International Journal of Business, Human and Social Sciences
ISSN: 2517-9411
Vol:9, No:5, 2015

Demographics Are Not Enough: Targeting and Segmentation of Anti-Obesity Campaigns in Mexico

D. Wrzecionkowska

***Abstract*—**Mass media campaigns against obesity are often designed to impact large audiences. This usually means that their audience is defined based on general demographic characteristics like age, gender, occupation etc., not taking into account psychographics like behavior, motivations, wants, etc. Using psychographics, as the base for the audience segmentation, is a common practice in case of successful campaigns, as it allows developing more relevant messages. It also serves a purpose of identifying key segments, those that generate the best return on investment. For a health campaign, that would be segments that have the best chance of being converted into healthy lifestyle at the lowest cost. This paper presents the limitations of the demographic targeting, based on the findings from the reception study of IMSS (Mexican Social Security Institute) anti-obesity TV commercials and proposes mothers as the first level of segmentation, in the process of identifying the key segment for these campaigns.

***Keywords*—**Anti-obesity campaigns, mothers, segmentation, targeting.

I. Introduction

IN Mexico in the 80ties there were still more women with normal weight than the overweight ones[1]. This picture swapped in the 90ties, with already 62% of women being overweight. These levels kept growing reaching 73% in 2012. So nowadays on the total adult population basis 7 out of 10 adult Mexicans, and 3 out of 10 teens and schooled children are overweight [1]. This makes Mexico a nation with the highest proportion of obese people among the most populated ones [2].

Compared with the massive publicity of unhealthy foods, the campaigns that promote healthy lifestyle are rather scarce. The coordinator of the alimentary health, Xaviera Cabada, from The Power of the Consumer [3] commented that in one hour of television programming, one ad of the Ministry of Health competes with at least 11 commercials of unhealthy foods. Additionally the communication against obesity in mass media is predominantly rational, coming from the fields of medicine, nutrition, politics. It rarely talks to the affected ones on a personal level, giving them motivation to adopt a healthy lifestyle. There is little evidence, information on the measurement of the success of anti-obesity campaigns in Mexico, and the obesity levels, although at a lower rate, yet keep rising.

[1] there is no data available for the male population for this period, ENSANUT 2012

Dagmara Wrzecionkowska is with Universidad Nacional Autónoma de México, C.U., Distrito Federal, 04510, México (phone: +52 55 1919 5159; e-mail: dagmara0510@gmail.com).

The objective of this paper is to look at the potential optimization of the anti-obesity communication in Mexico. Specifically, it is to look at the targeting of the IMSS, Mexican Social Security Institute, TV campaigns, aired in last 5 years. IMSS to my knowledge is the only institution in Mexico that has been consistently, since 2005, airing the anti-obesity campaigns on a national level. These campaigns are designed with the broad public in mind, meaning parents and kids who have IMSS security, age between 13 and 59 years old, from the mid to the lower socio-economic classes [4].

The reception study conducted with Mexican mothers indicates that the targeting of IMSS campaigns is too general, too broad, and mothers, an important sub-segment of the audience that these campaigns are targeted to; do not interpret these as targeted specifically to them. On the other hand the successful campaigns have their audience defined more precisely, on psychographic basis. Hence, taking into account the unproven success of the IMSS anti-obesity campaigns it is proposed to rethink the targeting of these campaigns.

II. Conceptual Framework

A term target in the context of marketing is commonly used when referring to the audience, defined based on some shared characteristics that are to be influenced with a specific campaign. These characteristics may include: demographics (gender, age, income, education, occupation, marital status etc.) and/or psychographics (personality, values, opinions, attitudes, interests, and lifestyles etc.). Defining the target is the first step in developing en effective communication. The next step is to divide this audience into segments that share same characteristics. The goals of segmentation are: identify a homogenous audience; issue more relevant, target message approach; increase the possibility of reaching the audience; improve the receptivity and comprehension of messages [5].

We can say that the targeting is effective when a campaign talks to the people that the offer is relevant to, and it talks to them in a meaningful way, so they can recognize that this campaign is made for them, and maybe even identify themselves with a characters of the ad or find these characters aspirational. In other words, having deeper understanding of the target group allows to identify the relevant message and meaningful form of executing that message, and provides more chance of having this message delivered. “Many social marketing researchers have found that customizing messages to a particular audience maximizes their strength and influence” [6].

The end goal of a campaign, including a public health campaigns, is to persuade the audience to try an offer, or to

adapt a new behavior, like a healthy lifestyle. Effective targeting, although is not a guarantee for the high persuasiveness of the spot, yet it builds the base, without which persuasiveness is hindered. Let´s take an example: if you want to convince a newly met person to go to a gym or a dance class, what would you say to them? If that person cares about their looks, you might tell them how good dancing is for shaping their body, or if they are a social person, you can say how many nice people they can meet there. If they are an introvert however, you might be better off not saying anything. So, the first step to the persuasiveness is knowing the audience, what matters to them, what they like doing, what motivates them. As knowing just the demographics is not enough.

Segmentation via psychographics serves additional purpose of identifying *key* segments. "To be valid a segmentation must provide groups that matter to the company´s financial performance. To start, companies can rank their own customers by profitability as to concentrate the right amount of attention on them. But to grow revenues, a company should understand what makes its best customer as profitable as they are, and then seek new customers who share at least a couple of those characteristics" [7]. If we translate it into health communication domain, it is key to focus on those segments that can provide the best return on investment, meaning those that have the best chance of being converted into healthy lifestyles, at the lowest cost.

A good place to start is to look at the influential segments, those that if addressed, can influence the behavior not only of theirs, but also of other segments. The cost of converting an influential segment might be lower than for the other segments, as this cost is spread over several segments. If we consider the anti-obesity campaigns, a good example of an influential segment can be - parents, as via influencing their behavior, motivating them to improve their eating habits, also the eating patterns of their children can be influenced, as children learn via emulating behaviors of their caregivers. "Parents" would be just the first level of the segmentation. Further psychographics characteristics, related to the obesity problem, would need to be taken into account to better define this sub-segment, these could be:

- being aware of the influence of healthy lifestyle (diet, physical activity) on their weight
- readiness to act upon their problem
- types of barriers and motivators to the healthy lifestyle

Then again the key sub-segment would need to be identified based on the potential return on investment.

III. Why Talk To Mexican Mothers

Parents have potential to shape their children´s eating patterns not only via genes but also via their own behavior. The food selection, making some food more available than others is one of the forms of exercising this influence. Research indicates that children take over their eating habits from the persons they spend most time with, and also children are more likely to eat foods that are already prepared and easily accessible [8]. So if a person that prepares food leaves within an easy reach greasy tacos and fizzy drinks, this is what a child will eat. The same would be true for any other type of food. As shown in the research conducted with schooled children by [9] "Fruit and vegetable consumption were significantly positively correlated with fruit and vegetable availability".

Children learn the eating patterns via imitation, observing the behavior of others, for example "parent´s fruit, juice, and vegetable consumption modeling was positively correlated with consumption of fruit, juice and vegetable by their children" [9]. Seeing the caregiver eating certain foods influences children's acceptance of these foods.

Furthermore, caregivers have potential of using feeding practices to develop eating patterns and behaviors of children. Using particular foods, usually sweet palatable ones, as a reward for good behavior, can result in promoting children´s preference for these foods, which are usually unhealthy. Another example of developing disruptive eating pattern is excessive parental control of types of foods that kid can eat [10]. "The results indicate that while modeling healthy patterns of food intake may be effective, the use of controlling child feeding practices that restrict children's intake of snack and pressure children to eat healthy foods are not associated with healthier diets in children" [11].

Parents can also influence the amount of foods that are consumed by children, via portions-size control [12]. "Several well-controlled, laboratory-based studies have shown that providing older children and adults with larger food portions can lead to significant increases in energy intake. (…) Despite increases in intake, individuals presented with large portions generally do not report or respond to increased levels of fullness, suggesting that hunger and satiety signals are ignored or overridden." [13]. "Although children possess an innate ability to self-regulate their energy intake, the extent to which they exercise this ability is determined by environmental conditions (…) the modeling of excessive consumption can all undermine self-regulation of energy intake in children." [14].

Parents´ perception of "a healthy child" including their child´s weight, will also impact the child´s relation with food. If caregivers of overweight children do not perceive their children as overweight they will not undertake practices to modify children´s eating behavior. Also if the parents do not take into account the objective measurements of obesity, and instead are guided by "social stigmatization, physical limitations, and lack of a healthy diet", they will act upon the latter, and not upon the guidance of the health professionals [14]. So it comes with no surprise that research indicates that a child of an obese mother has 40% possibility of becoming obese when it grows up [15].

What makes the Mexican case special is that in México in majority of the cases we could replace the word "caregivers/parents" with "women/mothers". In México only around 50% of women age between 25-49 have paid work[2], on

[2] Women paid work participation for ages: 25-29 48%; 30-34 50%, 35-44 52%, 45-49 50%

a total women population bases this is 35% vs. for men 69% (years 2005-2010). At the same time if we look at the men population and their participation in the non-paid work it is only 10%, for men age 25-49[3]. In 2010, out of 43.2 million of women age 14 and more, 62% would realize the non-paid work, while out of 39 million of men, only 26% would realize that kind of work. In 91% of cases these are women that take care of children (The INEGI category is "taking care of kids, sick & elderly). And in 75% of cases these are women who do household chores [16], [17].

Additionally, according to the report by National Institute of Women (2006) these are women who in 93% of cases decide what foods to buy for meals. Cooking, preparing food for the family requires time, women that do not have a paid-job, dedicate 15 hours, and in case of those with paid jobs 12 hours to this task; in case of men it is only 4 hours [18]. According to National Inquiry about the Use of Time (2002), all the interviewed women, in more than 93% cases said they participate in "cooking or preparing foods" regardless of their job situation [19].

To summarize, in Mexico there is no equal influence of both caregivers on children´s eating patterns. Mexican women spend significantly more time with children, they are the ones who in majority of the cases buy food, prepare meals, and because of that they exercise major influence over the development of children´s eating patterns. Hence, the proposal is to focus on mothers in case of anti-obesity campaigns. This segment would need to be defined further based on psychographics characteristics.

IV. Public Health Campaign & IMSS Example

Anti-obesity campaign is a form of a public communication. Public communication as defined by Rogers & Storey (1987) and Atkin, (2009) is an "purposive attempts to inform or influence behaviors in *large audiences* within a specified time period using an organized set of communication activities and featuring an array of mediated messages in multiple channels generally to produce noncommercial benefits to individuals and society" [20]. Springston (2007) in his definition of a public health campaign says "it is an effort to persuade a defined public to engage in behaviors that will improve health or refrain from behaviors that are unhealthy" [21]. It includes:

- strategic and organized efforts
- designed to yield specific outcomes or results
- focus on a *large number of individuals*
- specific beginning and ending dates.

Both definitions mention *large audiences*, and no doubt if we talk about the problems like obesity, that is even sometimes referred to as "epidemics", the large audiences need to be influenced. Yet, if the campaign is designed with that large population in mind, without previous psychographic segmentation, it has very little chance, if any, to be persuasive. As indicated by Kotler already in 1975, when referring to social marketing, "The design, implementation and control of programs seeking to increase the acceptability of social idea or practice in target group(s). It utilizes concepts of market segmentation, consumer research, idea configuration, communication, facilitation, incentives, and exchange theory to maximize target group response." [22] And although the theorists agree that the segmentation is a key step in the process of designing a public health campaign, yet it is not always exercised beyond the demographics level.

IMSS issues a new anti-obesity campaign almost every year, with the target audience defined via demographics. If we take into account all those that have IMSS security, we talk about the audience of 40 million people [23]. To reach this broad demographic group each campaign usually comes in several variants, typically: (1) woman variant, (2) man variant, (3) kid variant. Usually these are very similar, with a similar story flow, the key difference is that one predominantly features a woman, other a man etc. The key message stays the same regardless of the variant.

IMSS does not pre-test their campaigns; they only run the post testing [24]. The post testing is usually done in a form of a focus group. Although the reception study is a good method to understand how the campaign is interpreted, experts recommend conducting this study on a one on one basis, and even more so in the case of such a sensitive topic as obesity [25]. To my knowledge IMSS neither measures persuasion in a quantitative way nor they look at the impact of the campaign on the affected ones in real life, in the sense that IMSS does not follow the lifestyles of the obese ones to determine if they applied the recommended actions in their daily routines.

V. Method

The study was conducted in two phases. First a participant observation was conducted to understand better the target group, secondly the reception study was done, where the interviewed were presented the IMSS commercials. These two phases were selected based on the Lull´s (1988) proposal to, first, ran an ethnographic observation of the target group, and only then move to the open interviews, to obtain a specific information, conceptualization, regarding the object of the study [26].

In both phases the target group of the study was:

- Mexican mothers with children in a primary school (children 5 till 12 years old)
- with obesity or overweight problem, of mothers or of their children, or both
- from medium till low social class – the predominant social classes in Mexico[3].

For both phases the mothers were recruited via a public primary school "Rumania" in the medium-low socio-economic neighborhood of Mexico City (Pedregal de Carrasco, Coyoacán), where their children frequented.

Regarding the first phase of the research, the technique of observation was chosen, as an efficient way to obtain non-processed information directly from the subjects. As obesity is a quite sensitive topic, an observation can provide much more

[3] Men non-paid work participation for ages: 25-29 14%; 30-34 10%, 35-44 9%, 45-49 10%

precise information than a direct questioning. This information also served later to "screen" the results of the interviews for any inconsistencies.

The objective was to observe behaviors related to food and physical activity. (Prior to conducting the observation I defined the obesity related behaviors and environmental elements that were to be observed.) The observed two mothers shared similar socio–economic characteristics, yet had different obesity profiles. Both mothers came from mid-low socio economic class and same geographical area in Mexico city, their children frequented the same public school. Regarding the weight problem, one mother represented normal weight and her kid was overweight, the other mother was overweight and her kid was obese. Fig. 1 shows some more details about the observed mothers.

NORMAL WEIGHT MOTHER with	OVERWEIGHT MOTHER with
1 child 11 y.o. OVERWIEGHT	1 child 9 y.o. OBESE
2 younger children, normal weight	1 older child, normal weight

Fig. 1 Profiles of the observed mothers

The observation lasted 14 hours, from 7 am till 9 pm, from waking up the children, till their last meal that day. At the day of the observation I accompanied the mother in all her activities, inside and outside the household.

In a second phase 17 mothers were interviewed, and IMSS anti-obesity spots were presented to them. The one on one interview was selected as a technique, as commonly used and recommended for communication checks, plus more adequate for a sensitive topic like obesity that requires some self-disclosure [25].

Each mother saw two IMSS ads. The presented spots were selected from the pull of 20, coming from 4 different issuers (Mexican Social Security Institute, Alianza por la Salud Alimentaria, Industria Refresquera Mexicana, Fundación Campo, Educación, Salud). IMSS campaigns were selected as these were the only campaigns that met all the following criteria:

1) focus on fighting obesity
2) aired on national level
3) being a part of a long term anti-obesity strategy, independent from the conjuncture events
4) including a variety of motivational approaches

Secondly, 4 out of 14 IMSS spots were selected, based on the following criteria:

1) targeting women, as the closest to targeting mothers´ audience
2) primary focus on fighting obesity (some of the spots focused more on diabetes vs. obesity)
3) including a variety of motivational approaches

The 2010 campaign was excluded as its primary focus was on fighting diabetes. Out of the other campaigns the versions that targeted women were selected, plus from 2012 campaign, the spot "Counting" was selected as the most rational in the form of execution & messaging, out of 3 versions issued that year. This way the variety of motivational approaches was assured within the pull of four spots. See Fig. 2.

YEAR	IMSS CAMPAIGNS	TARGET REFLECTED IN VARIANTS OF SPOTS PER CAMPAIGN				MOTIVATIONAL APPROACH	
		woman	men	children	teens	Message	Execution
2013	Check, Measure and move yourself	x	x	x	x	rational	emotional
2012	Blackboard, Counting, IMSS unit	No targeting via gender or age, 3 spots each with different message				rational	rational
2011	Imagine your life carrying that heavy sack	x	x	x		emotional	emotional
2010	Diabetes	x	x			emotional	emotional
2009	Obesity shortens your life	x	x			rational	emotional

Fig. 2 Selected IMSS anti-obesity campaigns

These four IMSS ads were divided into two clusters:

- the cluster one included spots: "Check yourself, measure yourself, move yourself" (later in the article referred to as spot A) & the spot "Counting" (spot B);
- the cluster two included: "Imagine your life carrying that heavy sack" (spot C) & "Obesity shortens your life" (spot D). See Fig. 3.

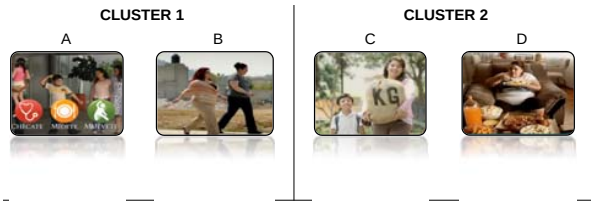


Fig. 3 Clusters of selected IMSS anti-obesity campaigns

See the storyboards of the analyzed spots at the end of this article.

All ads were 30 seconds long. The ads were combined into clusters based on their fast or slow rhythm, to assure that each stimulus included well differentiated ads, one slow and one fast paced.

The number of ads presented to each mother was limited to two, under the assumption that it is difficult to maintain the person´s attention towards the advertising for a longer time. Fig. 4 shows the number of interviews conducted per each cluster of spots and per each profile of mother. The profile of

the mother was defined based on her, and her child`s problem with obesity.

	SPOT CLUSTER 1		SPOT CLUSTER 2	
	Mother, normal weight	Mother, overweight / obese	Mother, normal weight	Mother, overweight /obese
Child, normal weigh	0	5	1	4
Child, overweight/ obese	2	2	1	2

Fig. 4 Profiles of the interviewed mothers

The spots were presented in the context of a larger interview, which lasted 40 minutes, and was run in the months of September & October 2014 in front of the primary school of their children (only in 4 cases the interview was conducted at the mother´s household). The interview consisted of the following parts:

1) Mother´s lifestyle
- eating habits and physical activity
- awareness of the problem of obesity in Mexico, and in her household
- attitude towards IMSS
- consumption of media

2) Reception of the IMSS TV spots, to understand if mothers interpreted these as targeted to them.

VI. Results

A) Participant observation

The two observed mothers on the demographic level were very similar: both from the same area of Mexico City, around 30 years old, with more than one child, both sent their children to a public schools, both married, not working etc. (Out of the demographic characteristics, only the socio-economic level (D+, AMAI [27]) was a controlled one at the recruitment phase, via recruiting mothers at the school of their children.) See details in Fig 5.

	SIMILAR SOCIO-DEMOGRAPHIC PROFILE	
	Normal weight mother	Overweight mother
Education	primary	Technical career
Age	28	32
Children and their ages	3(11,9,6)	2(11,9)
Owner of the house	Mother in law	Her mother
Marital status	Married	
Paid job	No job	
Social class (AMAI)	Low (D+)	
Children's school	public	
Household area	Santo Domingo, Mexico City	
Car	yes	no
TVs and cable TV	4 + cable	At least 1, no cable
Daily expenses (MXP)	200	250-300

Fig. 5 Demographic profile of the observed mothers

On the other hand, their behavior was very different. The mother of normal weight showed more coherence between what she was saying and doing, and that coherence showed across different types of behaviors, not only related to food. That was not a case with the overweight mother, who e.g. said that she goes every day to a zumba class, yet on the day of observation she skipped the class as some other unplanned activities occurred. The planning, organizing part was also a key differentiator between the two, in the course of the day of the overweigh mother, various unplanned activities came up, and that changed the plan of her day, that was not a case for the normal weight mother.

The overweight mother both verbally and in her behavior showed less consciousness about the possibility of children imitating her behavior, while the normal weight mother on a various occasions mentioned that her children do so, e.g. she mentioned that if she buys and drinks Coca-Cola in front of them, she cannot expect that they will not ask for it.

There was also a difference in ability of mothers to say "NO" when asked by their kids to buy or eat something (but not limited to that), the normal weight mother had clear rules, and when she said no, her children did not try to negotiate much and would accept the answer. The overweight mother had problems to say "no", when her kid asked for instance to eat sweets after dinner, she tried to push the responsibility to say "no" to others. See Fig. 6.

	DIFFERENT BEHAVIORAL PROFILE	
	Normal weight mother	Overweight mother
Coherent in her words and behavior	Yes	Doesn't seem so
Knows how to say "NO"	Yes	No
Conscious that children imitate behavior of ten mother	Yes	Doesn't seem so
Dedicates time to plan, organize	Yes	Little, many unplanned activities occurred
Has rituals routines	Multiple	Few
Conscious of her routines and their frequency	Yes	Unable to tell how frequently she does the activities

Fig. 6 Behavioral profile of the observed mothers

The mother of normal weight paid more attention to the groups of foods that she was combining, e.g. while preparing a dinner she would not prepare a cabbage salad with mayonnaise, although it is her kids favorite, as she already prepared sausages with fried bacon, and she did not want to give too much fat to her kids. The overweight mother did not show this type of concern while preparing meals, her dinner would include deep fried tacos, soup with deep fried pasta, and sugar sweetened pineapple water. The overweight mother declared she was on a diet, and her way of dieting was to eat only that meal, plus couple of snacks in between (one of the snacks included fried pork skin – chicharrón). See Fig. 7.

	Different relation with food	
	Normal weight mother	Overweight mother
Conscious of various groups of foods	Yes	Doesn't seem so
Concerned about balanced diet	Yes	Doesn't seem so Lose weight at any price
Eats together with children	Lunch & dinner	Lunch
Children ask to help themselves with food	Yes	Not always
Eats between meals	Rarely	Yes
Liquids intake	Higher	Lower

Fig. 7 Relationship with foods of the observed mothers

Regarding the physical activity, the overweigh mother showed lack of interest in walking, saying that her child really does not like to walk. The normal weight mother at various occasions mentioned that walking is good and she likes it. The child of the overweight mother spent his free time mainly playing on a computer, or a mobile phone. The children of the normal weight mother did not have access to internet; they spent free time playing football, including the overweight child. See Fig. 8.

	Different physical activity	
	Normal weight mother	Overweight mother
Internet	Doesn't have	Does have
Safe place to play outdoors	Yes Kids play football after lunch	No Mother & Obese child take zumba class - irregularly
Physical activity	Likes walking	Doesn't like walking, Takes zumba classes
Mother's activities during the day	Cooks, organizes, cleans, washes, swipes the floor, irons	Sleeps, cooks, (has a helper 1 x per week to clean), talks via mobile phone

Fig. 8 Physical activity of the observed mothers

So, if we take into account only the demographic characteristics, these two mothers fall into the same category, however if we look at their behaviors, lifestyle, these are totally different persons. Hence my point, that it is not possible to talk to these two mothers in the same way and be equally persuasive.

B) Reception Study

In general the interviewed mothers interpreted the presented IMSS ads as "for everyone". When asked "who do you think this ad is for?" they would spontaneously answer "for everybody" in majority of the cases. When aided they gave other answers, and only one interviewee answered "for mothers" in case of the spot C. See Figs. 9, and 10.

Spontaneous answers to "who is this ad for?" 8 interviews per spot			
A	B	C	D
For everyone (5 of 8) All family (2) A bit more for women (1)	For everyone (4 of 8) Nobody (1) People with medium resources (1) Family (1) People with some illness (1)	For everyone (7 of 8) Mothers, grandmothers, that spend time with their children (1)	For everyone (6 of 8) Adults (1) People that stay at home (1)

Fig. 9 Mothers´ spontaneous answers to "Who is this spot for?"

Aided answers to "who is this ad for?" 8 interviews per spot			
A	B	C	D
For everyone Adults, Mature ones All of us that are fat	For everyone Adults Those overweight People with some kind of illness	For everyone Adults, older people Those with the problem	For everyone Adults
Women		Women (30-50 y.o.) Domestic woman (young and mature)	Women (young and mature) Housewives
Family Fathers and mothers	Family	Mothers, grandmothers that send time with their children	
Workers	People with medium resources Those that work and don't have time	Those that work	People that stay home
			Also those that don't have obesity

Fig. 10 Mothers´ aided answers to "Who is this ad for?"

Taking into account that these spots where designed as "for women" (except for the spot B; 2012 campaign did not have a gender specific spot variant), these campaigns fail on that front as well, as they were not interpreted by the interviewed as such.

When asked if they identify themselves with any character from the ad, only in case of the spot C there were more mentions of "the mother", or mother related character. Spot C is the only one that focuses on, and features the role of a mother during almost the whole spot, showing her typical daily routine. Neither spot C, nor D, presents a character of a mother. Spot A in some parts shows the mother`s character, yet the activities that she does are not typical of a mother. Regarding the spot D, on the identification question, the interviewed almost unanimously rejected any kind of identification; even though mothers recognized that they were overweight or obese, they distanced themselves from the very obese person presented in the spot.

In the spot B, although some interviewed identified themselves with the obese women passing by in the street, yet they did not seem happy about admitting that (the responses were accompanied by nervous laughing, or a pause before answering). See Fig. 11.

SPONTANEOUS ANSWERS TO "DO YOU IDENTIFY YOURSELF WITH ANY CHARACTER IN THIS AD?"
8 interviews per spot

A	B	C	D
No (2) The woman weighing herself (1) The woman exercising and cutting the cake (1) The girls that are jumping, doing exercise (1) The person cutting the cake (1) The mother (1)	No (3) The heavy ones that walk by (1) Heavy woman (1) People walking by (1) The united family (1)	No (3) The mother (1) The mother carrying the sack (1) One that is carrying so much (1) The woman not because of obesity but for her activities (1) Her because she is medium mature, still has a lot to give (1)	No (7) The woman as suddenly one can be eating like that (1)

Fig. 11 Mothers answers to "Do you identify yourself with any character from the ad?"

The additional information about the relevance of these ads was acquired via mothers giving the scores between 1 ("not at all") and 5 ("a lot"), to the phrases like: "This ad is for someone like me" and "This ad is relevant, important to me." Based on this, Spot D was considered as least "for people like me", confirming the previous finding. Spot A was considered as most "for people like me" and "relevant". This is the only spot that uses mainly positive emotions, and focuses on the solutions rather than problems. See Fig. 12.

ANSWERS TO "THIS AD IS:

…for people like me."				…relevant, important for me."			
A	B	C	D	A	B	C	D
4.2	3.9	3.5	3.3	4.6	4.0	4.0	4.0

Scale: 1 (not at all) – 5 (a lot)

Fig. 12 Mothers´ evaluation for phrases "This ad is for people like me", and ""This ad is relevant, important for me"

Although all spots received the evaluation above 3 (the mid point), this cannot be interpreted as a strong score, as the ads were only compared with other IMSS ads, without putting them in a larger context of other campaigns. (In the next steps of the research it will be analyzed which spots were considered most motivational by the mothers, to cross the current findings regarding the targeting with motivational elements of the ads, yet this is not a part of this paper.)

This is a qualitative study, so the numbers are directional, and further quantitative research would be required. Yet, still it indicates that the spots are not considered as for mothers, nor specifically designed to talk to women, and there is little identification with the characters presented in the spots (with exception to spot C). So the targeting of IMSS based on the demographics leaves room for improvement. One way to achieve it would be via psychographics, like underlying motivations and lifestyles etc.

VII. Conclusion

Using a large population as a target at the designing phase of a campaign limits the possibility of creating a persuasive communication, as that usually means designing the campaign based on the general socio demographic characteristics. Using a tighter targeting based on the behavioral and motivational characteristics, while designing a campaign, can help improve the campaign's persuasiveness.

It is proposed to look at "mothers" as the primary level of segmentation for the anti-obesity campaigns, this segment later would need to be further divided into sub-segments, based on the characteristics like:

- being aware of the influence of healthy lifestyle (diet, physical activity) on their weight
- readiness to act upon their problem
- types of barriers and motivators to the healthy lifestyle

Then again the key sub-segment would need to be identified based on the potential return on investment.

Any form that helps improve persuasion is key for public health campaigns. More and more time is dedicated in mass media to advertising, so a public health campaign is fighting for attention of a viewer. On top of that a viewer commonly has a power to skip the ads. If that was not enough, the public health campaigns have to compete with omnipresent ads of unhealthy foods, issued by companies with big budgets. So pure demographic segmentation is no longer enough!

Appendix

Story Boards of the analyzed IMSS anti-obesity campaigns. See Figs. 13-16.

SPOT A: 2013
Check yourself, measure yourself, move yourself;
(Chécate, Mídete, Muévete)

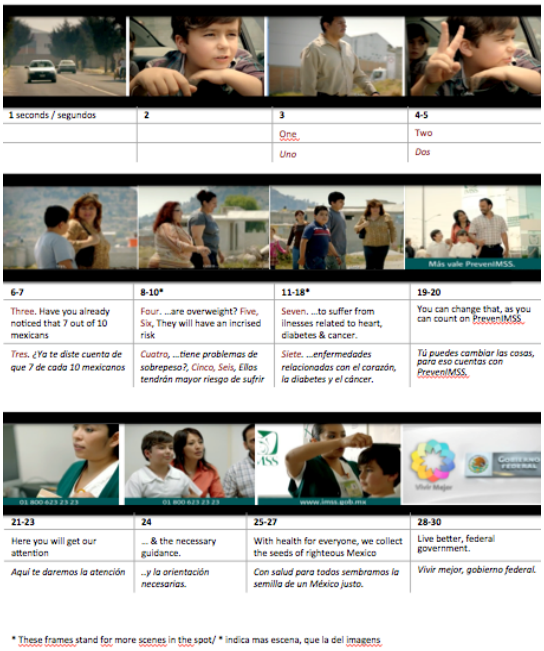
1-5 seconds / segundos	6-11	12-17
Check yourself, is a first step	Measure yourself, eat less fat, sugar, and salt	Move yourself, do exercise
Chécate, es el primer paso	*Mídete, bájale a las grasas, al azúcar y a la sal*	*Muévete, haz ejercicio*

18 - 21	22	23
	Check yourself	Measure yourself
	Chécate	*Mídete*

24-26	27-28	29-30
Move yourself		
Muévete		

Fig. 13 Spot A storyboard

SPOT B: 2012
Counting;
(Contar)
**in dark red voice of a kid, counting overweight & obese people in the street*



1 seconds / segundos	2	3	4-5
		One.	Two
		Uno	*Dos*

6-7	8-10*	11-18*	19-20
Three. Have you already noticed that 7 out of 10 mexicans	Four. ...are overweight? Five, Six, They will have an incrised risk	Seven. ...to suffer from illnesses related to heart, diabetes & cancer.	You can change that, as you can count on PrevenIMSS.
Tres. ¿Ya te diste cuenta de que 7 de cada 10 mexicanos	*Cuatro, ...tiene problemas de sobrepeso?, Cinco, Seis, Ellos tendrán mayor riesgo de sufrir*	*Siete. ...enfermedades relacionadas con el corazón, la diabetes y el cáncer.*	*Tú puedes cambiar las cosas, para eso cuentas con PrevenIMSS.*

21-23	24	25-27	28-30
Here you will get our attention	... & the necessary guidance.	With health for everyone, we collect the seeds of righteous Mexico	Live better, federal government.
Aquí te daremos la atención	*..y la orientación necesarias.*	*Con salud para todas sembramos la semilla de un México justo.*	*Vivir mejor, gobierno federal.*

* These frames stand for more scenes in the spot/ * Indica mas escena, que la del imagens

Fig. 14 Spot B storyboard

SPOT C: 2011
Imagine your life carrying that burden;
(Imagínate la vida llevando esta carga)

1-2 seconds / segundos	3-4	5-7
		Imagine your life, carrying all the time that burden
		Imagina tu vida llevando siempre esta carga.

8-13	14-19	20-21
You do not have to.	Be mindful of the obesity & overweight	Come to Prevenimss and get informed
No tienes por qué hacerlo.	*Cuídate de la obesidad y el sobrepeso.*	*Acércate a Prevenimss e infórmate*

22-25	26-27	28-30
we will help you with a, right for you, diet & an exercise program.	Healthy Mexico is a strong Mexico.	Mexican Social Security Institute.
nosotros te ayudamos con una dieta y un programa de ejercicios adecuados para ti	*Un México sano es un México fuerte.*	*Instituto Mexicano del Seguro Social.*

Fig. 15 Spot C storyboard

SPOT D: 2009
Obesity shortens your life;
(La obesidad te quita años de vida)

1-2 seconds / segundos	3-4	4-7*	8-11*
	If you overeat, do not exercise,	& do not drink water, you can have a heart attack.	It is for real.
	Si comes en exceso, no haces ejercicio	*y no tomas agua te puede dar un infarto.*	*Es en serio.*

12	13-15	16-18	19-21
The obesity shortens your life.	The federal government	promotes actions that fight the obesity & overweight.	Go to Prevenimss at least once per year.
La obesidad te quita años de vida.	*El gobierno federal*	*promueve acciones para combatir la obesidad y el sobrepeso.*	*Acude al Prevenimss al menos una vez al año.*

22-24	25-26*	27-28	29-30
There we will explain you the diet & exercise that you should do.	It is better with Prevenimss	Live better.	Federal government
Ahí te orientaremos sobre la dieta y el ejercicio que debes hacer.	*Más vale Prevenimss*	*Vivir mejor*	*Gobierno federal*

Fig. 16 Spot D storyboard

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