

## Anti-obesity Public Service Announcements: An Exploratory Study on Perceived Realism and Identification with Advertisement Characters

Anuncios públicos contra la obesidad: estudio exploratorio sobre  
realismo percibido e identificación con los personajes de anuncios

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**Abstract.** Mass media outreach represents an important vehicle to address widespread obesity; however, literature evaluating the effectiveness of the anti-obesity message is scarce, and the concept of identification has not been reviewed in that context. Identification with message characters and perception of realism facilitate engagement and foster message effectiveness. Fifteen women were presented with four portrayals of the overweight, in one-on-one interviews: (1) a sedentary, overeating obese individual; (2) an overweight person struggling with daily activities; (3) another overweight person in a low-income socio-economic context, and (4) an overweight woman exercising and limiting her in portions. This exploratory study indicates that associating an obese person with some negatively perceived activities limits identification, regardless of activities being perceived as realistic.

**Keywords.** Obesity, identification, perceived realism.

**Resumen.** Los medios masivos proporcionan un vehículo importante para combatir la obesidad; sin embargo, la evidencia científica de la eficacia de los anuncios contra la obesidad es escasa y el concepto de identificación poco desarrollado en ese contexto. La identificación y percepción de realismo, facilita el involucramiento y fomenta la eficacia del mensaje. A quince mujeres se les presentaron cuatro representaciones de personas con sobre peso: (1) una persona sedentaria con obesidad, comiendo en exceso; (2) una persona con sobre peso, realizando con dificultad actividades diarias; (3) varias personas con sobre peso, en un barrio de nivel socio-económico bajo; (4) una persona con sobre peso, haciendo ejercicio y limitándose en sus porciones de alimentos. Este estudio exploratorio sugiere que asociar a una persona con obesidad a las actividades percibidas negativamente, limita la identificación, independientemente de que las actividades sean percibidas como realistas.

**Palabras clave.** Obesidad, identificación, realismo percibido.

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## Introduction

Obesity has become a burning issue: according to World Health Organization, overeating represents a bigger health risk than insufficient food intake, with the exception of sub-Saharan Africa region and some parts of Asia (Lozano et al., 2012). Mexico has one of the highest overweight rates in populations aged 15-74 (Organization for Economic Cooperation and Development, 2017). In 2016, 72.5% of Mexican adults were overweight (Secretaría de Salud, 2016). For a problem of such a broad scope, mass media, supported by the evidence of public health campaigns, represent an important tool to influence behavior (Hornik, 2002). Among its various responsibilities, the Mexican Institute of Social Security (IMSS) has issued television adverts against obesity. Although the organization addressed the problem effectively in some aspects, Wrzecionkowska's research (2017) points to certain undesired effects related to the portrayal of the overweight characters in these public service announcements (PSA).

The way PSAs characters are portrayed, and how realistic their presentation is regarding their looks and events in their lives, influences the audience's empathy with these characters and perception of their narrative as a whole. For instance, in some alcohol advertising and anti-alcohol messages, the effect was undermined when stories were regarded as "unrealistic" or "fake" (Pinkleton, Austin, & Fujioka, 2001).

Perceived realism refers to whether an event is possible to occur, common (typical) and whether it has actually occurred in real life, taking into account the consistency and quality of its narrative (Hall, 2003, in Cho, Shen, & Wilson, 2013). Cho, Shen and Wilson (2013) study showed that perceived realism increased identification and high identification, in turn, increased estimation of personal probability.

Identification, understood as the audience's perceived connection with a character, experiencing what happens to the character as one's own experience (Cohen, 2006, p. 184), was shown to have a positive impact on the overall message effect. Cohen (2001) indicates that it helps viewers to see an issue from a different perspective allowing for a change in attitude, and to evoke emotional reactions, engagement and message liking.

Identification depends on the message, its character and the viewer (Cohen, 2006, p. 185); some similarity between the viewer and the character is therefore required to generate identification. Cohen following Press (1989, in Cohen, 2001) talks about similarities based on demographic characteristics (e.g. age, gender, race), as well as motivations, sentiments, values, behaviors, attitudes towards issues and events. Some authors sustain that the demographic similarity may not be necessary if a perceived one is achieved (Cohen, 2006, p.188).

The importance of identification has been shown in media entertainment formats, such as television series, but also in short formats like advertising or PSAs. For instance, Hoffner and Buchanan (2005) found that adolescents' identification with alcohol advertising characters may increase their alcohol consumption. On the positive side, several studies have reported (e.g., Basil, 1996; Suggs, McIntyre, Warburton, Henderson, & Howitt, 2015) that identification with celebrities in PSAs increased intention to adopt pro-health

behaviors. Still, there is little information on perceived realism and identification in the context of anti-obesity adverts.

The objective of this research was to explore which portrayals of overweight characters in anti-obesity PSA facilitate or limit identification. Additionally, the overall effect of each advert was analyzed.

## Method

### *Design*

A qualitative study with phenomenological design was carried out to understand the individual's subjective reception of different portrayals of the overweight characters presented in anti-obesity PSAs, to elicit facilitators and barriers of viewer identification with these characters.

### *Participants*

Judgement sampling was applied (Malhotra, 2008, p.340) to recruit women with the following characteristics: (1) with children, (2) overweight, (3) with a low-income (background) (D+ in the classification of the Mexican Association of Market Research Agencies (AMAI)) - the predominant socioeconomic status in Mexico, representing 36% of the population (AMAI 2009).

Women with children were chosen as an important audience, as they can influence their own habits and those of their children. This is especially true in Mexico, where mothers have more influence over food and meal choices compared to fathers (Instituto Nacional de las Mujeres, 2007). Additionally, mothers are more present at home, accompanying their children. In México, 43% of women are labor active vs. 78% of men; and women more often carry out unpaid housework (Instituto Nacional de Estadística y Geografía, 2016).

Women were recruited while waiting for their children in front of an elementary school. Neighborhoods around the school represent low socioeconomic status. Verbal informed consent was obtained from all interviewees and the data discussed here is anonymized. Data was collected in September and October 2014 in Mexico City.

### *Materials*

Four IMSS anti-obesity PSAs, later referred to as A, B, C and D, from all 19 anti-obesity PSAs aired between 2009 and 2013 on Mexican television, were selected as stimuli. The selection criteria included: 1) focus on obesity, 2) national reach, 3) part of a long-term strategy, e.g., not an election spot. Each PSA portrayed an overweight character differently: (A) an active overweight woman, exercising outdoors with others and limiting her portion size while cutting a cake at a family reunion; (B) various obese or overweight characters passing by in a less affluent socio-economic neighborhood; (C) an overweight woman struggling with her daily activities: taking a bus, picking up kids from school, shopping; (D) an obese woman overeating in front of television, home alone. All PSAs end with the character entering an IMSS clinic. The advertisements were divided into two clusters (1) A, B, (2) C, D; combining slow and fast-paced announcement to facilitate the differentiation between the two.

### *Instrument*

Two structured questionnaires were developed and applied by the researcher. The first questionnaire consisted of closed questions with regard to participants' psychodemographic information: age, work, education, eating and exercise habits (e.g. How many meals do you eat per day?, Do you eat breakfast?, Do you snack between meals?, How would you describe your physical activity during the day?). Behaviors to lose weight (e.g. Have you tried to lose weight?, If you have tried to lose weight: how many times last year? What did you do to lose weight?, What results have you obtained?).

In this part, participants also self-evaluated their weight range by answering: "Do you think you have: low weight, normal weight, overweight, or obesity?" and provided their weight and height, which served to calculate their BMI. Some of the above questions were adapted from Weight and Lifestyle Inventory (WALI) (Wadden & Phelan, 2002, p.209), a detailed 17-page long behavioral assessment of obese patients. Only a few questions were selected from WALI, as the objective of this questionnaire was to identify key weight management differences in the audience of anti-obesity PSAs, and not the full assessment of obese patients.

The second questionnaire was developed based on advertising copy-testing methodology applied in qualitative evaluation of television commercials through individual interviews (Butterfield, 2003, p.109). This structured questionnaire included questions regarding identification with the spot characters and overall PSA reception.

As regards identification, spontaneous and guided answers were obtained to: "Who do you think this advert is for?", to evaluate whether the participants included themselves within the audience. Global identification was explored through: "Do you identify with any of the characters? and Why?".

To understand overall spot effect, participants answered a series of closed and open questions. Closed questions included a series of descriptors (e.g. "It is for people like me", "It makes me want to change my habits for healthier ones", "It makes me want to lose weight") and a list of contrasted adjectives (e.g. interesting - boring, clear - confusing); for each, respondents indicated on a Likert 1-5 scale how well it described PSA. Respondents were also presented with the list of emotions to mark ones they felt while watching the spot (they could mark as many as wanted, but had to indicate the predominant one).

Open stimuli included: "What are the principle ideas, topics of this spot?", "Imagine that your friend has not seen this spot, please describe it to her, what happens in the spot?", "Are there any scenes that you liked or disliked in this spot?", and "Tell me all that you have thought or felt while watching the advert". The last one was used immediately after the viewing of the spot to incite top-of-mind thoughts and emotions related to the stimuli, based on the thought-listing technique used to analyze the persuasive message processing (Cacioppo & Petty, 1981).

### *Procedure*

Participants were preselected from women who, according to the researchers' criteria, were overweight. The researcher approached them individually to obtain informed consent

for their participation in the study. The first questionnaire was applied upon securing consent; the PSAs were presented afterwards, followed by the application of the second questionnaire. Each session lasted about 45 minutes. The participants did not receive any incentive to participate in the study.

### *Data Analysis*

Audio was recorded and all the interviews were transcribed verbatim. For first questionnaire, data was reviewed to identify the main similarities and differences between participants based on their demographics and weight management behaviors.

Regarding spot reception, answers to open questions were organized in matrices and codified to identify key themes. First, answers regarding the spots' intended audience were categorized to understand whether the participants included themselves within the audience, and how broadly they perceived it.

Frequencies were calculated and activities/situations that generated relatedness were identified for overall identification. Critical discourse analysis was applied to analyze open question responses related to identification and overall spot perception. As proposed by Fairclough (2003, p. 2), discourse is talk and text in action in certain contexts, and its analysis "is based upon the assumption that language is an irreducible part of social life, dialectically interconnected with other elements of social life, so that social analysis and research always has to take account of language", and it should be combined with other forms of analysis. Discourse analysis included: themes analysis, identifying elements that evoked identification and those that did not; e.g., discursive distancing forms like deixis, or use of personal pronouns, e.g. we vs. they, were analyzed; emotional words (identified with the library from the Linguistic Inquiry Word Count program) and counter arguments were sought. For closed questions, values were calculated for each descriptor per spot (based on answers on Likert scale).

## Results

*Sample characteristics.* The participants were 15 women: 13 overweight and two with obesity. They shared demographic characteristics of being mothers from low socio-economic strata, as per the sample selection criteria. Nine had a remunerated job. Seven had secondary education, and eight, bachelor's education. See table 1.

They differed in characteristics related to their weight management, with respect to actions taken to lose weight. Five had not tried to lose weight and ten had, with different results: one kept it only partly off, two gained more than they lost, three went back to their previous weight, and four were still on a diet when interviewed. Out of the last four, only one shared her success spontaneously: she had lost 20 kg. Five out of those who tried to lose weight exercised to slim down (when not dieting, only two of them declared to exercise).

*Identification and PSA perception.* Participants were randomly assigned to view one of two clusters. Eight of those interviewed saw cluster 1, and seven cluster 2. Participants considered that analyzed PSAs were for everyone, with few exceptions. Two mothers

Table 1

*Presentation of women's characteristics.*

	Age	Work	Education	Kids	IMC*	Weight range*	Tried to lose weight	Results from dieting
1	40	yes	BA	2	22	overweight	no	
2	29	no	secondary	1	29	overweight	no	
3	33	no	secondary	1	24	overweight	no	
4	24	no	BA	1	26	overweight	no	
5	42	yes	BA	3	25	overweight	no	
6	30	no	secondary	1	29	overweight	yes	back to the same
7	32	yes	secondary	1	27	overweight	yes	lost some & on diet
8	39	yes	BA	2	29	overweight	yes	lost some & on diet
9	40	no	BA	1	29	overweight	yes	back to the same
10	43	yes	secondary	1	29	overweight	yes	lost & gained more
11	37	yes	BA	2	26	overweight	yes	lost & gained more
12	45	yes	secondary	2	27	overweight	yes	kept off some
13	43	no	secondary	2	29	overweight	yes	lost some & on diet
14	31	yes	BA	1	34	obese	yes	back to the same
15	33	yes	BA	1	37	obese	yes	lost some & on diet

\* self-reported weight &amp; height;

\*\*Answer to: Do you consider being obese, overweight, of normal weight or underweight?

*Note.* Own elaboration based on the information from the interviews.

considered that A was targeted more towards women, and C towards mothers. Table 2 presents the answers to the question “Who is this advert directed to?”

When guided, women considered the advertisements to be aimed at adults and some considered them directed a bit more at women, with the exception of B. All PSAs were considered as aimed at the overweight. C and D were considered by some as addressed to “housewives” and A and B for “those who work”.

Table 2

*Spontaneous answers to "Who is this announcement directed to?"*

A (8)	B (8)	C (7)	D (7)
Everybody (4)	Everybody (4)	Everybody (6)	Everybody (5)
Whole family (2)			
A bit more towards women (2)	Nobody (1)		
People with medium resources (1)			
Family (1)			
People with some illness (1)	Mothers, grandmothers, who spend time with their children (1)	Adults (1)	
People that stay at home (1)			

*Note.* Own elaboration based on the information from the interviews. In brackets -.the number of answers.

Each woman saw two spots. In 12 out of 30 answers, women denied any similarity regarding the different portrayals of the overweight character. Spot C generated the most mentions of identification with the mother/woman. In A, those interviewed related to some activities performed by the character. In B, they considered themselves similar with respect to their overweight figure. In the case of D, only the participant who lost 20 kg identified with the obese character, others denied any similarity. See table 3.

*"Overeating obese"*. Only one participant identified with the obese individual from spot D: the woman who had lost 20 kg, and who had gone from obese to overweight. She felt "horror to see that", she did not like "to see us in some way reflected". She noted that one eats to solve one's problems and this occurs even more so with women who stay at home. She was proud of her success and had no problem admitting that she was like that previously. Identification occurred with her past self.

No other interviewee identified with this character. The one who considered herself obese (BMI 37) and connected with presented behaviors ("sometimes one gets accustomed to eating junk food, sweetened drinks like sodas, juices, all that") thought that the character gave no importance to the problem, and she did. "I am trying to correct what I had not given enough importance to earlier". Another participant, who considered herself overweight (BMI 26), appreciated the realism of the scenes e.g. "I like the scene where the

Table 3

*Interviewees answers to "Do you identify with any character from the spot?"*

A (8)	B (8)	C (7)	D (7)
No (2)	No (3)	No (2)	No (6)
“the woman that is weighing herself” (1)	“the chubby (gordita) woman/ person” (3)	“the mother” (1)	“the woman, because to resolve [problems], on the spur of the moment, one turns to eating” (1)
“the woman exercising & the woman cutting the cake” (1)	“the persons that were passing by” (1)	“the mother carrying the sack” (1)	
“the girls that are jumping, exercising” (1)	“the united family” (1)	“the woman, not so much for being overweight, but for her activities” (1)	
“the person/woman who was cutting the cake” (2)		“one that carries so much” (1)	
“the mother” (1)		“her, because she is so what mature, she has still a lot to give” (1)	

*Note.* Own elaboration based on the information from the interviews. In brackets -the number of answers.

woman is eating, because this is what we do in reality, we sit down with food in front of us and we eat”, yet without identification.

Those interviewed used discursive forms to distance themselves from the character. Overweight participants called her “the obese person” or “that woman”. One overweight participant with a remunerated job considered D to be targeted at “women that dedicate themselves to staying at home”. Some pointed out how the character lost control over her eating (“this woman is eating excessively”), and they did not see themselves like that.

Regarding the overall spot effect, D received the highest score for “interesting” and “worth remembering,” but the lowest for “it is for people like me”. Yet, it received the highest score, at parity with C, for “It makes me want to change my habits for healthier ones.” It evoked almost exclusively negative emotions of high arousal, e.g. anguish, fear, nervousness.

*“Overweight in a less affluent neighborhood”.* In PSA B, interviewees identified mainly via their round figure with “chubbies” (gorditas) or “people that walked in the street” (all characters in B are overweight); one related via a whole family going together to IMSS clinic: “[I identify with] the united family, this is how I always want to see my family.”

Participants pointed out to realism of PSA regarding high prevalence of obesity “this ad is more realistic, because it is true, walking in the street one always sees obese people.” They also mentioned that the PSA situated overweight characters in a poor neighborhood, which



led to comments that the less affluent have more difficulties to access health services. Still others commented on PSA presenting mainly overweight women and not men.

Regarding two that did not identify: one overweight participant rejected the message as discriminatory, only showing a high number of obese without proposing any solution. In her case, the spot triggered some counterarguments, stating that the obese are not so because they want to, but often due to reasons beyond their control. Another participant, obese, considered not being like those portrayed because she (similarly to another participant with obesity in reaction to spot D) was already doing something to address her problem: “no [I do not identify with the character], because I give importance to my problem, I do not behave like I don’t care, and I would eat whatever”.

Regarding overall PSA evaluation, B received the highest score for “confusing”, “useless”, “offensive” and the lowest for “it makes me want to change my habits for healthier ones”, “it makes me want to lose weight”. Together with spot C, it was considered the most boring in the adjective exercise. It received many different emotional reactions, with the exception of high arousal positive ones.

*“Overweight struggling with daily activities”*. Advert C generated identification not only via larger body shape but via performed activities and roles. The woman who lost 20 kg related to carrying a heavy sack, indicating that this was how she felt when obese. Others identified with “the mother,” her shopping, taking a bus, picking up children from school, considering these as activities they carry out themselves. One participant related to the age and moment in the character’s life cycle “[I identify with] her, because she is somewhat mature and she still has a lot to give, to do.”

Although the PSA generated identification, the activities they related to evoked tiredness, which was reflected in the vocabulary they used to describe the PSA: “She gets on a bus with a lot of difficulty”; “You carry your bag with extra kilos and everything becomes difficult”; “You wear out, you get tired, you feel fatigued”; “I got tiered just from watching how she carries that sack and this is the reality, we see that, we who at some point are overweight, and that is what causes fatigue and tiredness”.

Women who did not identify: one (BMI 25) who considered having only a few kilos extra, did not consider sharing the same difficulties; another (BMI 29) got bored with the ad: “I’ve seen the spot so many times, [...], I just did not care much”, which can also indicate a strategy for not processing uncomfortable information.

PSA C received the lowest punctuation for “motivational”, “credible”, “interesting” and was considered boring. Yet in the descriptor exercise it received the highest score for “It makes me want to change my habits for healthier ones” and “it makes me want to lose weight”. It evoked almost exclusively negative emotions of both high (mainly anguish) and low arousals (e.g. guilt and tiredness).

*“Active overweight”*. In the case of spot A, interviewees related to activities of: cutting a cake at a family reunion (the most mentioned), exercising or weighing oneself. It reminded them of activities they do in their daily lives; however, in the case of two women who identified via exercising, only one actually claimed to exercise. One participant related

to the activity of weighing herself “[I identify myself] with the lady who weighs herself, because suddenly I am, up or down [with my weight] a little, like that”.

Among two overweight participants who did not identify, one questioned the plausibility of a whole family going together to the doctor’s. The interviewees were not asked about their family status. If they were single or divorcing, seeing a whole family could block identification.

PSA A as whole was considered the most “motivational”, “credible”, “informational”, and “for people like me”. It evoked positive emotions of high (e.g. enthusiasm and stimulation) and low arousal (e.g. happy and pleased).

## Discussion

The purpose of this study was to explore facilitators and barriers to identification with portrayals of overweight in anti-obesity PSAs. The overall spot reception was taken into account. Four portrayals were analyzed: (A) an active overweight woman, exercising outdoors with others and limiting her portion size while cutting a cake at a family reunion; (B) various characters with obesity or overweight passing by in a less affluent socio-economic neighborhood; (C) an overweight woman struggling with her daily activities; (D) an obese woman alone at home, overeating in front of television.

The portrayal of an obese woman who overeats in front of television did not evoke identification. Portrayals of overweight people did evoke identification, yet it occurred via different means: in B, via similarity in figure; in A, via activities (cutting a cake at a family reunion, exercising and weighing oneself); in B, via figure, activities (taking a bus, picking up children from school, shopping) and role (being a mother, woman).

The activities mentioned above were in general seen as events, situations that happen in their daily lives or activities that they would like to do (for instance, exercising). The event of a whole family going together to a clinic had two interpretations: one participant perceived it as realistic and aspirational; another, as implausible. Although the sample included participants who do not exercise, the activity of exercising did not generate counter arguments regarding its plausibility.

Results suggest that activities could be divided based on their valence: negative ones include overeating, eating in front of television, eating junk food; neutral ones, such as shopping or taking a bus; and positive ones, like a family reunion and exercising. Activities can be also divided with respect to their personal frequency: very frequent, e.g. daily routine and infrequent, e.g. weighing oneself. It is hypothesized that as weighing oneself in Mexico is uncommon, this activity has not developed negative associations.

Similarly, it is proposed to divide the weight range statuses according to their valence: being morbidly obese as negative and not acceptable, vs being overweight as acceptable.

PSA B evoked topics of other statuses, socio-economic level and gender, associating obesity with poverty and being a woman, which limited identification. The low income is predominant in Mexico, yet being poor is a key discriminatory factor. The survey conducted by Consejo Nacional para Prevenir la Discriminación (2011) shows that six

out of ten Mexicans consider wealth as the most divisive factor in society. The gender gap is another common problem in Mexico, which ranks 83rd out of 135 countries in the Gender Gap Report (World Economic Forum, 2013).

Showing obesity as a female problem added to an already discriminated status, even if statistically there are more obese women than men: out of all overweight women, 51% are obese, vs. 38% of men in total overweight male population (Secretaría de Salud, 2016). Discrimination increases stress, generates changes in the concept of self, and may trigger maladaptive coping mechanisms. This stress is adaptive, depending on the number of discriminating statuses a person carries (Stuber, Meyer, & Link, 2008).

Results also point towards another dimension of identification: time, identification with present vs. past self. Negative characteristics did not limit identification when these described the past self and were not true for the present self, as in the case of the participant who lost 20 Kg.

Although she was the only one who admitted similarity with the character in D, it is presumed that lack of identification in others may have been dictated by shame, a self-conscious public emotion related to exposing oneself to public disapproval. Shame arises from personal failure and leads to seeing oneself as defective, as explained by Fischer and Tangney (1995, in Yoon, 2015). Withdrawal and avoidance are the frequent mechanisms of reaction to health problems related with shame.

Regarding the overall evaluation of the spots, results are not unequivocal. Spots C and D received the highest score for “it makes me want to change my habits for healthier ones,” whilst C was considered tiring, boring and least motivational. Based on the study in commercial advertising, higher arousal emotions are recommended so as to strengthen engagement (Lilja, Eriksson, & Ingelsson, 2010); showing a mundane routine goes against this recommendation.

D was also considered “interesting” and “worth remembering,” yet participants rejected resemblance with the character. This, as mentioned, could be explained via shame, but it also points to some problems with the instrument applied. In the case of personal emotion, evoking issues like obesity, traditional spot evaluation with direct questions may not be most adequate strategy.

Increasing effectiveness of communication against obesity is key. Taking into account that a television advert lasts no longer than 30 seconds, selecting activities and statuses that facilitate identification is of great importance. The objective of anti-obesity PSAs is to motivate pro-healthy behaviors. Previous studies have suggested that identification with the character contributes towards achieving that goal, and that perceived realism fosters identification. This study proposes that valence of perceived realism (of actions and statuses that constitute it) needs to be accounted for, as negatively perceived activities may limit relatedness with the character. This study was of an exploratory character, and included small number of participants. Proposed hypotheses require validation via quantitative research, and testing with other themes beyond obesity.

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