

# LIFESTYLE PERCEPTIONS AMONG MIDDLE – AGED OBESE WOMEN

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## ABSTRACT

*Background.* The aim of the study was to establish the perceptions of lifestyles among middle-aged obese women.

*Methods.* Data collection method was semi-structured face-to-face interview. Interview guide was based on short form 36 (SF-36), long form of IPAQ and previous research (Bukman et al., 2014).

*Results.* All obese women of our study feel inferiority complex due to their physical appearance, feel dissatisfied with themselves trying to hide their appearance, discomfort, and disadvantages. They have a lot of health problems: joint pain, increased cholesterol level, increased blood pressure, heart beat rate, dyspnoea, as well as chronic diseases such as type 2 diabetes, thyroid gland dysfunction and sleep disorders. All the subjects both had poor eating habits and ate inadequate food. Some of the participants ate a lot before bedtime and skip breakfast. The physical activity is limited and reduced of all subjects.

*Conclusions.* The relationship between excess weight and psychological well-being is complex, encompassing physical, social and psychological factors. All obese women of our study feel inferiority complex due to their physical appearance, dissatisfied with themselves. They complained of cardiovascular problems, sleep disorders and chronic diseases. The physical activity was limited and decreased. Also, such a great weight excess caused a discomfort in their daily life. Obese women in our study negatively view smoking effects, but they tolerate or even have positive attitudes to alcohol consumption, though they acknowledge that alcohol increases their weight. Malnutrition is most common problem of our respondents. They both had poor eating habits and ate inadequate food. Some of the participants ate a lot before bedtime and skip breakfast. A lot of participants reported about their negative attitude to their diet, but this attitude did not always act like a stimulus to change. Most of respondents could not find the time or motivation to engage in the adequate physical activity. They wanted to increase their physical activity, but found excuses not to do that – their excess of weight, lack of time, as well as laziness, passivity - the main causes of their inactivity or poor physical activity.

**Keywords:** obesity-related health problems, lifestyle perceptions, adequate physical activity.

## INTRODUCTION

Physical activity carries immediate and long-term benefits for middle-aged and older women; however, physical activity in women decreases in adulthood and aging. Despite an increasing prevalence of obesity and inactive lifestyle among the middle aged population, few studies have examined people's perception of

body weight and lifestyle in this population. As an appropriate perception of one's own weight is important for improved weight control and healthy lifestyle behaviour (Bukman et al., 2014), understanding people's perception will help in designing educational and intervention programs to address these problems.

Nowadays the worldwide prevalence of obesity nearly tripled since 1975 (WHO, 2017). Obesity becomes worldwide epidemics; it is one of the biggest risk factor for a huge number of non-communicable diseases, as diabetes, cardiovascular diseases and various types of cancer. These unhealthy conditions are associated with greater use of health care services among obese patients. The risk for these non-communicable diseases increases, with increases in BMI (Bleich, Bennett, Gudzone, & Cooper, 2012). Weight gain is a major health anxiety for all adults because weight gradually increases at a rate of about 0.5 kg/year. It is a particular concern for women in their midlife. Obesity is various and increased risk of premature death, decreased quality of life and caused chronic diseases, such as cardiovascular diseases, diabetes and musculoskeletal disorders. Also, obesity has an impact on women's reproduction, menstrual cycle and menopause (Lobo et al., 2014). In women, obesity is a risk factor for breast cancer and it also increases the risk of depression mostly as a result of poor body image (Sutin & Zonderman, 2012).

The best ways to reduce obesity rates is to work with persons at the individual level; the main responsibilities go to professionals who work with individuals as personal trainers, lifestyle and physical activity professionals, also family doctors and others. The interventions such as limiting energy intake from total fats and sugars, increasing consumption of fruit and vegetables, as well as legumes, whole grains and nuts; and engaging in regular physical activity (60 minutes a day for children and 150 minutes spread through the week for adults) is the best way to decrease obesity in any age group (WHO, 2016). The accuracy is very important in all these interventions, firstly, the professionals must correctly evaluate the previous behaviours of the individuals, create adequate plans and programs for a lifestyle change. It is known that women tend to evaluate and percept their physical activity and nutrition habits wrongly, people tend to think, that they are physically active enough, and that their nutrition habits are healthy, even though the reality it is different (Edwards, Pettingell, & Borowsky, 2010). In studies that use questionnaires persons tend to produce socially acceptable answers, sometimes they misunderstand questions or even to lie, and questionnaires with multiple choice answer options do now allow respondents to show their perceptions, feelings

or ideas. For those reasons the best way to carry out a study about women's perceptions of physical activity is a face-to-face interview method because there many different answers can be obtained and collected. Besides, interviews allow us to collect non-verbal data, the interviewer can ask follow-up questions to evoke a more thorough response, which leads to more detailed and thorough data.

The *aim* of the study was to establish the perceptions of lifestyles among middle-aged obese women. Research objectives were to establish the perceived relationship of overweight and obesity with the quality of life and health in obese middle-aged women, the perceptions of harmful habits in relationship with overweight and obesity in obese middle-aged women, the perceptions of nutrition in relationship with overweight and obesity in obese middle-aged women and the perceptions of physical activity in relationship with overweight and obesity in obese middle-aged women.

## METHODS

The object of this research was obese middle-aged women's lifestyle perceptions. **Research participants** were 15 middle aged women purposefully selected using a typical case convenience sampling strategy.

Inclusion criteria to select participants were as follows:

- Women aged 45–65 years,
- BMI – 30 kg/m<sup>2</sup> or more,
- Formally physically inactive,
- Volunteers to participate in the study,
- Living in Kaunas city.

All participants were from Kaunas. Their age ranged from 45 to 65 years.

**Data collection** method was semi-structured *face-to-face interview*. Interview guide was based on previous research (Bukman et al., 2014) also referring to the short form 36 (SF-36) and long form of IPAQ. SF-36 is the most widely used generic self-report health questionnaire, which is based on a multidimensional model of health (Ware, 2000). The scale assesses health related quality of life outcomes, known to be most directly affected by unspecific disease and treatment. Long form of international physical activity questionnaire (IPAQ) assesses the types of intensity of physical activity and sitting time that people do as part of their daily lives are considered to estimate total

physical activity in MET-min/week and time spent sitting (IPAQ Research Committee, 2005).

Interview was constructed in five parts: contextual information, questions about life quality, habits, nutrition behaviours and physical activity status.

**Research organization.** Research was held in October–November 2017. The participants were selected according to the criteria: middle aged women, obese. According to the *Oxford English Dictionary* (2016), middle age is between 45 and 65. For adults, WHO (2017) defines overweight and obesity as follows: obesity is a BMI greater than or equal to 30. The participants were volunteers from Kaunas city that matched the inclusion criteria. The participants that agreed to participate in the study were asked to sign in an informed consent form. The respondents were informed about confidentiality and anonymity; also they were acquainted with the research topic and methods. In the investigation, 15 participants (middle-aged obese women) were interviewed (BMI more or equal to 30) face-to-face. The semi-structured interviews were held in the Hospital of Lithuanian University of Health Sciences Kauno Klinikos. The respondents were hospitalized due to obesity-related diseases. The time and location of the interviews were determined by the participants themselves. The interviews lasted approximately 1–1.5 hours. After interviewing all participants, the information was transcribed, the interview data were analysed and discussed.

**Data analysis.** The results of the research were processed using a qualitative data analysis method (content analysis) (Bitinas et al., 2008). All the data were empirically gathered on respondents' experiences. The data analysis was started by taking the research data (interview), looking for meaningful interfaces, the data were grouped, regrouped, searched for common, similar categories, after which those categories were linked, visual models and tables were created.

## RESULTS

**Perceived relationship of overweight and obesity with the quality of life and health in obese middle-aged women.** Analysing interviews with respondents about their health and quality of life, it emerged that those obese women felt inferiority

complex due to their physical appearance, denied their body weight, and therefore identified problems in work and daily activities due to their overweight or obesity. By analysing the answers of interviews about their physical health, we found that the subjects complained of poor health, joint pain, increased cholesterol level, increased blood pressure, heart beat rate, dyspnoea, as well as chronic diseases such as type 2 diabetes, thyroid gland dysfunction and sleep disorders. Also, the participants admitted that increased body weight limited their physical work and lowered the level of their physical activity – they were frustrated by a higher physical load, it was difficult to climb upstairs, some of them could not walk for more than 10 minutes. However, the majority of them took great care of themselves: women could go shopping, carry packs, and have a bath without any problem. They also tried to walk as much as possible, climb up to several floors, but the third and the fourth floor caused difficulties and breathlessness for them. However, what was very interesting to hear was that women enjoyed life, and they lived every day with a smile.

The perceived relationship of overweight and obesity with the quality of life and health is given in Table 1.

**Perceptions of harmful habits in relationship with overweight and obesity in obese middle-aged women.** The assessment of harmful habits given in Table 2. All participants agreed that smoking had a particular impact on women's health and aesthetic appearance. However, a big part of participants of the study revealed a sufficiently positive view on alcohol consumption. Only one woman said that "Alcohol is in fact puts on weight <...>". One more lady also had a very negative opinion about alcohol's harmful effect on women's health. The majority of respondents drink alcohol very rationally, only 1–2 cups of wine during celebrations, but for the others, alcohol is a kind of relaxation after a week's work.

**Perceptions of nutrition in relationship with overweight and obesity in overweight and obese middle-aged women.** By analysing interview respondents' responses about their diet, we found that most of them consumed unhealthy food. Malnutrition was the most common problem of our respondents. *Malnutrition* is a serious condition that occurs when a person's diet does

Table 1. Overweight and obesity trigger health and lifestyle problems

Category	Subcategory	Examples
Physical problems	Diseases	<p>“Asthma, bronchitis.”</p> <p>“&lt;...&gt; increased sugar, glycaemia.”</p> <p>«&lt;...&gt; diabetes.»</p> <p>„&lt;...&gt; because of the thyroid gland dysfunction heart rate is increased, high pressure, overweight.“</p> <p>„&lt;...&gt; troubles with joint pain.“</p>
	Cardiovascular problems	<p>„&lt;...&gt; blood pressure is high, so breathlessness appears very quickly &lt;...&gt;.“</p> <p>„&lt;...&gt; increment of heart beat rate &lt;...&gt;.“</p> <p>„Increased blood pressure &lt;...&gt;.“</p>
	Sleep disorders	<p>„The sleep quality is so so &lt;...&gt;.“</p> <p>„Sleep quality becomes worse every year with age &lt;...&gt;.“</p> <p>„&lt;...&gt; I have sleep dysfunction &lt;...&gt;.“</p> <p>„I sleep poorly enough, restlessly; maybe those two cups of coffee and tea before bedtime affect my sleep.“</p> <p>„&lt;...&gt; sometimes I wake up in the night due to my spine, neck pains, sometimes it goes away, then I sleep better.“</p>
	Decreased physical fitness	<p>„When there is an elevator I use it...“</p> <p>„&lt;...&gt; I don't lift any packages now ...</p> <p>„&lt;...&gt; I can go upstairs till the third floor.“</p> <p>„&lt;...&gt; I cannot walk now.“</p> <p>„It's a bit harder for me to put on socks.“</p>
	Limited level of physical activity	<p>„&lt;...&gt; I can lift up hard things/packages, but not running, not any sport, because joint pain doesn't allow me.“</p> <p>„&lt;...&gt; my physical activity decreased by weight change.“</p> <p>„I will try to lift package up to 10 kg, no more.“</p> <p>„&lt;...&gt; It is necessary for me to climb up to the third floor or above, and sometimes it is really difficult.“</p>
Psychological problems	Negative evaluation of the body mass	<p>“My weight is horrible; It is double &lt;...&gt;.”</p> <p>„I would like to reduce it, it would be easier to move and live.“</p> <p>„&lt;...&gt; I would like to weigh less ...“</p> <p>„&lt;...&gt; I am not satisfied with such weight &lt;...&gt;.“</p>
	Inferiority complex	<p>„ &lt;...&gt; when you see others being slimmer, more beautiful, healthier, I also want to look like them.“</p> <p>„&lt;...&gt; my weight always bothered me, especially during communication with other people, during some kind of gatherings, that minute I would like to have a weight of at least 100 kg.“</p> <p>„&lt;...&gt; aesthetic attitude is very important for me, but overweight disturbs it.“</p> <p>„Having weight affects my self-esteem, it is less now, the sense of satisfaction is lower, the possibilities lower &lt;...&gt;.“</p>
Social problems	Problems at work	<p>„&lt;...&gt; Especially if there is a stress situation in work, I think it is also related to my weight ...“</p>
	Problems in daily activities	<p>„&lt;...&gt; mobility has diminished, my whole youth I was active, and now the weight has grown up, so now I am sedentary.“</p> <p>„&lt;...&gt; Such big overweight causes discomfort in daily life – it is hard to move, to lift something, to dress up.“</p> <p>„Of course it's hard to do usual activities at home...“</p>

Table 2. Perception of harmful habits

Category	Subcategory	Examples
Smoking	Negative effect on the health	<p>„&lt;...&gt; smoking is stifle ... harmful to health.“</p> <p>„&lt;...&gt; everyone knows that smoking is not good, but probably it is a way to escape from the troubles.“</p> <p>„&lt;...&gt; it is especially harmful to health, especially for all young people.“</p>
	Negative effect on physical appearance	<p>„&lt;...&gt; the voice is stuttered, the face darkened.“</p> <p>„Woman’s face becomes aged earlier.“</p>
Alcohol	Sufficiently positive view on alcohol consumption	<p>„Moderately. I use it during the holidays, but not every day.“</p> <p>„&lt;...&gt; Rational alcohol consumption will not harm.“</p> <p>„&lt;...&gt; if you work hard all week, you can have some wine during the weekend.“</p> <p>„&lt;...&gt; Alcohol at certain doses is nothing terrible.“</p> <p>„&lt;...&gt; Rational consumption is permissible, but you should to know a measure.“</p> <p>„I use, usually wine, but only on trips, during Christmas, New Year, it’s a cup one, really no more. Traveling is just about exciting.“</p> <p>„&lt;...&gt; it all depends on the amount, when and how much, if there is a birthday or a new year, dry wine, champagne, cup, two are positive effect.“</p> <p>„... and alcohol, as much as I use, it’s a positive thing to me. When you need to work I use brandy, if I want sleep, I drink a glass of wine.“</p> <p>„I think this is bad, and I do not believe in the benefits when it’s said that a small dose is good, but I don’t restrict myself and I suspect that drinking alcohol will not harm &lt;...&gt;.“</p>
	Negative effect on physical appearance	<p>„Alcohol puts on weight ...“</p> <p>„It is a terrible thing, especially for women, alcohol.“</p>

not contain the right amount of nutrients. Some participants indicated that they were trying to use healthy food – in summer they consumed more vegetables, drank water, cooked at home, some subjects had regular meals, at certain intervals and in appropriate quantities. But the others tended to use high-calorie foods, consumed them in the evening very often. We also found that most respondents at a lot of confectionery, unhealthy fats, added a lot of sugar to coffee and salt to food while cooking. Most participants reported about their negative attitude to their diet, but this attitude did not always act as a stimulus to change. Some women revealed that they had already tried a lot of weight loss methods, but they all were still unsuccessful. The nutritional characteristics of the participants are presented in Table 3.

**Perceptions of physical activity in relationship with overweight and obesity in obese middle-aged women.** Analysing participants’ responses about their physical activity, it was found that obese women spent much time sitting on weekdays as well as at weekends. They often spent weekends sleeping and watching TV. All the subjects of the study admitted that their physical condition was poor; they wanted to be more physically active. They remembered that they were active enough in their youth, but now, most of them were passive and the only reason for this was their overweight. Most of the subjects said they wanted to increase their physical activity, but they found excuses not to do it – overweight, obesity, lack of time, as well as laziness, passivity were the main causes of their inactivity or poor physical activity.

Table 3. Obesity and nutrition

Category	Subcategory	Examples
Day time meals	Not eating breakfast	<p>„Never eat breakfast &lt;...&gt;.“</p> <p>„&lt;...&gt; I do not have breakfast because I do not want to eat in the morning.“</p> <p>„Usually I don't eat any food in the morning &lt;...&gt;.“</p> <p>„I miss my breakfast &lt;...&gt;.“</p>
	Junk food	<p>„It happens that all day I do not eat anything at all, and when return in the evening, &lt;...&gt; I'm hungry and then I eat a lot &lt;...&gt; I have a lot of snack sitting near the TV or reading book.“</p> <p>„&lt;...&gt; My diet is not always healthy, I eat pizza in cafes, and also I buy some fast food going out somewhere.“</p> <p>„... back in the evening after a day's work, I will not lie, I eat a lot, I eat a lot of pasta with rissoles.“</p> <p>„Usually there are sandwiches during my dinner, and my dinner is very satisfying.“</p>
Unhealthy ingredients	“Unhealthy” fats	<p>„Refined oil anyway, butter.“</p> <p>„&lt;...&gt; I really love mayonnaise, and I use it.“</p> <p>„I like to cook on butter, and on oil, sunflower oil.“</p> <p>„&lt;...&gt; butter and oil basically.“</p> <p>„&lt;...&gt; rapeseed oil is so optimal for me. Of course, and butter.“</p>
	Sugar to coffee	<p>„&lt;...&gt; I consume a lot of sugar I put it to the tea and coffee.“</p> <p>„I put at least two teaspoons to tea or coffee, and I drink coffee and tea 3–4 times a day.“</p>
	Added salt	<p>„Yes, I really like salt. ... I use salt a lot.“</p> <p>„&lt;...&gt; I do not eat without enough salt.“</p> <p>„I use salt a lot, in every meal &lt;...&gt;.“</p>
	Sweets drinks/ sweets	<p>„I eat sweets every day &lt;...&gt;.“</p> <p>„&lt;...&gt; I am dependent on sweets &lt;...&gt;.“</p> <p>„... I eat sweets, cakes, I like them, I buy a couple of times for a week or a cake, or a biscuit or a doughnut.“</p> <p>„I like sweets &lt;...&gt; I can eat another half a week in a week, and I cannot eat at all.“</p>
Eating behaviours and their assessment	Negative evaluation of nutrition	<p>„Ordinary nutrition, &lt;...&gt; I should eat more in the first half of the day, because I have a greater physical activity, and in the evening I should eat less, &lt;...&gt; but I do not do it.“</p> <p>„&lt;...&gt; I eat too little vegetables, meat and sweets too much, I do not think that I eat healthily ... but relatively healthily because I am preparing myself ...“</p> <p>„I would not say that my diet is healthy, because I like to eat potato pancakes ...“</p> <p>„I do not, but I try. &lt;...&gt; I would like to give up flour dishes.“</p> <p>„I do not think that I eat very well ... because of the presence of sweets ...“</p> <p>„Negative, because I don't have any purpose.“</p>
	Trying to change eating behaviours	<p>„&lt;...&gt; I have tried all diets as many times as possible.“</p> <p>„I've tried, of course. And then, when weight decreases a little, I reward myself with tortillas, roast, sausage, coffee and sweets.. and then the whole cycle screws up.“</p> <p>„I tried, but it was a short-term effect, &lt;...&gt; you should simply shift the intensity of the eating to the first part of the day, and in the second half of the day, &lt;...&gt; reduce portions, don't eat snacks &lt;...&gt;.“</p> <p>„&lt;...&gt; I went to a dietitian, she gave me recommendations, I asked for advice &lt;...&gt; I started to be more active &lt;...&gt; but it was not enough. My daughter is little enough, I can't walk 10 km with her, my husband works, and I'm with the child without any additional help. It seems to me that I do not do enough for my health; I need to eat healthier and to be more active. „</p> <p>„I would like to cut down on sweets; I tried to do it, but not successfully. It's just a wrong habit.“</p> <p>„I want to eat more vegetables and fruits. Fruits should be eaten in the morning, and I want to eat them in the evening, but then blood sugar increases. I would like to have more vegetables in the diet, we need more vegetables, and I try, but not always successfully.“</p> <p>„&lt;...&gt; I would like to change &lt;...&gt; snacks are the biggest problem for me.“</p> <p>„&lt;...&gt; I try often, almost every month, sometimes success smiles at me.“</p>

Table 4. Perceptions of lifestyle and physical activity in relationship with obesity

Category	Subcategory	Examples
Sedentary lifestyle	Long-time sitting on weekdays	<p>„Sometimes I have to sit more than 6 hours a day &lt;...&gt;.“</p> <p>„A lot of hours. My job is sitting at the desk.“</p> <p>„I sit a lot, all the time, sitting at the computer, for 8 hours per day. I come back home and sit at the TV again ...“</p> <p>„&lt;...&gt; I sit every day for seven to eight hours every day for five days a week. And two days, I sit maybe shorter, 4 hours a day.“</p> <p>„I sit quite a lot because the job is sedentary, 8 hours/day, and when I return home I sit again watching TV.“</p>
	Long-time sitting at weekends	<p>„I sit more than 8 hours.“</p> <p>„It's time to rest and relax on the weekend, so I sit a lot.“</p> <p>„My weekends are passive; I sit watching TV a lot.“</p> <p>„&lt;...&gt; I sit half a day watching a movie or something on TV.“</p>
Potentials for physical activity	Dissatisfaction with their body physical condition	<p>„Poor: Overweight causes immobility. If you need to go somewhere soon, it's hard to breathe normally if you carry something heavier.“</p> <p>„It could be better if the weight was lower; I could walk and run more than now.“</p> <p>„I am poorly evaluated because when I have to run, I become to stifle, when I go upstairs, the same thing happens &lt;...&gt; the condition deteriorated much after my daughter's birth ...“</p> <p>„Not very well, I would like to lose weight.“</p> <p>„It's bad, it's hard to bend, I must exercise every day.“</p>
	Wish to be more physically active	<p>„I would like to increase my physical activity; I think weight would start to decrease when I will change diet and physical activity.“</p> <p>„I think that I should increase my activity. There is a street near our house, about 100 meters. So I should go at least 100 m forward and 100 m back. I could walk and after weeks increase that distance, but ... Everything is only in my mind, I promise to myself that I will start the next day.“</p> <p>„&lt;...&gt; I am not physically active I would like to find time for training ...“</p> <p>„I know that I must increase my physical activity more than I have now.“</p> <p>„Maybe I would like to exercise, but I do not have time for that activity.“</p>
	Recognition of unwillingness to move	<p>„&lt;...&gt; I'm lifeless.“</p> <p>„I like to watch sports on TV, but I do not do enough in real life.“</p> <p>„&lt;...&gt; I'm a passive woman &lt;...&gt;.“</p> <p>„&lt;...&gt; physical activity gives way to TV, board games.“</p>

## DISCUSSION

Obesity is caused by a complex interaction between the environment, genetic predisposition, and human behaviour. Environmental factors are likely to be major contributors to the obesity epidemic (Nguyen & El-Serag, 2010). The relationship between excess weight and psychological well-being is complex, encompassing physical, social and psychological factors. Many individuals living with obesity experience

self-blame, low self-esteem, and general negativity towards themselves and their situation (Taylor, Forhan, Vigod, McIntyre, & Morrison, 2013). In our study, analysing interviews with respondents, we found that all obese women felt inferiority complex due to their physical appearance, they were dissatisfied with themselves trying to hide their appearance, discomfort, and disadvantages. Our results agree with those in other studies

(Hilbert, Braehler, Haeuser, & Zenger, 2013) which reported that overweight and obesity are associated with poor self-esteem, while increasing the risk of depression and anxiety. In addition, women can develop unhealthy mental activities by having a negative body image due to obesity. Therefore, the basis for a healthy life should be established through appropriate lifestyle interventions, which in turn can help women build a more positive body image and greater self-esteem (Chao, 2015).

Physical activity plays a critical role in improving cardiovascular health in obese individuals. But the problem is that most individuals cannot find the time or motivation to engage in the high volume of activity (Mora, Cook, Buring, Ridker, & Lee, 2007). The results from our study are in line with these findings. Our research results showed that all participants were not physically active enough. They would like to increase their physical activity, but they found excuses not to do it – their excess of weight, lack of time, as well as laziness, passivity were the main causes of their inactivity or poor physical activity. Tudor Locke with his colleagues (2010) described an accelerometer-derived physical activity/inactivity profile in normal weight, overweight and obese adults and computed physical activity volume indicator (e.g. counts/day), rate indicators (e.g., steps/minute), time indicators, the number of breaks in sedentary time and classified by step-defined physical activity levels. Based on Tudor-Locke, step defined activity levels could be classified into such categories: basal activity is < 2,500 censored steps/day, limited activity 2,500 to 4,999 steps/day, low active 5,000–7,499 steps/day, somewhat active 7,500–9,999 steps/day, active 10,000–12,499 steps/day, highly active  $\geq 12,500$  steps/day. So, the results showed, that adults for the overweight category took  $6879 \pm 140$  steps/day,  $25.3 \pm 0.9$  minutes/day in moderate intensity, and  $5.3 \pm 0.5$  minutes/day in vigorous intensity, and for the obese category  $5784 \pm 124$  steps/day,  $17.3 \pm 0.7$  minutes/day in moderate intensity, and  $3.2 \pm 0.4$  minutes/day in vigorous intensity. So, physical activity of overweight and obese people was too low. Our results also showed the same – obese women were inactive or their activity was low enough. Gupta and his colleagues (2016) evaluated association between temporal patterns of sitting (long, moderate and brief uninterrupted bouts) and obesity indicators, such as body mass index, waist circumference and fat percentage. The scientists

found that brief bouts of sitting were negatively associated with obesity for the whole day and work, but not for leisure. Sitting time in long bouts was positively associated with obesity indicators for the whole day also. Our participants, obese women, also sit a lot during a working day. They emphasize this. Findings of Henson and his colleagues (2016) indicate that even lower activity stimulus (e.g., standing) may yield metabolic advantages for a minimum of 24 hours. This study demonstrated that breaking up prolonged sitting with 5-min bouts of standing or walking at a self-perceived low intensity reduces postprandial glucose, insulin levels in postmenopausal women who have a high risk of type 2 diabetes. Light-intensity physical activity and even standing can prevent metabolic health problems.

By analysing women's responses about their diet, we found that most of them consumed unhealthy food. Malnutrition is the most common problem of our respondents. Obese individuals can lose weight by following calorie restriction diets that vary widely in macronutrient composition. Caloric restriction, however, rather than macronutrient composition, is the key determinant of weight loss. A big part of participants in our study tended to use high-calorie foods, consumed them in the evening very often. We also found that most respondents ate a lot of confectionery, unhealthy fats, used a lot of added sugar and salt. Most participants reported about their negative attitudes to their diets, but these attitudes did not always act like stimulus to change.

Saneei et al. (2016) showed that individuals with irregular eating habits were more overweight or obese, abdominally overweight/obese and abdominally obese compared with those who had regular eating habits. One more study (Al-Rethaiaa, Fahmy, & Al-Shwaiyat, 2010) also showed that 65% of overweight students and 66% of obese students ate irregularly, 58% of overweight subjects ate 2 times a day, 15% – 1 time per day, and only 27% – 3 and more times. While 60% of obese students ate 2 times a day, 6% ate one time and 34% – 3 and more times a day. Fried food was eaten daily by 13% of overweight people and 12.5% of obese people. The results of this study revealed that overweight people tended to skip meals, usually breakfast, consumed alcohol and ate late in the evening before bedtime. We also found from the interviews that a big part of women liked to drink alcohol occasionally, some

of them drank in the weekends and their opinion about the alcohol consumption was rather positive. Breakfast is very important for weight gain. Skipping breakfast is considered to be an unhealthy eating habit linked to the risk of obesity and type 2 diabetes. Eating dinner late at night can elicit subsequent breakfast skipping (Odegaard et al., 2013). Scientists (Kutsuma, Kei, & Kaname, 2014) clarified that habitual breakfast skipping related with late night dinner eating may represent poorer eating behaviour than skipping breakfast alone, associated with metabolic syndrome and obesity in the general Japanese population. Our results agree with these findings because many participants also ate a lot before bedtime and skipped breakfast.

Our obese participants had health problems: joint pain, increased cholesterol level, increased blood pressure, heart beat rate, dyspnoea, as well as chronic diseases such as type 2 diabetes, thyroid gland dysfunction and sleep disorders. The other studies (Tsai, Abbo, & Ogden, 2011) reported that obese and overweight people had various health problems: 4.27% of overweight people and 9.29% of obese had diabetes, 96.91% of overweight and 97.55% obese people had increased blood pressure, high cholesterol level was typical of 18.73% overweight and 23.08% of obese people. Also 6.05% of those with overweight and 5.26% of obese respondents suffered from cardiovascular diseases.

After analysing the results, we found that the participants of our study had a variety of problems, most of them were related to health and emotions, but we have very little information about the social problems caused by overweight and obesity. So, the study of this phenomenon is also relevant in further research. Further research also should focus more on changing behaviours to make it easier to turn people's knowledge and perceptions into stimulus to take actions to be healthy and fit. Behavioural changes should be considered a viable treatment option for the population of obese people.

## CONCLUSIONS

The relationship between excess weight and psychological well-being is complex, encompassing physical, social and psychological factors. All obese women of our study felt inferiority complex due to their physical appearance, they were dissatisfied with themselves trying to hide their appearance, discomfort, and disadvantages. They complained of poor health: joint pain, increased cholesterol level, most of them had cardiovascular problems, sleep disorders as well as chronic diseases such as type 2 diabetes, thyroid gland dysfunction. Their physical activity was limited. Also, such a great weight excess caused a discomfort in their daily life: it was hard for them to move, to lift something, to dress up.

Obese women in our study negatively viewed smoking effects, but they tolerated or even had positive attitudes to alcohol consumption, though they acknowledged that alcohol increased their weight.

Malnutrition is most common problem of our respondents. They both had poor eating habits and ate inadequate food. The majority of participants used high-calorie foods; very often they consumed them in the evening. Most respondents ate a lot of confectionery, unhealthy fats, used a lot of added sugar and salt. Some of the participants ate a lot before bedtime and skipped breakfast. A lot of participants reported about their negative attitudes to their diets, but these attitudes did not always act like a stimulus to change.

Most of our respondents could not find time or motivation to engage in the adequate physical activity. They wanted to increase their physical activity, but found excuses not to do that – their excess of weight, lack of time, as well as laziness, passivity were the main causes of their inactivity or poor physical activity. Also the majority of obese women were sedentary a lot during their working day as well as weekend.

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