

# Experiences of Obese Adolescents trying to Reach a Healthy Weight: Considerations for the Development of a Curriculum Guide

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**Objective:** Obesity, almost all around the world, has been described by the medical authorities as the most common pediatric illness in children and youngsters. The purpose of this study is to explore, describe, and analyze the experiences of obese adolescents on being obese and trying to reach a healthy weight.

**Design and Methods:** A convenience sample of eight obese adolescents from 15 to 17 years old of both genders from three high schools of the educational region of San Juan, Puerto Rico was obtained. A phenomenological multiple-case study was conducted using a semi-structured interview.

**Results:** The experience of trying to reach a healthy weight is difficult because it requires a lot of physical effort to do exercises and physical activities, they lack the support of parents and trainers, and because of the availability of food with low nutritional value in their environment. Participants also pointed out that it is difficult due to the negative feelings that adolescents experience while performing the activities to lose weight.

**Conclusion:** The goal to reach a healthy weight is difficult. It is recommended that agencies that work with overweight and obesity problems provide people with the knowledge, strategies, alternatives, and needed activities from a biopsychosocial perspective to help adolescents with this health condition to be successful in reaching and keeping a healthy weight. [*P R Health Sci J* 2018;37:208-212]

*Key words:* Adolescents, Obesity, Overweight, Obesity Treatment, Prevention, Public Health

Childhood obesity is one of the most serious public health challenges of the twenty-first century (1). It has been considered an epidemic, given the magnitude and scope that it poses to the health of human beings. To this end, prevention and treatment programs have been developed for this condition for children and youth (2).

It is worrying for government and education authorities that obesity rates for children over five years old increased from 5% in 1980 to 13.9% in 2004. Likewise, the obesity rate for children between the ages of 6 to 11 years old has increased from 6.5% to 18.8%, and among youth 12 to 19 years old, this trend has increased from 5% to 17.4% (3). According to the World Health Organization (WHO) (4), it has been estimated that in 2005, there were 1.6 billion overweight adults 15 years and older worldwide, 400 million obese adults, and 20 million children younger than five years old with the same condition. For 2015, the WHO projected that 2.3 billion adults would be overweight and more than 700 million would be obese. In Puerto Rico (PR), according to epidemiologist Rullán, the high prevalence of overweight (25.7%) surpasses the U.S. rate (5). Likewise, according to a PR Department of Health report,

for 2025, 97% of the Puerto Rican population will face health problems related to overweight or obesity (6). Data from 2005 indicated that 45 of every 100 children had an inadequate weight for their age. Rullán and Alvarado (7) found that 32% of children 4 to 24 months old were obese, and in 2007, 39% of children between 2 and 5 years old participating in the Women, Infants and Children program were obese or at risk of obesity. Qualitative researchers (8,9) have concluded that barriers perceived by adolescents to lose weight must be identified and more research must be conducted with prospective designs. These researchers pose that such research may be useful to

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facilitate future actions against childhood obesity, which include the development of health promotion and education programs from a biopsychosocial perspective that provides knowledge and skills to successfully manage the overweight and obesity problem. The present study has the objective of exploring, describing and analyzing the experience of obese adolescents trying to reach a healthy weight.

## Methods and Procedures

This study responds to a qualitative research strategy of multiple cases. The biopsychosocial model developed by George Engel in the 1970's serves as the conceptual framework for this study (12). The biopsychosocial model defines the human being as a complex system of three dimensions: biological, psychological, and social. Engel (13) argues that regardless of the condition that an individual may suffer, the clinical practice and level of understanding would be incomplete without a thorough examination of the three interacting dimensions (biological, psychological and social). According to this author, an incomplete understanding could lead to an inadequate diagnosis and treatment. To gather the information, the technique of in-depth interview was used. Each participant was asked to describe in depth their narratives to promote a profound dialogue and recreate their experiences. Based upon the purpose and object of study, the topics for the interviews were specifically directed towards the effect (experience) of obesity as experienced by the adolescents between 15 and 17 years old. This was a rigorous process, developing semi-structured and open questions related to the experience and feeling of the participant about being obese, as well as about the challenges to achieving a healthy weight, and their recommendations in developing a curriculum guide.

The selected participants for this study were obese adolescents enrolled in different high-schools of the public education system of PR. Quota and selective sampling techniques were used (14). Selective sampling is a non-probability sampling. This technique does not allow an objective representation of the population being studied, as the technique relies on the judgement of the researchers who select the sample. Each criteria of judgement is established according to the knowledge of the researchers. However, it must be duly justified (14). Quota sampling establishes in advance the number of participants that the researchers would like to use as a sample. These in turn, must meet certain specific characteristics, consistent with the purpose of the study (14). The sample consisted of eight obese adolescents 15 to 17 years old of both genders from three high-schools of the Education Department's region of San Juan. The group age responded to the difficulty to conduct in-depth interviews with younger populations. Therefore, the inclusion or eligibility criteria for the selection of the participants were: adolescents of both genders (male and female), have 15 to 17 years old, live in PR, being overweight or obese, and having tried or being trying

to lose weight. Adolescents who did not meet the inclusion criteria were excluded. Percentiles defined by the Centers for Disease Control and Prevention (CDC) were used as the criteria to determine whether a participant was obese (over the 95th percentile).

## Instruments

Three instruments were used to gather the information. These were: an interview protocol, a logbook and a form. A content analysis of the instruments was conducted by experts in the field. Three educators of the fields of health education, teaching and curriculum design, and research served as judges for the content analysis. Each judge has given the instruments and a form with the criteria to determine the validity of the instruments. Face and logical validity were obtained through the judges (14, 15).

The interview protocol included three open-ended questions which focused in the experience of trying to reach a healthy weight, the experience of being obese, as well as their recommendations for a curricular guide. The use of a protocol during the interview increased the validity and reliability of the study (16).

The second research instrument used was a log where information related to research activities were recorded (17), as well as the ideas that resulted from the analysis and comments. Information was coded by assigning categories. Logs are valuable instruments to establish the validity and reliability in a qualitative analysis (18).

The third instrument was a form in which all the observations and transcriptions were written. The forms were reviewed by the participants to confirm, eliminate or add information, and to obtain their approval of the content.

## Procedures

Schools were selected by convenience. Three high-schools of the academic region of San Juan were visited and two were selected; six participants were selected from one school and two from the other. The recruitment process included the distribution of a promotion placed in the school's bulletin boards with information about the study, including the selection criteria and the purpose of the study. These schools were intentionally selected because of the easy access, availability, and interest expressed by the concerning authorities.

As part of the selection process of the participants, an orientation was programmed with teens and their parents or guardians to explain the objectives of the study, the handling of documents, assurances of confidentiality, risks, and benefits. Their free and voluntary participation was emphasized. Adolescents were given a letter of intention to obtain their assent for their free and voluntary participation. Participants and their parents or guardians signed the document of assent and informed consent respectively. This study was approved by PR's Interamerican University institutional review board (IRB) to be conducted between May 11, 2011 and May 11, 2012.

After this process, telephone communication was made with the parents and adolescents to coordinate their participation and a calendar was developed based on their availability. These interviews were transcribed for analysis purposes, which was conducted identifying categories or topics to organize the information. Interviews had a duration of approximately 60 minutes and were transcribed word by word, (including pauses and silences) by the principal researcher using a digital recorder. Interviews were conducted in approximately two weeks at a location provided by the school. Parents and guardians waited for the participants until the interview with the adolescent was completed. The place where the interviews were completed provided a room free from distractions, comfortable and large to provide the privacy and confidentiality of the adolescents. Each participant was assigned a numerical code from one to eight to protect their identity.

The day of the interview, a certified personal trainer took the anthropometric measures of weight and height to determine the body mass index and classify their level of obesity. Obtaining these measures was conducted in an equal condition environment. All the participants were measured wearing their school uniform, but no shoes nor jewelry. The trainer used a Detecto scale to measure the weight and a tape measure for the height. The body mass index (BMI) was calculated using the height, weight, age and sex (19). The units used to calculate it are weight in kilograms divided by the height in meters.

### Analysis

The technique of data triangulation was used for the validation of the information (16). This analysis included three general strategies through which information was obtained and corroborated. These strategies include exploring, analyzing and evaluating the information (16). This involves the reviewing of conceptual or theoretical foundations, differing explanations in the literature, and the information or experiences that result of each interview. The application of these three strategies for each area, provided the internal and external validity to this research, establishing greater reliability for the results.

The interpretation of data and information resulting from the interviews and documents reviewed was conducted using the qualitative content analysis technique (20, 16). The process of the content analysis included the critical, comprehensive and thorough organization and interpretation in order to group and categorize the information where there was agreement among the participants. Results were organized descriptively using verbatim narration. The descriptive categories were defined taking as a base the research questions and were illustrated by designing tables, which contributed to summarize, with greater objectivity, the findings of this study. This analysis process allowed to answer the three research questions of this study. Finally, each protocol, logbook, form and audio tapes were stored in a file that is locked. After an estimated three-year period, these were destroyed to protect the identity and confidentiality of participants.

## Results

### Participants

Eight obese adolescents 15 to 17 years of which seven (88%) were female and one (12%) was male. One participant was foreign, and seven were living in urban areas. In terms of education level of their parents, one father had elementary education; two mothers and four fathers had secondary education; two mothers and two fathers had an associate degree; one father and three mothers had a bachelor degree; and one mother had a master degree. In terms of household annual income, four adolescents (50%) indicated that it ranges from \$3,240 to \$8,000, three (37%) indicated from \$21,000 to \$38,000 and only one participant said that it was \$60,000.

### Anthropometric measures

In terms of anthropometric measures, five of the participants (63%) had a body mass index (BMI) of 30.0 to 34.9, while three participants (37%) showed a BMI between 35.0 and 39.0. This means that all the participants are classified in the category of obesity. These BMIs place participants above the 95th percentile indicating that all would be classified as obese.

### Experience of trying to reach a healthy weight

This study found that the experience of trying to reach a healthy weight was difficult. One participant perceived that a good physical condition was required in order to perform the physical-athletic activities. This participant expressed: "... well it has been tough ... difficult, because one needs to be in good condition ... in the gym, you have to run half an hour, I can't run half an hour because I get tired too quick, then it becomes like going uphill." Likewise, they pointed out that it is difficult to obtain a healthy weight due to the effort one needs to exert to achieve that goal and keep the desired weight. The expression that better describes this was: "It's difficult to lose weight and one needs to do one's part to reach it and not gain weight again." The participants also mentioned that this experience is difficult due to the negative feelings of anxiety and failure that they go through while performing the physical activities to lose weight. One participant also expressed: "When I am anxious, I even feel like crying, crying because I say to myself: 'Damn! It's so hard for me, I want to continue, but anxiety doesn't let me'; 'I simply tried, but I always gave up, I didn't have enough willpower to do it ...'." The participants also mentioned that it is hard to lose weight because they do not have the support of their parents or a trainer. The most representative expression of this was: "Maybe I'm looking for that motivation in my family, but I don't find it, specifically from my dad and my aunt who are obese people. All they do is criticize me instead of supporting me because I am doing it on my own". Furthermore, it was pointed out that it is difficult to keep in shape because of the availability of food with low nutritional value around them: "when [...] you are not home [...] it is difficult because that's when you eat the most [...] you eat fast foods".

### Experience of being obese

In relation to being obese, it was found that this situation is difficult and negative due to the association of this health problem with other health conditions. A participant indicated: "What will become of me, I mean, about my overweight problem". Likewise, they mentioned that they cannot perform physical or athletic activities effectively. An adolescent expressed: "We have to make an effort to walk or to perform certain things which a person can normally do". They also expressed negative feelings and perceptions about themselves: "I sometimes called myself fat pig"; "I don't feel good about the way I am"; "Sometimes I have felt that I wanted to die... because of all the criticism... that I eat a lot... that I am too obese... once I wanted to kill myself, but no... I can't do that..."; "In occasions, our self-esteem is low for being obese, or how clothes fits us, what people say about us... sometimes we are going up the stairs and we feel fatigued, things like that, and one feels heavy...". Similarly, these youngsters have had negative experiences with diverse social groups, therefore, they feel that they look bad for society. They indicated that people perceive them as lazy and ugly individuals. The expressions that better illustrate this are: "People are influenced by what they see. Surely, they say that I eat a lot, that I don't do things with effort"; "Maybe for them I am ugly because I'm chubby and then they push me away". Based on these negative experiences, several of the participants pointed out that they felt discriminated and that society makes fun of obese people. The most relevant expressions to this were: "A lot of people always discriminate and I don't like this"; "People are very conceited with obese or overweight individuals, they make fun of us... they call us nicknames... they compare us with animals... sometimes they say we look like elephants or whales, things like that".

### Considerations for the development of a curriculum guide

In terms of the considerations for the development of a curriculum guide, the youngsters emphasized the need to develop a physical education curriculum that would allow to address the educational needs of overweight and obese adolescents. In this sense, expressions as follow were obtained: "I don't like the physical education class because it doesn't motivate me... I find it a routine... They don't do things that interest me, they make me feel bored... I don't want to go in..."; "[Classes should incorporate] the exercises that they [overweight and obese people] can do," "Teach them how to eat healthy and slow, not fast," "Motivate them," "Help and support them."

## Discussion

### Experience in trying to reach a healthy weight

The results of this research evidence that the experiences of these obese adolescents trying to reach a healthy weight were difficult and negative. The biopsychosocial variables (functional physical disability, effort, social support, and the obesogenic environment) had a direct impact on the attempt of this health

goal by this sample. The adolescents perceived having physical limitations to perform exercises or athletic activities. Other researchers (8,21) have also found that youngsters identify athletic limitations as barriers to decide losing weight and that obese people show negative attitudes toward sports. Hence, overweight and obese youngsters don't want to participate in physical-athletic activities. Participants also stressed the effort they have to do to reach a healthy weight. This result agrees with previous research (22) where youngsters expressed that losing weight is difficult to reach and maintain and requires a high level of perseverance and control. Furthermore, they described the process as a prolonged and eternal struggle, making the allusion to the term, "yo-yo". Losing weight altered their lifestyles because they had to stay on a rigorous diet and perform physical-athletic activities. Participants of our study also pointed out the difficulty they had to lose weight because they didn't count on a support team to achieve a health goal, which could include parents, coaches and health professionals. Likewise, previous research (8,9) evidenced that obese adolescents who wished to lose weight received the disapproval and opposition from their obese or overweight peers in the effort of losing weight. Similarly, other studies have showed that the health professionals had manifested a high level of insensibility toward these individuals. They even had converged in a discriminated and stereotyped behavior toward them in the clinic scenario (26). Prejudice is prevalent against overweight and obese people (23, 24).

Participants also expressed that it is difficult to lose weight due to the obesogenic environment which is found in the modern society. Other researchers have concluded that this was due to how the current environment (including the school scenario) promoted the intake of fast and poor nutritional food. Furthermore, the level of influence which this variable had on the decision-making process of these individuals was observed. The youngsters identified the intake of non-nutritional food in school as a barrier to decide losing weight. Therefore, this dimension must not be evaded to the effective attention of the obese and overweight problem among adolescents.

### Experience of being obese

According to the experience of being obese, results show that it was difficult due to the negative repercussions which the reality of being obese had in their lives from a biopsychosocial perspective. It was demonstrated, how suffering from this condition provokes other health problems, including those which have to do with functional and physical ability to perform athletic activities, which leads to the construction of negative perceptions and feelings of themselves, and health problems related to their emotional well-being (25). This stage is particularly important as adolescents are very sensitive to cultural messages (28). Although the results of this study cannot be generalized to all the obese adolescents in PR, the adoption of a biopsychosocial perspective is recommended in terms of research, clinical and educational practices to take into account

and integrate different aspects that affect the physical and emotional well-being and outcomes of obese and overweight adolescents trying to achieve a healthy weight. Such aspects include nutrition, exercises or physical activities, motivation and effort of each individual, social support, management of the obeseogenic environment, satisfy the educational needs of the youngsters in the physical education class and educate the general population about the problem of overweight and obesity in relation to their negative health outcomes.

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## Resumen

La obesidad, en la mayor parte del mundo, ha sido descrita por las autoridades médicas como la enfermedad pediátrica más común en niños y jóvenes. Objetivo: Explorar, describir y analizar las experiencias de los adolescentes obesos de estar obesos y de tratar de alcanzar un peso saludable. Diseño y método: Se obtuvo una muestra por conveniencia de ocho adolescentes obesos de 15 a 17 años de ambos géneros de tres escuelas superiores de la región educativa de San Juan, Puerto Rico. Se aplicó un diseño fenomenológico de casos múltiples utilizando una entrevista semiestructurada. Resultados : La experiencia de tratar de alcanzar un peso saludable es difícil porque requiere mucho esfuerzo físico para hacer los ejercicios y las actividades físicas, carecen del apoyo de sus padres y entrenadores y por la disponibilidad de alimentos con un bajo valor nutritivo en el ambiente externo. Los participantes también destacaron que es difícil debido a los sentimientos negativos que experimentan mientras realizan las actividades para perder peso. Conclusiones: La meta para alcanzar un peso saludable es difícil. Es recomendable que las agencias que trabajan con los problemas de sobrepeso y obesidad provean a las personas con el conocimiento, estrategias, alternativas y las actividades necesarias desde una perspectiva biopsicosocial para ayudar a los adolescentes con estas condiciones de salud a ser exitosos en alcanzar y mantener un peso saludable.

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