obese people with low or high incomes. This finding seemed to be specific for the obese group and not for the non-obese groups with low, moderate or high incomes. Previous research (Katsaiti, 2011) has found that income in some countries (i.e., Australia and Germany but not in the United Kingdom) is positively related to happiness. It has been suggested that the association between income and happiness is mediated by self-control of food consumption (Stutzer, 2007). People, for example, who feel unable to control their food consumption are more likely to spend more money buying and eating more food. These people might suffer from both gaining extra weight and adding strain on the family budget. Obese Kuwaitis of moderate income, compared with their peers with low income, may not experience a lack of money but may have financial management difficulties derived from spending more money on food as well as added strain on the family budget, which in turn may affect spousal relationships and reflect marital unhappiness.

The results also showed that obese and non-obese people perceived marital happiness differently based on their levels of marital satisfaction

and marital problems. Married people (obese and non-obese individuals) who were dissatisfied with their marriage and had many marital problems were less happy in marriage than married people who were satisfied and had fewer marital problems. Because these results were found for obese and non-obese people, it might be concluded that married people who are dissatisfied with their marriage and have many marital problems would experience difficulties in their relationships and feel less happy in marriage. However, precaution must be taken when using these results for future intervention plans. These results were not found specifically for obese people but rather for the general population of married people.

### **Suggestions and Recommendations**

Based on our results, it may be concluded that the sum of the pains is more than the pleasures in obese peoples marital lives. The inequality between pains and pleasures might be seen as bad because it negatively affects the marital happiness of obese people. Social workers and mental health professionals need to focus their work on targeting obese people in hospitals and elsewhere because it was found that obese people feel unhappy with their marriages more than do non-obese people. Social workers and mental health professionals should shift their work from focusing on decreasing weight through dieting programs to engaging obese people in relationship enhancement programs to help obese people have better relationships with their spouses, feel satisfied with their marriages and enhance their happiness and well-being.

Social workers need to be trained by joining programs that include psycho-educational components (e.g., The Relationship Enhancement Model) (Scuka, 2016) to help obese people learn new techniques that can be used for effective communication with their spouses. In particular, obese females should learn expressive and empathic skills that help them engage effectively with their spouses in a dialogue and be able to address their marital problems with less anxiety, more trust, openness and high emotional security.

Social workers should also focus on obese people who have moderate income. Obese people could be provided with programs that enhance their self-control of food consumption and increase their knowledge about financial issues and financial planning. Such programs can result in improved performance in changing food habits and

household budgeting practices and can help to increase saving and happiness in marriages (Anderson et al., 2004).

Additionally, attention must be directed to obese people with more children to ensure future marital stability. Obese people with more children should be encouraged to engage in training programs that help enhance their parental self-efficacy and change their physical activity behavior. Programs focusing on techniques, such as action planning, time management and self-monitoring of behavioral outcome and social support plans can produce significant positive changes in an obese individuals behavior toward promoting physical activity (Olander et al., 2013). More attention must also be directed to obese people who have non-obese spouses. Social workers could work with these groups and focus on increasing their awareness of the importance of participating in workshops that aim to foster mutual understanding, compassion, and support. Such programs would help obese people initiate a dialogue with their non-obese spouses about their feelings, concerns and desires and allow their spouses to better understand their experiences in married life.

Finally, it is important to be aware that the present findings are limited to a small sample of obese Kuwaitis (98 obese people). Further research is needed to select a larger sample size to generalize the results to the total population. Additionally, more research is needed to investigate factors that may mediate the relationship between marital happiness and obesity, such as self-control level, self-efficacy, physical activity behavior, the time of occurrence of obesity, and social support.

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