

## Strong beliefs on personal responsibilities and negative attitudes towards the child with obesity among teachers and parents

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### ABSTRACT

**Introduction.** It has been reported in industrialized countries that overweight or obesity is a stigmatizing condition. Negative attitudes towards obesity have been linked to incorrect beliefs about the causes of weight gain and the responsibilities of such overweight or obese people and their family.

**Objective.** The aim of this study was to assess the attitudes towards children with obesity by teachers and parents.

**Material and Methods.** Two-hundred and five teachers and eighty parents from two Mexico-USA border cities participated in the study. A questionnaire with 13 issues including attitudes towards the obese child was applied. Questions were grouped into three categories: Attitudes about features of the obese child, attitudes related to the care of the obese child, and beliefs about obesity self-control. Bivariate analyses and Chi Square test of associations were computed.

**Results and Conclusions.** Participants with normal Body Mass Index (BMI), and those who overestimated the role of self-control for losing weight have more negative attitudes towards the obese child. Participants with normal BMI, and those with adequate perception of adults, boys and girls body image emphasized more on the lack of self-control of the obese child.

**Key words:** Negative attitudes, childhood obesity, self-control

### RESUMEN

**Fuerte creencia en responsabilidades personales y actitudes negativas hacia niños con obesidad entre profesores y padres**

**Introducción.** En los países industrializados se ha reportado que el sobrepeso o la obesidad es una condición estigmatizante. Las actitudes negativas hacia la obesidad han sido asociadas con la creencia incorrecta acerca de las causas del aumento de peso y las responsabilidades del sobrepeso por las personas y sus familiares

**Objetivo.** Valorar las actitudes de los maestros y padres mexicanos hacia los niños con obesidad.

**Material y Métodos.** Participaron en el estudio doscientos cinco maestros y ochenta padres de dos ciudades mexicanas fronterizas con los Estados Unidos. Se aplicó un cuestionario que incluía 13 reactivos sobre actitudes hacia el niño obeso. Se agruparon las preguntas en tres categorías: 1) actitudes sobre las características de los niños obesos, 2) actitudes relacionadas con la atención al niño con obesidad, 3) opiniones sobre la importancia del autocontrol para la obesidad. Para evaluar asociaciones, se realizó un análisis bivariado y la prueba de Ji-cuadrada.

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**Recibido:** el 17 de diciembre de 2008. **Aceptado para publicación:** el 8 de abril de 2008

Este artículo está disponible en <http://www.revbiomed.uady.mx/pdf/rb081922.pdf>

**Resultados y Conclusiones.** Las personas con índice de masa corporal normal (IMC) y quienes sobreestimaban el papel del auto-control para perder peso, tuvieron más actitudes negativas hacia el niño con obesidad. Quienes presentaron IMC normal y estimaban adecuadamente la imagen corporal de adultos, niños y niñas le dieron mayor importancia a la falta de autocontrol de los niños con obesidad.

**Palabras clave:** Actitudes negativas, obesidad infantil, autocontrol

## INTRODUCTION

It has been reported in industrialized countries that overweight or obesity is a stigmatizing condition (1). Negative attitudes toward obesity have been linked to incorrect beliefs about the causes of weight gain and the responsibilities of such overweight on people and their family. Besides, obesity has been considered since medieval times as the result of laziness or gluttony (2). Recently, it has been hypothesized that in addition to genetics, there are pre and postnatal risk factors. Thus obesity is due to several cultural contingencies, such as family and friends promoting sedentary practices and over-eating; as well as an organized industry such as the fast food business and their promoting media. In addition, there is a fast growing technology that contributes to all of us to develop sedentary habits for both at work and recreation i.e computers, TV, movies, DVD music, etc. According to the Behavioral Ecological Model (BEM) the two are synergistic, fast food and recreation or sedentary work which often takes place together. The use of technology that enhance sedentary habits and the reinforcing nature of eating fast food (high sugar, fat and salt contents) maximizes natural reinforcements for such abnormal eating patterns (3).

The BEM emphasizes cultural contingencies of reinforcement (3). First, “patterns of food consumption or sedentary life” can be broken down into component behaviors. Second, the model

asserts levels of environmental control. At the individual level, biological feedback systems (i.e withdrawal symptoms) prompt “patterns of food consumption or sedentary life” and doing so provides relief and pleasure. These reinforcing consequences keep ongoing “consumption or sedentary life”. However, as family, friends or other people criticize “consumption, sedentary life or obesity” or encourage an alternative behavior (for example, healthy food consumption or physical activity); therefore rate, timing and context of “patterns of food consumption or sedentary life” can change. Third, influence could arrive from social agencies that are more distant than family and friends. This includes clinicians, teachers, a broader society and the media. These sources of influence range from minimal to intense in nature. Physician or teacher’s advice might be considered minimal and the ongoing counseling a more intensive intervention. Additionally, social and economic matters have evolved to provide inexpensive energy-dense foods to overlook the need of physical activity, and to promote sedentary entertainment options (4). The BEM could also be applied to attitudes of people towards the obese. Different contingencies at individual and family level up to the social sphere have stigmatized the obese population as if their condition was the result of gluttony and laziness. Thus, overweight and obesity control as well as mechanisms for tolerance and acceptance of the obese requires all available interventions to be applied simultaneously in order to reduce the diabetes epidemic.

Some of the prejudices regarding obesity come directly from children role models or educators, such as those from health care professionals (5-11), teachers (12), parents, etc. Price (5) found that an important number of family practice physicians held negative or stereotypical attitudes towards obese patients (i.e. patients with a lack of control, laziness, etc.). Additionally, the level of weight (overweight vs. obesity) is an important issue for the attitudes of general practitioners and clinical psychologists (1). Among children it has

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also been reported rejection of the obese child (13). In the USA, Latner and Stunkard found that among children the bias against their obese peers was stronger in 2001 than in 1961 (13). In Mexico, children and teens tend not to choose an obese peer as a friend; Mexican mothers who have an obese child did not choose an obese child as a friend for their children (14-16).

Possible consequences of obese stigmatizing include decreasing levels of self-esteem, sadness or depression, and high-risk behaviors for smoking or alcohol consumption (17-19); Strauss reported that Hispanic and white obese females shown lower levels of self-esteem at early teens (17).

It has also been hypothesized that African-American and Mexican-American are more accepting overweight figures, in particular, it has been reported that black women and men have a higher acceptance of larger body size than white ones (20); however, controlling for age, education and body weight has shown that ethnicity does not influence preferences for female and male shapes, or tolerance for obesity (21). From the studies conducted on Latino population in the USA, it is likely that higher levels of overweight and obesity may be viewed as normal and even preferred by some. Among education staff, as well as among parents, the perception of ideal body size may influence the attitude towards the obese child and the identification of high-risk subjects for intervention programs. Teachers and parents are usually models to growing children; however, we have found no studies that evaluate attitudes from Mexican teachers and parents towards obese children. Thus, the aim of this study was to assess the attitudes towards the child with obesity among Mexican teachers and parents.

### METHODOLOGY

**Setting:** Tijuana and Tecate are the two north-western-most Mexican Cities of the State of Baja California that share borders with the U.S. county of San Diego, California, according to the 2000 census (22). Baja California has approximately

2,480,000 residents and shares a strong economic and cultural relationship with the United States. According to INEGI, during the academic year 2003-2004 the figures of operating schools in the area were 3,011 having 597,000 enrolled students and 25,993 teachers. Tecate had 66 public elementary schools, 492 teachers, and 12,906 students, and Tijuana had 553 public elementary schools, 5,767 teachers, and 183,600 students. More than 50% of teachers from Baja California are allocated in the cities of Tijuana and Tecate (23).

**Population of study:** Two-hundred and five teachers (100 from Tecate and 105 from Tijuana) and 80 parents from 12 Tijuana schools and 9 Tecate schools participated in the study. Recruitment procedures and representative samples. The school principals, teachers and parents were contacted and told about the purpose of the study. The principals were also asked permission to recruit members of staff outside the classrooms and during the break. All the teachers from all the schools from a school district (medium to low socioeconomic class area) were asked to participate during an eight-week period (February- April, 2005). Ninety percent of them accepted to participate. Parents were asked to participate before or after school hours of whom, 79.0 % accepted to participate (24).

**Measures.** Participants were given a questionnaire with 13 questions including attitudes towards the obese child (6 regarding features of the obese child, 4 regarding caring of the obese child and 3 regarding beliefs on personal responsibility of obesity), plus questions regarding demographic characteristics such as age, gender, occupation, as well as, self weight and height, self-perception of body size and perception of ideal body size for adults and children. Participants were asked to circle the ordinal scale that best represented their agreement with a given statement indicating: strongly agreed (number 1); agreed (number 2); uncertain (numbers 3 to 5); disagreed (number 6) or strongly disagreed (number 7). Furthermore, they were shown a pictogram (adapted from the

paper by Stunkard *et al*) of two different age groups, 6 to 10 and 35 to 45 years old, for male and female, respectively (25). Subjects were asked to indicate the number of ideal body size for each group, and to indicate the number they identify themselves according to their body size. The ethical committee of the Instituto de Nutrición de Baja California approved the study. A written consent of approval was obtained from all participants.

**Reliability.** Reliability of the questionnaire, including identification of body size was determined by a 1-3 week test-retest procedure. Test-retest agreement for all questions ranged from  $r = 0.55$  ( $p < 0.05$ ) to  $0.98$  ( $p < 0.05$ ), while the mean of the ideal body size and self-identification of body size was  $r = 0.9$  ( $p < 0.05$ ). Average size of 18 selected questions was  $r = 79.8$ .

**Data analysis.** The data were analyzed using SPSS 11.5 for Windows. Attitudes are presented by percentage of those who agreed (when the numbers were 1 or 2), those who were uncertain (when the numbers were 3 to 5), and those who disagreed (when the numbers were 6 or 7). Questions were grouped into three categories: Attitudes concerning features of the obese child, attitudes related to the care of the obese child, and beliefs about obesity self-control. Descriptive univariate statistics including ranges and means, and bivariate analyses such as Pearson and Chi Square test of associations, were computed.

## RESULTS

Two-hundred and five teachers and eighty parents responded the questionnaire. Age, gender, Body Mass Index (BMI), and waist size of the participants are shown in **Table 1**.

Distribution of the responses about features of the obese child, the caring of the obese child and beliefs about the role of self-control on the prevention and control of weight gain are shown in **Table 2**.

Twenty-six percent of overweight ones ( $>25-29.9$  kg/m<sup>2</sup>) consider themselves as having a healthy body weight, 77.0 % of the obese ( $< 30$

kg/m<sup>2</sup>) consider themselves overweight (70.0 %) or with a healthy body weight (7.0 %). Ninety-six per cent of men with a waist size bigger than 40in consider themselves either, overweight (82.0 %) or obese (14.0 %), and 88.0 % of women with a waist size higher than 35in consider themselves either, overweight (72.0 %) or obese (16.0 %).

Approximately 55.0 % of the participants completely agreed or were uncertain with negative statements about the obese child, 27.0 % agreed or were uncertain about reluctance to the caring or teaching an obese child, and more than 90.0 % of the participants belief that weight control is the result of personal responsibility (**Table 2**). In **Table 3** predictive negative factors towards the obese child are shown.

## DISCUSSION

The result of this study shows that both teachers and parents, males and females, have a strong negative attitude towards the obese child, who emphasizes on personal responsibility and self-control as causes of obesity. Teachers have lower negative attitudes toward the obese child, but gave a higher importance to the role of self-control for the prevention and treatment of childhood obesity (**Table 3**).

**Table 1**  
Demographic Characteristics of Subjects Groups

	Teachers N=205		Parents N= 80		All N= 285	
Age (years)	38 (20-59)		32 (17-64)		37 ( 27-64)	
Gender	N	%	N	%	N	%
Male	53	26	28	35	81	28
Female	152	74	52	65	204	72
BMI						
≤18.5	0	0	2	2.5	2	1
18.5-24.99	57	27.8	32	40.0	89	32
25-29.99	77	37.6	32	40.0	109	39
≥ 30	63	30.7	14	17.5	77	28
Waist Circumference						
Male ≥ 40in	18	38	4	14	23	28
Female ≥ 35in	68	48	24	46	29	45

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**Table 2**  
**Distribution regarding features of the obese child, the caring of the obese child and the knowledge about self-control and obesity**

<b>Attitudes about features of the obese child</b>	% Agree	% Uncertain	% Disagree
Most obese children are aggressive	13	35	52
Most obese children have been spoiled	24	36	40
Obese children rarely express their true feelings	18	39	43
Most obese children experience unresolved anger	14	31	51
Most obese children are lazy	24	37	39
Most obese children lack self-confidence	25	44	31
Mean	18	37	44
<b>Attitudes Related to the Care of the Obese Child</b>			
Caring for an obese child is physically exhausting	20	41	39
Teachers feel uncomfortable when teaching obese children	7	10	83
Caring for an obese child repulses me	5	7	88
Most teachers would prefer no to teach an obese child	4	13	86
Mean	9	18	74
<b>Strong Beliefs on Personal Responsibility of Obesity</b>			
Childhood obesity can be prevented by self-control	77	19	4
Weight loss is only a matter of changing lifestyles	64	25	11
Most obese children can lose weight if they change their eating habits	76	20	4
Mean	72	21	6

These attitudes are more negative than the reported by their American counterparts (12). The high importance that this group gave to self-control of childhood obesity, as the only way to prevent and treat obesity, is consistent with the negative features that characterize the obese child (more lazy, lack of self-confidence, being spoiled, more aggressive, rarely shows true feelings), which suggests limited knowledge about other genetic and environmental factors involved in the origin of obesity (26). Provision of information explaining the obesity had limited positive influence on the children's attitude (27), but different studies have shown that body image perception is affected by cultural ideals and values (28,29). Attitudes towards obesity and the implications of body image perception on self-esteem might be culturally related, and Mexican-American adolescents have shown that those ones satisfied with their body had

higher self-esteem, and a strong negative correlation has been reported between body image and body fat composition (30). As a result of the stigmatization of the obese children their life quality is reduced. Measured by distress, it has been shown comparable to those receiving chemotherapy (31), which is a condition that children did not choose; however teachers and parents in this study invoke negative behaviors, suggesting the concept of own responsibility.

Different contingencies affecting the attitudes towards the obese child may also prevent positive attitudes from even overweight and obese people. Parents and teachers are the most important people in the life of children, their communication and affection is vital to develop self-esteem; besides parents and teachers are key models to children and their attitude is being learn by obese and non-obese children, therefore, stigmatization from them will make a social environment more

**Table 3**  
**Predictive negative factors toward the obese child**

	n	OR (95% CI)	X <sup>2</sup>	P
<b>Risk of Negative Attitude Toward the Obese Child</b>				
Male:Female	282	0.85 (0.65-1.12)	1.24	0.25
Teachers:Parents	271	0.50 (0.39-0.66)	26.41	0.0001
BMI < 25 vs > 25 kg/m <sup>2</sup>	277	1.53 (0.39-0.66)	10.48	0.001
Adequate estimation of adult image (≤ 4 image vs ≥ 5 image)	262	0.85 (0.65-1.12)	1.35	0.25
Adequate estimation of boy image (≤ 4 image vs ≥ 5 image)	273	1.19(0.92-1.55)	1.84	0.175
Adequate estimation of girl image (≤ 4 image vs ≥ 5 image)	272	1.44(1.12-1.85)	14.12	0.0001
Limited knowledge about the role of self-control	264	1.87 (1.33-2.49)	14.12	0.0001
<b>Risk of Negative Attitude Toward the Care of the Obese Child</b>				
Male:Female	285	1.5 (1.03-2.18)	4.46	0.03
Teacher:Parents	282	0.81 (0.56-1.19)	1.12	0.28
BMI < 25 vs > 25 kg/m <sup>2</sup>	285	1.06 (0.73-1.55)	0.01	0.75
Adequate estimation of adult image (≤ 4 image vs ≥ 5 image)	271	1.03(0.66-1.61)	0.022	0.88
Adequate estimation of boy image (≤ 4 image vs ≥ 5 image)	281	1.43(0.96-2.11)	3.11	0.078
Adequate estimation of girl image (≤ 4 image vs ≥ 5 image)	280	1.39(0.94-2.96)	2.77	0.096
Limited knowledge about the role of self-control	274	1.15 (0.75-1.75)	0.4	0.5
<b>Strong Beliefs on Personal Responsibility of Obesity</b>				
Male:Female	278	0.48 (0.28-0.85)	6.58	0.01
Teacher:Parents	270	3.69 (2.10-6.50)	22.3	0.0001
BMI < 25 vs > 25 kg/m <sup>2</sup>	275	1.37(0.74-2.52)	0.24	0.30
Adequate estimation of adult image (≤ 4 image vs ≥ 5 image)	256	3.38(1.78-6.40)	14.95	0.0001
Adequate estimation of boy image (≤ 4 image vs ≥ 5 image)	267	2.33(1.15-4.7)	5.66	0.017
Adequate estimation of girl image (≤ 4 image vs ≥ 5 image)	266	2.14 (1.15-3.99)	5.84	0.016

Data are bivariate ORs (95% CIs) and X<sup>2</sup> associations

difficult to the obese child. Family, school environment, society and the media influence attitudes of children and adults towards the stigmatization of the obese child. Thus at different contingencies intervention programs should be addressed to be more effective in preventing stigmatization as well as healthy life styles.

Men have a more negative attitude towards the care of the obese child, while women gave more importance to the role of self-control and own responsibility (as if some children would

choose to become obese) on prevention of obesity, and those who with ideal body weight have more negative attitude towards the obese child (**Table 3**). This is consistent with other studies showing that boys' attitudes were negatively affected by obesity, whereas girls' ratings were not (27). Those who gave greater importance to the role of self-control have higher risk of showing negative attitudes, and those who adequately estimate the body image for adults, boys and girls have more negative attitudes. The results presented in this study might

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have two views: on one hand, adequate identification of ideal body image could help to encourage for personal health care or get into a prevention program; on the other hand, negative attitudes and stigmatization towards the obese children might have adverse effects on teacher-student relationship and children self-confidence. Additionally, those who underestimate overweight and obese children maybe unaware of children at risk and could also be promoters of larger body size that would otherwise be considered unhealthy. It was also found in this study that people who have larger waist size are more accurate, than those with higher BMI, in identifying themselves as overweight or obese. This indicates that abdominal obesity rather than overweight and obesity by BMI status are better predictors for overweight and obese self-perception, which might be a good sign in a population with high prevalence of abdominal obesity. Besides, it has been proposed that patients understanding the weight-related-health risk might be an important step towards setting healthy lifestyle goals (32).

The results of this study should be considered in the light of some potential limitations, primarily concerning the fact that this is a small convenient sample taken from two Mexico-US border cities, teachers and parents in the study were from a predominantly low socioeconomic class. To generalize these findings to Mexican teachers and parents, one would need a more inclusive sampling. Our findings raise issues for future research such as inclusive samples of different regions of Mexico from different socioeconomic class and ethnic groups might be necessary. Additionally, the questionnaire was focused on cognitive and behavioral measurements, but did not assess affective perception, which would be a more comprehensive method for attitude assessment. It is also recommended to evaluate different methods to improve attitudes and behavioral intentions of parents and teachers towards obese children. These findings warrant larger and more representative sampling and more complete measures of cultural

issues that might be contributing to obesity in the Mexican community. In the meantime prevention programs should include the acknowledgement of biological susceptibility and responsibility of the society, as well as de-emphasizing the concept of own responsibility.

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