



Perception of Obesity in Adult Women

**Lizet García Ríos^{a++}, María del Carmen Omaña Galindo^{a++},
Gustavo Peña Serrano^{a++}, Indira Vega Gaitan^{b#}
and Jesús Carlos Ruvalcaba Ledezma^{b#*}**

^a ICSA-UAEH, Institute of Health Sciences - Autonomous University of the State of Hidalgo, Mexico.

^b Department of Medicine, [ICSA-UAEH] Institute of Health Sciences - Autonomous University of the State of Hidalgo, Mexico.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/EJNFS/2023/v15i101345

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/105584>

Original Research Article

Received: 01/07/2023

Accepted: 04/09/2023

Published: 12/09/2023

ABSTRACT

Obesity is a health problem that has increased since 1975. For this reason, to treat the disease, a transdisciplinary intervention is needed, however, this problem can be affected by the perception that people have about obesity, because the way people see and approach the problem is influenced by the sociocultural environment.

Objective: to know what is the perception and approach that adult women from 19 to 49 years of age have about obesity.

Methods: qualitative ethno-methodological study through an in-depth interview that included 6 adult women from 19 to 49 years of age who were diagnosed with obesity from Mixquiahuala, Hidalgo. The data was then analyzed with the ATLAS.ti software.

Results: people may understand that obesity is a problem, and identify methods to control body weight, however, some tend to minimize the problem, making it difficult for them to achieve satisfactory results, and may face physical and social difficulties because of the weight excess they live with.

⁺⁺ Master in Health;

[#] Master in Public Health;

^{*}Corresponding author: Email: dcspjcarlos@gmail.com;

Conclusion: People are aware of obesity; as well as different strategies for its treatment, however, they do not consider it a health problem, even minimizing it. Therefore, it is necessary to develop strategies that allow people to identify obesity as a disease associated to health risks.

Keywords: Adult women; obesity; perception.

1. INTRODUCTION

According to the World Health Organization, obesity is an abnormal accumulation of body fat, which can be detrimental to health, in addition, obesity has become a public health problem that in recent decades has been increasing to epidemic proportions. The World Health Organization (WHO), reported that, worldwide, in 2016 there were 650 million adults with obesity, this amount represents 13% of the entire adult population of the world, an amount that has tripled since 1975. This problem, beyond causing a decrease in the quality of life of those who suffer from it, is related to an increase in the risk of noncommunicable diseases such as diabetes mellitus type 2, stroke, heart disease, cancer and musculoskeletal problems (*Obesidad y Sobrepeso*, n.d.; *Prevención de La Obesidad - OPS/OMS | Organización Panamericana de La Salud*, n.d.).

In addition, the American continent is the area with the highest prevalence, where together, overweight and obesity affect 62.5% of the adult population, and obesity affects 28% of adults, of which 26% are men and 31% are women. (*Prevención de La Obesidad - OPS/OMS | Organización Panamericana de La Salud*, n.d.).

According to the ENSANUT 2020 (National Health and Nutrition Survey) in Mexico the prevalence of overweight and obesity in adults was 76% in women and 72.1% in men, in addition, since 2012 the prevalence of obesity has increased by 17.5% in men and 7.2%, being a greater problem in urban population (36.5%) than in rural populations (33.9%). Shamah Levy et al [1].

In the state of Hidalgo, Mexico; during 2018, the prevalence of obesity was 24.7% in males and 35.7% in females (Shamah Levy et al., 2020).

To address the problem of obesity, it is necessary to do it from a multidisciplinary perspective, taking into account not only individual actions, such as an adequate diet and physical exercise, but also public policies, such as the promotion of healthy eating, guaranteeing access to physical exercise, and establishing advertising controls on ultra-processed and unhealthy food. Swinburn et al. [2].

However, beyond the physical problems and diseases that can occur as a consequence of obesity, there is the perception of obesity, which, although it has helped to provide better care for this condition, it is also a complex issue that is influenced by the culture and sociocultural context in which the person is located [3]. For some cultures, such as the Nepalese, obesity and a bulging

abdomen, is considered as a sign of well-being and prosperity [4] while for others the obese person is considered strange or clumsy, unattractive or ugly, lazy, self-pitying, undisciplined and lacking in motivation [5, 6, 7]. This has led to obesity becoming a stigma that promotes discrimination and in turn can cause problems with emotional well-being, self-esteem and quality of life. In a study by Puhl et al. it is noted that obese people have felt discriminated by health personnel (doctors, nurses, nutritionists and mental health professionals), as well as by family members, coworkers and bosses or supervisors. Puhl & Brownell [8] For this reason, this study seeks to delve into the perception that women have about their obesity.

1.1 Objective

To determine the perception and approach to obesity among adult women aged 19 to 49 years.

2. METHODOLOGY

A qualitative ethno-methodological study was carried out with a group of six young adult women, who were selected according to the following inclusion criteria: age 19 to 49 years, residing in Mixquiahuala de Juárez, Hidalgo and having diagnosed obesity, contacted personally at the Taxhuada Health Center belonging to the municipality of Mixquiahuala de Juárez, Hidalgo. Women who did not agree to participate in the interview were excluded and those women with whom interaction was not achieved to carry out the course of the interview were eliminated.

An in-depth interview was used and the data were analyzed with ATLAS software. Ti. software under grounded theory.

3. RESULTS AND DISCUSSION

As can be seen in Fig. 1, the women interviewed made 13 mentions of the disease and ailments they have because of obesity, indicating that these ailments are important in their lives and have proven to be a burden for them. They also mentioned healthy eating strategies 12 times, so it can be said that they know or have heard a lot about what healthy eating should be like, and they mentioned 11 times having tried to make dietary modifications and habit changes, but only 4 times reported any health improvement. Therefore, it can be said that the modifications or changes in habits have not given them lasting results, which could be due to lack of adherence to treatment, since on two occasions they spoke of lack of motivation, and only 5 times they spoke of having received professional help, however, most of the time this advice was provided by doctors and nursing staff.

Finally, dissatisfaction with body image was mentioned 7 times and 3 times in situations of low self-esteem, as well as prejudice, discrimination and difficulty in interpersonal relationships, which indicates that there is a psychological burden associated with obesity.

Like this study, different studies agree that people perceive obesity as a health problem that is related to other morbidities or chronic diseases, and limitations such as fatigue, joint pain, dyspnea, among others, and attribute it to poor diet due to consumption of foods high in sugars, fats and calories, as well as lack of physical activity [9,10,11,12]. However, in agreement with what was observed by *Matus, et al*, it was identified that people can also underestimate the problem and minimize it by referring to themselves as "fatties", "full" or "overweight", which limits the effectiveness of the actions that can be taken for its clinical approach, in addition, when there is no presence of symptoms, discomfort or limitations, it becomes more complicated for them to identify obesity as a problem in their lives, and, therefore, so will be the abandonment of harmful habits and their change for healthier habits [13,14]. People report that in order to manage obesity it is necessary to reduce the amount of food they consume, do physical exercise and in very few cases go to health personnel for counseling. This is in agreement with what was reported by *Zhang, et al*. Since in their study people showed that they had knowledge about the approach to obesity such as reducing portions or performing physical

activity [12]. The interviewees mentioned that living with obesity limits them in their daily activities because excess weight generates illness and ailments, such as weight gain, diabetes, tiredness, pain in the feet, head, stomach. Some others reported aesthetic patterns such as "my clothes don't fit" "my waistline is falling off", they also mentioned mood problems, feelings of frustration and aggressiveness "I am a person who is exalted by the way I look" "I get irritated and everything bothers me every day, I don't want to be like this anymore". They also refer to perceive a different treatment by their social circle or people with whom they relate on a daily basis "people look at my physique", "they do not treat you kindly" "they think I do not care about myself", "she has become fatter", "she is not like she used to be", "she has become careless". Regarding this, *Brown, et al*. have shown concern about the stigma attached to obesity, reporting negative thoughts about what they believe other people think of them, making comments such as "look at the size of that person", "he would never let me be like that", "he's a pig", "he must be a glutton", etc. (*Primary Care Support for Tackling Obesity: A Qualitative Study of the Perceptions of Obese Patients | British Journal of General Practice*, n.d.).

On the other hand, *Abad Massanet, et al*. found that people tend to underestimate the degree of obesity they present, but in spite of this, they feel dissatisfaction with their body image. *Massanet et al* [15.]

The women identified different ways to control their weight such as eating balanced diets with a high amount of vegetables, avoiding dishes with high fat and sugar content, drinking more water and exercising constantly, indicating knowledge of alternative treatments for obesity such as supplements, juices, tea, however, they mentioned not using them, "I went to the gym", "not eating sugar, not eating a lot of salt" "I do diets that my son gives me". Some of the most common methods they have used and have been successful in controlling their weight include going for walks, eating well, giving up sugary drinks and following the recommendations of nutritionists and health personnel, but they have not abandoned them due to barriers such as lack of family support, lack of time due to COVID confinement and daily occupations, "with the pandemic, when I couldn't go out, I would eat and eat and eat and eat". This contrasts with different authors who have found that people may perceive

Table 1. Analysis of the discourse on obesity knowledge

Category	Questioning	Speech	Discourse analysis
	What is your opinion regarding obesity?	<p>E 1: Disease. Some disease, I feel that it is caused by fat and so on, I mean, by so much fat.</p> <p>E 2: well, it's how fat one is.</p> <p>E 3: it is bad, it causes us different types of diseases and we do not do our part to improve this excess of obesity. Personally, I find it very difficult to eat, even if I am not hungry, and I say: "How can I stop? But I feel that it is like a disease that, because we are overweight, causes diabetes and all those kinds of diseases.</p> <p>E 4: Well, I say that vegetables are not like they used to be, now it is all chemicals that we eat, even tortillas are purely chemical.</p> <p>E 5: That it is a serious health problem, but sometimes you don't know how to treat it and it becomes a bigger problem and by the time you see it, you already have major health problems and sometimes it is too late for many people.</p> <p>E 6: well, obesity, we are the fatties, aren't we?</p>	<p>According to the WHO, obesity is a disease and is a health problem caused by the accumulation of excess fat and is caused by an excess of energy, which is not spent and accumulates. That is, by the consumption of foods rich in calories and fat, and low physical activity. (1). The way to deal with obesity is by decreasing energy intake, increasing the consumption of fruits and vegetables, and exercising. (1).</p>
	Why do you think people have	<p>E 1: Well, for me it's something very normal, almost everyone looks chubby and I've been like that since I was a child, everyone in my house is the same.</p> <p>E 2: Maybe it is because one is careless, also, or eats things that one should not eat. Well, unfortunately I have been poor all my life, so I didn't have the opportunity to eat whatever I wanted, but now, thank God my job is going well, so I crave things and I buy and eat them, why, because they are things I have craved since I was a little girl, so now, as if to say, I eat them, but now because of my sugar, my diabetes, they told me that I shouldn't eat.</p> <p>E 3: Well, I say that, because we eat too much, we eat more than we should eat and we don't exercise.</p> <p>E 4: It is because we eat unbalanced food with a lot of oil and fats.</p> <p>E 5: Many times it is ignorance, because many people educate us that it is important to be chubby, that it is a symbol of health for many people, when in reality it is not so, so sometimes it is a lot of misinformation.</p> <p>E 6: Because we eat badly, we have bad habits, we don't exercise, pure grenache.</p>	
	In what ways do you think excess weight can be managed?	<p>E 1: I have started to eat more vegetables. But I get more desperate because then I don't see results. And they tell me that no, that it is normal for me to look like that, but I follow him and maybe I see the clothes or after I come to weigh myself and I see results, before I don't want to be scared, that's why I almost don't come to weigh myself.</p> <p>E 2: Well, just stop eating, I mean not drinking coke or not eating sugar, not eating too much tea, not too much salt, but in fact I have been eating very salty food for quite a while now, I almost don't like it. And I do diets that my son gives me, he looks for things on the internet and I do what I can on my own, for example more quelites, more nopales.</p>	

Category	Questioning	Speech	Discourse analysis
Obesity awareness		<p>E 3: Balanced diet, well, in my opinion, I like to eat vegetables, and I say eat everything, but with less quantity of food. Not consuming soda, cracklings and all that good at least I feel it would help, and with physical activity.</p> <p>E 4: With a healthy diet, vegetables, and eating three times a day, lower them to the portions we eat.</p> <p>E 5: Well, with exercise and eating well, and going, well, if you can, to the nutritionist at our health center, to seek guidance, like this</p> <p>E 6: Well, not eating, going on a diet.</p>	

Source: Prepared by the authors based on the application of six in-depth interviews

Table 2. Discourse analysis of body perception

Category	Questioning	Speech	Discourse analysis
	How do you see yourself and what do you think of your body?	<p>Interviewee 1: I don't know. Otherwise, as I can tell you sometimes, I don't give a damn. I think it's normal for me to be overweight, but they tell me it's not.</p> <p>Interviewee 2: Now that I see that I can eat everything, it is not like before, I am happy, I am fat, but I work. The bad thing is my diabetes, being chubby, I even feel that it is normal to overeat what I like.</p> <p>Interviewee 3: Well, I have gained a lot of weight. I feel fat, I complain about it, my feet hurt, my head hurts, my stomach hurts, my body feels tired. And yes, the truth is that sometimes I even despair because of the way I am, I have tried to do it to have a better life, a better diet, but it is hard for me, even physical activities are hard for me. I do my chores, and when I finish my chores, I go to bed, but I feel that it is not the same as doing physical activity, it is a different type of exercise. I feel like a fat person.</p> <p>Interviewee 4: Well, I feel heavy, because of the weight I carry.</p> <p>Interviewee 5: Well, yes, I do look very...if I consider that I am overweight. Yes, I do consider myself, because I have also been told, my doctor has told me that I have to take more care of myself. So yes, I do consider myself an overweight person.</p> <p>Interviewee 6: Well, I'm very full</p>	<p>People may think that obesity is something normal, they do not perceive themselves as obese people, but they perceive themselves as "overweight", "chubby" or "full" (17). (17). When there are no symptoms, discomfort or presence of other diseases it is difficult to see obesity as a problem. (23). They show dissatisfaction with their physical appearance (17). They express that they have been the object of comments by their relatives and health</p>
	What do you think about how others see you?	<p>Interviewee 1: It has always been like something normal. I don't take it like that. In fact, I have wanted to lose weight, but nothing is easier that way. It's like very slow.</p> <p>Interviewee 2: Well, my children are the only ones who tell me that I am fat and with my diabetes I should eat less and one of them brings me diets and I do a little bit of what I can, almost more what the nurses tell me. And my siblings don't know that I have diabetes, they just see me as fat, but since we used to be very poor, now we eat everything.</p>	

Category	Questioning	Speech	Discourse analysis
Body perception		Interviewee 3: I think that people look at my physique, "I feel that she has put on weight", "she has become fatter", "she is not like she used to be", "she has been neglected", I am not one of those who pays attention to people, but I feel that people criticize me.	personnel. (24,25).
		Interviewee 4: Well, it's normal, although sometimes you can feel the glances.	
		Interviewee 5: Well, I think that many people see me, well, not in a very favorable way, because they think that I don't care about myself, because sometimes people say that being overweight is like people's carelessness. So, sometimes people's attention is not favorable.	
		Interviewee 6: Well, if they tell me that I am overweight, in my consultations when I go to the doctor's office, I will be able to tell them that I am overweight.	

Source: Prepared by the authors based on the application of six in-depth interviews

Table 3 Discourse analysis of the experience with obesity

Category	Questioning	Speech	Discourse analysis
Experience with obesity	How has your weight influenced your daily life? Your relationship with other people (family, friends) Environment	Interviewee 1: I lead my normal life, right now I am young, I am 34 years old, so I go up and down with my children and as I told you my parents are the sick ones, so I have to do everything and I feel that it doesn't affect me because I have always been like that, but who knows later with the years, because then I get more tired, or I can't bend down quickly and it must be because of the extra fat I have.	Report health problems or difficulties in carrying out their daily activities (17) They may perceive mistreatment, discrimination, exclusion or prejudice by family members or people with whom they interact on a daily basis. (24,25).
		Interviewee 2: It affected me a lot because I couldn't stand my feet. Yesterday, uh-huh, they do hurt right now, but I mean, I sit down or lie down for a while, so that it goes away, but being fat makes me very tired and I can't go out or work a lot.	
		Interviewee 3: I'm a person who gets exalted, I get exalted because of the way I am, I'm fat, I have a fat belly, and that bothers me and when I'm upset and they talk to me, I answer badly, that is, I get a little aggressive with family members, practically, because with other people, I don't. But yes, then they say to me, my children, "you get angry about everything every day". But then my children say to me, "you get angry about everything every day". Every day I get irritated, everything bothers me. Seriously I say: "I don't want to be like this anymore", "everything bothers you, I can't tell you this because you are already angry", but I feel that it is because I feel fat.	
		Interviewee 4: Well, I say fine, I haven't had any problems.	
		Interviewee 5: Well, a lot, because I can't buy the clothes I like. Sometimes people don't treat you in a nice way, just because you are overweight, it's not a nice way for many people. Compared to thin people, sometimes they have more opportunities in many things, we do not.	
		Interviewee 6: Well, I get tired. I get very tired when I walk, then my knees hurt.	

Source: Prepared by the authors based on the application of six in-depth interviews

Table 4. Analysis of the discourse on the approach to obesity

Category	Questioning	Speech	Discourse analysis
	Tell me what you know about ways to control your weight.	<p>Interviewee 1: Well, from what the doctor tells us in my parents' consultations. So, I mean, with time, maybe it will happen to me too, but my overweight can also cause it. It can lead me to that. In fact, I have had situations that I don't like. It doesn't develop, but then I learn from that, I don't want to be like my parents, now I know that with vegetables.</p> <p>Interviewee 2: exercise, in other words, walking is not the same as going downtown, because you go fast, you don't go with the food, you go fast, in other words, walking fast every day, even if it's just for a little while, spending half an hour and eating well anyway.</p>	Various sources agree that treatment for obesity begins with low-calorie diets accompanied by physical exercise (26-28).
		<p>Interviewee 3: There are products like Herbalife, but I don't go around consuming these products, there is one called Divina Tea. My parents taught me that I should not consume this kind of products and that vegetables would help me, eating normal, natural food. I have heard of pills, but the truth is that I am not used to this type of products to lose weight and I feel that the most advisable thing to do is to exercise, eat a balanced diet and drink a lot of liquids without sugar.</p>	People agree that, in order to control their weight, they should limit the amount of food, refined flour consumption, drink more water and do physical activity.
		<p>Interviewee 4: Having a balanced meal in the morning, for example, a tea, an egg, but from home, and fruits.</p> <p>Interviewee 5: surgeries, bypass, the nutritionist</p> <p>Interviewee 6: Well, exercise, avoid bread and tortillas.</p>	
	Have you used one, tell me your experience with it.	<p>Interviewee 1: My sister used to go for walks with me, but after they got tired, there was no one to go with me. But it was good for me to go for a walk with her and eat the same food as my parents.</p> <p>Interviewee 2: Eat well what the nurses here and the doctors tell me because of my sugar because I can't walk or exercise, my feet hurt.</p> <p>Interviewee 3: I have stopped eating tortillas and drinking water. They say you have to drink two liters, but it's hard for me, it disgusts me, but I feel it's due to lack of habit, because if I drink a glass, I drink two glasses a day, but it's very rare that I drink two liters a day. But I don't drink soft drinks or sweet water either, for example, the little sachet of "Tang", "Fresquibon", I don't like them, I don't like them because they leave sweetness in my mouth and I don't like to be all day with sweetness in my mouth.</p> <p>Interviewee 4: I have tried to eat less, that is, not to eat so much fat.</p> <p>Interviewee 5: I have used the appointment with the nutritionist.</p>	

Category	Questioning	Speech	Discourse analysis
Approach to obesity		Interviewee 6: Well, I have stopped eating bread, tortillas, the truth is that I almost can't, I can't. I can't eat bread.	
	Have any of them worked for you, and why do you think this is?	Interviewee 1: Well, they eat less, go for a walk and drink water, but with the vacations they get out of control. They picked up the pace. Yes, because of the vacations. But I tell you, finally the family's support and all that, well, it also helps. Since my parents are diabetic, we all eat what the doctors tell them to eat. With my dad we walk. Then, someone would also tell them, so you say let's go, let's go, they pull us all together. And I don't do anything on my own, so I don't lose weight.	
		Interviewee 2: Yes, well, my weight has gone down, I have lost 5 kg since when I started, my blood sugar was very high, yes, yes, yes, it has improved a lot, but it was because I lost weight. So now, I mean, I feel good. Because I can walk normally, my feet don't hurt as much as before, but I still eat. Now I eat whatever I want. Yes, but as I said, not constantly, but once a week, twice a week, now that the tortilla is ready, I eat 2 or 4 and that's it. No bread, I am not addicted to bread, but sometimes I would eat a piece or so, anyway, eating less is what I see that made me go down, I eat half of a roll, but I eat almost half of a roll, but I rarely eat sweet bread when we love it, but I hardly eat it often anymore.	
		Interviewee 3: Before the pandemic I did physical activity, I went to the gym, I went for a month, it helped me a lot, and I reduced the amount of food I ate, from 6 enfrijoladas, I reduced it to four. But with the pandemic, I couldn't go out and I don't know if it was anxiety, but I was eating and eating and eating, and I stopped this routine. I also went for a walk and it worked for me, but since I stopped exercising, I "bounced back". I weighed 74 kilos, now I weigh 84 -88 kilos. I go to Pachuca for a check-up and they tell me that I am overweight, that I have to lose weight, but it is very hard for me.	
		Interviewee 4: Yes, it has worked for me, because I weighed 70kg. Now I am a little bit more.	
		Interviewee 5: Yes, the appointment with the nutritionist, because he did do my exams as my diet should be and as long as I followed it everything was fine. And as long as I didn't, I lost that consistency.	
		Interviewee 6: diet, the diet has almost not worked for me.	

Source: Prepared by the authors based on the application of six in-depth interviews

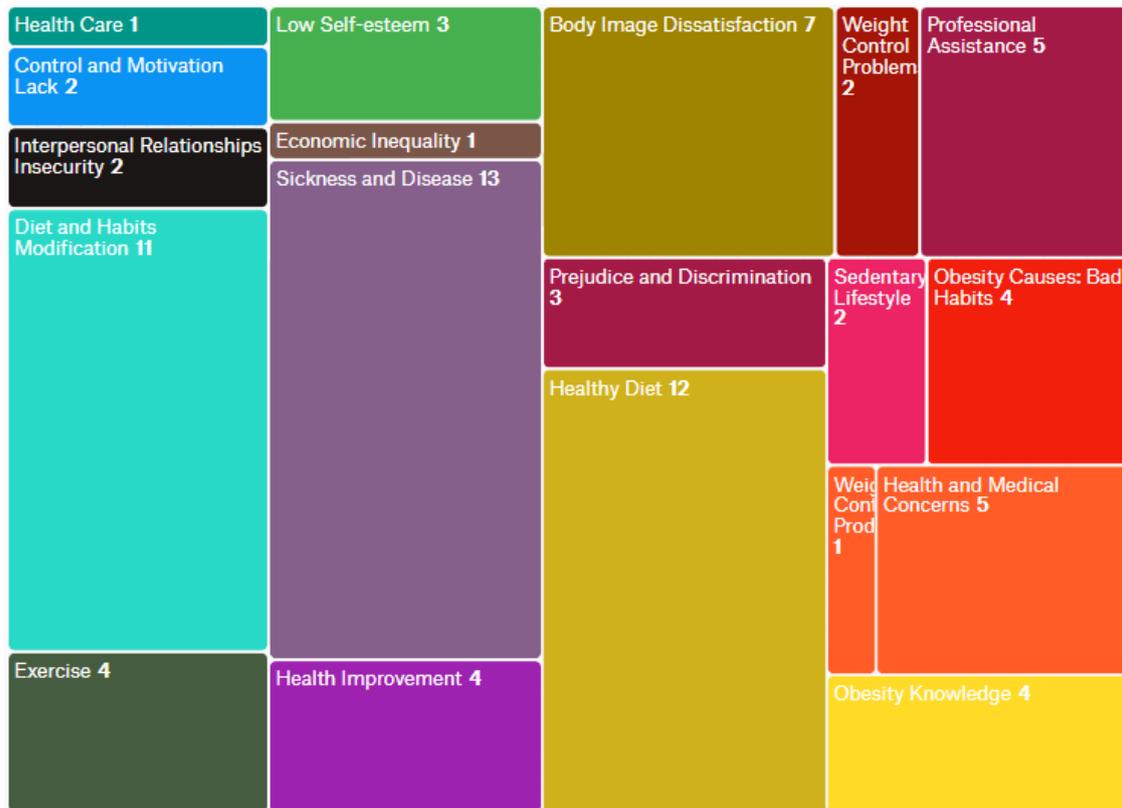


Fig. 1. Analysis of the perception of obesity in adult women

Note: Developed with ATLAS.ti software

the presence of internal barriers such as lack of family support or physical fatigue, and external barriers such as not having adequate clothing or a place close to home to exercise or lack of time. (Osorio et al. [16] Rubio Henao & Varela Arevalo [17] Villacrés Calle also mentions perceived barriers to physical activity and healthy eating, and people refer to environmental barriers, such as lack of time due to family and work, personal barriers, such as lack of motivation or enjoyment, as well as considering themselves lacking in ability. Social barriers are also mentioned, such as lack of support from those close to them. (Villacrés Calle [18].

4. CONCLUSION

Adult women do not conceive obesity as a disease, however, they have basic knowledge of what this morbidity is, and can even minimize the problem in the absence of symptomatology or other diseases. They also identify the strategies and actions that should be carried out for weight control, but without obtaining the desired results because there is no consistency or adherence without receiving the appropriate individualized treatment by trained personnel, so there is a lack

of development of strategies to raise awareness among the population about the problem that obesity represents by itself and the risks it implies for the development of chronic diseases among others, as well as the benefits of weight control.

CONSENT

As per international standard or university standard, participants' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Shamah Levy T, Rosemary Martinez M., Barrientos Gutierrez, T., Nasu Caves L., Bautista Arredondo S., Mattress M., Gaona Pineda E, Lazcano Ponce E., Martinez Barnetche J, Alpuche Spider C. Dommarco River J. National Health and

- Nutrition Survey on Covid-19 National results; 2021
2. Swinburn BA, Sacks G, Hall KD, McPherson K, Finegood DT, Moodie ML, Gortmaker SL. The global obesity pandemic: shaped by global drivers and local environments. *Lancet* (London, England). 2011;378(9793):804–814. Available:https://doi.org/10.1016/S0140-6736(11)60813-1
 3. Puhl RM, Heuer CA. The stigma of obesity: A review and update. In *Obesity* 2009;17:5:941–964). Available:https://doi.org/10.1038/oby.2008.636.
 4. Vaidya A, Shakya S, Krettek A. Obesity prevalence in Nepal: public health challenges in a low-income nation during an alarming worldwide trend. *International Journal of Environmental Research and Public Health*. 2010; 7(6):2726. Available:https://doi.org/10.3390/IJERPH7062726
 5. Bocquier A, Verger P, Basdevant A, Andreotti G, Baretge J, Villani P, Paraponaris A. Overweight and obesity: knowledge, attitudes, and practices of general practitioners in france. *Obesity Research*. 2005;13(4):787–795. Available:https://doi.org/10.1038/OBY.2005.89
 6. Campbell K, Engel H, Timperio A, Cooper C, Crawford D. Obesity management: Australian general practitioners' attitudes and practices. *Obesity Research*. 2000; 8(6):459–466. Available:https://doi.org/10.1038/OBY.2000.57
 7. Foster GD, Wadden TA, Makris AP, Davidson D, Sanderson RS, Allison DB, Kessler A. Primary care physicians' attitudes about obesity and its treatment. *Obesity Research*, 2003;11(10):1168–1177. Available:https://doi.org/10.1038/OBY.2003.161
 8. Puhl RM, Brownell KD. Confronting and coping with weight stigma: an investigation of overweight and obese adults. *Obesity* (Silver Spring, Md.), 2006;14(10):1802–1815. Available:https://doi.org/10.1038/OBY.2006.208
 9. Gavaravarapu SRM, Rao KM, Nagalla B, Avula L. Assessing Differences in Risk Perceptions About Obesity Among “Normal-Weight” and “Overweight” Adolescents - A Qualitative Study. *Journal of Nutrition Education and Behavior*. 2015;47(6):488-497.e1. Available:https://doi.org/10.1016/j.jneb.2015.07.001
 10. Okop KJ, Mukumbang FC, Mathole T, Levitt N, Puoane T. Perceptions of body size, obesity threat and the willingness to lose weight among black South African adults: A qualitative study. *BMC Public Health*, 2016;16(1). Available:https://doi.org/10.1186/s12889-016-3028-7
 11. Sikorski C, Riedel C, Luppá M, Schulze B, Werner P, König H.-H, Riedel-Heller SG. Perception of overweight and obesity from different angles: A qualitative study. *Scandinavian Journal of Public Health*. 2012;40(3):271–277. Available:https://doi.org/10.1177/1403494812443604
 12. Zhang W, Chen X, Wang C, Gao L, Chen W, Yang W. Perceptions and Attitudes Toward Obesity and its Management in Migrants and Rural Residents in China: a Cross-sectional Pilot Study. *Obesity Surgery*. 2022;32(1):152–159. Available:https://doi.org/10.1007/S11695-021-05755-6/METRICES
 13. Matus Lerma, N. P. S., Álvarez Gordillo, G. del C., Nazar Beutelspacher, D. A., & Mondragón Ríos, R. (2016). Perceptions of overweight and obese adults and their influence on weight control in San Cristóbal de Las Casas, Chiapas. *Social Studies*, 24(47), 379–409.
 14. Ocampo-Barrio P, Pérez-Mejía AN. Beliefs and perceptions of obese people about obesity. *Family medicine. SEMERGEN*. 2010;36(6)325–331. Available:https://doi.org/10.1016/J.SEMERGEN.2010.01.006
 15. Massanet FA, Rivero Pérez J, Cobos F, Antonio J, Osorio V, De M, Porcell V, Montero Sánchez L, Massanet A, Pérez R, Sánchez M. Perception of one's own body image in obese or overweight patients. *Revista Ene de Enfermería*. 2012;6(2):24–31. Available:http://ene-enfermeria.org/ojs/index.php/ENE/article/view/16
 16. Osorio A, Raygoza P, Paloalto R, Laura, M. Perceived barriers and level of physical activity in older adults from Aguascalientes, Ags: A cross-sectional

- study. *Global Nursing. Ciencias Psicológicas* 2013;12(31):34–51.
Available:https://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S169561412013000300003&lng=es&nrm=iso&tlng=es
17. Rubio Henao RF, Varela Arevalo MT.. Perceived barriers in young university students to perform physical activity. *Cuban Journal of Public Health*. 2016;42(1):0–0.
Available:http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S086434662016001000007&lng=es&nrm=iso&tlng=es
 18. Villacrés Calle MG. Transtheoretical model and perceived barriers to maintaining healthy behaviors in a group of prediabetic individuals from the Pontificia Universidad Católica del Ecuador after a diabetes prevention intervention program [Pontificia Universidad Católica del Ecuador]; 2017
Available:<http://repositorio.puce.edu.ec:80/handle/22000/13973>
 19. Bautista-Díaz ML, Marquez Hernandez AK, Ortega-Andrade NA, García-Cruz R, Álvarez-Rayón G, Bautista-Díaz ML, Marquez Hernandez AK, Ortega-Andrade, NA., García-Cruz R, Álvarez-Rayón G. Excess body weight discrimination: Contexts and situations. *Mexican Journal of Eating Disorders*, 2019;10(1):121–133.
Available:<https://doi.org/10.22201/FESI.20071523E.2019.1.516>
 20. Diagnosis and treatment of overweight and exogenous obesity. Evidence and Recommendations Guide: Clinical Practice Guide; 2018. CENETEC
 21. Lacunza AB, Caballero SV, Salazar R, Sal J, Filgueira J. Déficit sociales en adolescentes con sobrepeso y obesidad. *Ciencias Psicológicas*, 2013;7(1):25–32.
Available:http://www.scielo.edu.uy/scielo.php?script=sci_arttext&pid=S1688-42212013000100003&lng=es&nrm=iso&tlng=es
 22. Mahan LK, Raymond JL.. *Krause Dietoterapia* (14th ed.). Elsevier; 2017.
 23. *Obesidad y sobrepeso*. (n.d.). Retrieved April 8, 2023,
Available:<https://www.who.int/es/news-room/fact-sheets/detail/obesity-and-overweight>
 24. Perceptions of overweight and obese adults and their influence on weight control in San Cristóbal de Las Casas, Chiapas. (n.d.). Retrieved May 3, 2023, from.
Available:<https://www.redalyc.org/journal/417/41744003014/html/>
 25. Prevención de la Obesidad - OPS/OMS | Organización Panamericana de la Salud. (n.d.). Retrieved April 8, 2023,
Available:<https://www.paho.org/es/temas/prevencion-obesidad>
 26. Primary care support for tackling obesity: a qualitative study of the perceptions of obese patients | *British Journal of General Practice*. (n.d.). Retrieved May 4, 2023,
Available:<https://bjgp.org/content/56/530/666.short>
 27. Health Secretary. (1998). Official Mexican standard NOM-168-SSA1-, from the clinical file. *General Information*, 1998; 8(3):161–168.
 28. Shamah Levy T, Vielma Orozco E, Heredia Hernandez O, Rosemary Martinez M, Mojica Caves J, Santaella Castell J, Rivera Dommarco J. *National Health and Nutrition Survey 2018-19: National Results*;2020.

ANNEXES

Annex 1

Interview format

Good morning, my name is: ____ I am a nutritionist, what is your name: ____ nice to meet you. I am doing a study on obesity in which we would like to know your opinion, it is important that you know that there are no good or bad answers, you can answer what you think and feel, your personal data will be private, would you be interested in participating in this interview?

Question	Sub-question
Knowledge of obesity	
I.	What is your opinion regarding obesity?
II.	Why do you think people have obesity?
III.	In what ways do you think excess weight can be managed?
Perception	
IV.	How do you see yourself and what do you think of your body?
V.	What do you think about how others see you?
Experience with obesity	
VI.	How has your weight influenced your daily life? Relationships with other people (family, friends) Environment
Approach to obesity	
VII.	Tell me what you know about ways to control your weight.
VIII.	Have you used any of them? Tell me about your experience with it
IX.	Have any of these methods worked for you? Why do you think this is?

I would like to thank you for your confidence in answering these questions. Would you like to share a means of contact in case any clarification is required?

© 2023 García Ríos et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:

<https://www.sdiarticle5.com/review-history/105584>