

Formative Research on a Social Marketing Campaign to Promote the Consumption of Healthy Breakfast and Snacks: A Qualitative Study

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Abstract

Background: The elimination of breakfast and the high consumption of low-value snacks are becoming more frequent and common among adolescents. Nutrition is a complex behavioral phenomenon that is associated with the specific cultural and environmental issues of each society as well as psychological features. This qualitative research was conducted to identify factors affecting breakfast consumption behavior in adolescents using the social marketing framework.

Materials and Methods: A qualitative research based on the social marketing framework was conducted through directed content analysis in the high schools of Isfahan and Khorramabad, Iran, in 2016. Data were collected through seven focus group discussions and 33 in-depth, semi-structured; interviews conducted in person with both male and female students, the parents, and the teachers and were analyzed simultaneously in three phases, namely preparation, organization and reporting.

Results: The results obtained in the present study within the social marketing framework were coded into the four categories of product, place, price and promotion. The product category had four subcategories, including favorite taste sought in breakfast, breakfast preparation, breakfast serving style, variety and the healthful features of breakfast. The price category had four subcategories, including time, psychological, social and financial prices. The promotion category had three subcategories, including official channels, unofficial channels, and educational materials and equipment. The place category had two subcategories, including having breakfast at school or having breakfast in an outdoor space.

Conclusion: The promotion of healthy breakfast as a product, requires that first its important features be considered, including the favorite taste sought in breakfast, second that it be promoted through channels most popular with students, and most importantly, that its price be reduced by using incentives such as serving breakfast at school as an attractive place for students.

Key Words: Adolescents, Breakfast, Snack foods, Social marketing, Students.

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1- INTRODUCTION

Breakfast is one of the main meals of the day and has an important role in the health of children and adolescents and enhances their learning power. In recent years, skipping breakfast or replacing it with junk food has become prevalent among children and adolescents (1, 2). Skipping breakfast is reported in 8% to 30% of Iranian children (3-13). This issue has been correlated with an increase in the body mass index (BMI), and poor academic performance of students (1, 2). The behavior of skipping breakfast in children and adolescents is increasingly becoming more prevalent, despite the importance of breakfast to the health, future habits, and lifestyles of adolescents (4). Interventions or campaigns aimed at modifying nutritional behavior should be designed and implemented within a logical framework based on data gathered from initial and formative research. Many researchers have turned to social marketing (SM) for targeting nutritional behaviors (14-17).

SM focuses on the needs and demands of the target group with the help of the principles and techniques of commercial marketing in order to promote a desirable and attractive product among the target audience using their favorite communication channels, while at the same time reducing the obstacles and costs of obtaining it and making it available at a place that is for them, so that ultimately the behavior can be influenced and improved as a consequence of the intervention (18, 19). Studies that have used marketing strategies have shown significant behavioral changes in the participants, such as improved nutrition and food choices (14-17). The SM framework emphasizes the need for formative research to identify the factors influencing behavior (product, place, price, and promotion). "Product" is the suggestion that is expected to be accepted

by the target audience. "Price" is what the customer pays to get the desired product. "Place" is the path through which the product or service reaches the customer; in other words, it refers to the location where the customer receives the product and where a voluntary exchange takes place. "Promotion" is the form and content of the information provided and the ways or channels through which individuals learn about the benefits of the proposed behavior (17). Formative research uses both qualitative and quantitative approaches. Qualitative research is recommended for an in-depth and comprehensive study of phenomena, the formation factors of which are not well-established in different social groups (20).

Qualitative research is valuable in providing the necessary components for the development of a program for health education campaigns using social marketing. Qualitative practices can provide a deeper understanding and help the marketer reach out to the target audience and establish a friendly relation with them in order to find out who they are, what they think and how their behaviors are formed (17). Since nutrition is a complex issue related to the social, environmental and psychological aspects of the lives of adolescents, and their families and the school personnel, the most appropriate approach to better understand the dimensions of such a multi-dimensional phenomenon is to use qualitative methods with an inductive approach (21). Although breakfast consumption behavior is one of the most important cultural components of human societies, there is still not enough knowledge available about the nature and dimensions of this behavior among children and adolescents, and this issue and its related factors have not been adequately studied without prior assumptions and with a qualitative approach in the real context in which

children and adolescents grow up, which could be why, despite previous studies and interventions (22-25), children still opt for skipping breakfast as an unhealthy behavior. Starting a campaign based on the SM model, therefore, requires answers to questions about the preferences of students regarding the features of healthful breakfast foods as the product, the costs of and obstacles to obtaining it as the price of the product, and the preferred locations, where the students would like to obtain the product, and the communication channels, which are appealing for the students, and through which the product (healthful breakfast foods) can be promoted. This study was therefore conducted to identify the factors affecting breakfasting behaviors (product, place, price, and promotion) using formative research based on the SM framework.

2- MATERIALS AND METHODS

A qualitative research was conducted through directed content analysis in the high schools of Isfahan and Khorramabad in Iran in 2016 (20, 26). In order to achieve data saturation and higher diversity in the participants and samples, which are among the accuracy criteria of qualitative findings, this study was conducted in two provinces of Iran.

2-1. Participants

The study participants included 16 students with a mean age of 13 ± 0.9 years old (eight girls and eight boys) as key informants who had direct experience with the target behavior (breakfast consumption). The other informants of the subject and the target group included seven mothers, four fathers, one school principal, four teachers and one provincial school health officer, who were interested in sharing their experiences in detail. Individuals who were unwilling to participate in the research or were unable to elaborately share their experiences were

excluded from the study. Seven group discussions (each with seven to ten individuals) were held with students from two boys' schools and five girls' schools.

2-2. Sampling

Sampling was purposive and included those who had experience with the target behavior, i.e. breakfast consumption. The researcher performed and continued purposive sampling based on the type of information required and initial findings, so that rich data could be gathered and until data saturation occurred. In qualitative research, the repetition of previous data or its highlights is indicative of an adequate sample size. Consequently, the required sample size cannot be determined in advance (27, 28).

2-3. Qualitative data collection

Data were collected from focus group discussions, semi-structured, in-depth, individual interviews, and observation from April 2016 to March 2017. The participants were asked to talk freely about their experiences of the desired features of the product (healthy breakfast foods), place, price (costs), and channels for promoting the product.

Each participant was interviewed 1-3 times. All 33 interviews and the seven group discussions were recorded, transcribed, and analyzed through directed content analysis.

Each interview lasted from 20 to 60 minutes, depending on the participants' viewpoints, the situation, and the interview process.

2-4. Analysis

Data analysis was performed concurrently with data collection and was carried out through the qualitative method of directed content analysis in three phases, namely preparation, organization, and reporting. The use of prior theory is among the different types of directed content analysis.

In fact, this approach to content analysis involves the deductive use of theory in order to describe a phenomenon more clearly. This theory helps with concentration on the research question. It can provide predictions about interesting variables or about the relationships among these variables, thus helping to determine the initial coding scheme or the relationships between the codes. In the present study, data collection and analysis regarding the consumption of healthy breakfast and snacks was conducted within the framework of the constructs of social marketing, namely the location where this behavior occurs (place), the features of healthy breakfast foods as a product (product), the way this product is promoted (promotion), and the costs of the product (20).

In the preparation phase, the audio files of each interview were first typed word by word as the units of analysis. The researcher listened to the tapes several times and reviewed the transcribed texts, so as to grasp the gist of the data. During the organization phase, an inductive approach was used to carry out the process of analysis by breaking the text into separate lines, extracting the meaning units, and performing open coding. The initial codes were categorized based on their similarities and differences according to the components of SM (product, place, price and promotion). During the constant comparison of the data, the sub-categories formed were merged or eliminated and the results were reported as the concepts of the SM mix, i.e. product, place, price and promotion (29-31).

2-5. Rigor of the findings

In order to ensure the validity of the findings, the researcher kept his long-term engagement with the subject matter of the study through a continuous review of the data and constant communication with the target group (students, teachers, parents,

and school principals, provincial school health officers) to gain a better understanding of this group. Attempts were made to guarantee the validity of the data by combining different data collection methods (group discussions and interviews), and data sources (students, teachers, parents, school principals, provincial school health officers), and by using maximum variation sampling (e.g. employed and stay-at-home mothers, different socioeconomic statuses, being an only child or having siblings and single parenting in the two provinces of Isfahan and Lorestan). A number of encoded interviews were returned to the participants for further revision in order to confirm the extracted content. The reliability of the findings was examined through a review of the data by team members. To ensure the confirmability of the findings, the researcher tried his best not to impose any of his assumptions on the process of data collection and analysis (32, 33).

2-6. Ethics approval and consent to participate:

Informed consent was obtained from the participants. Consent for publication was included in the Consent for Publication form. Ethics Committee of the Isfahan University of Medical Sciences approved the study protocol with the approval number IR.MUI.REC.1396.3.420.

3- RESULTS

Based on the results of the formative research, the categories that emerged about the features of the product in this study are as follows.

• Product features

This category shows the students' preferences regarding healthful breakfasts. The features of healthful breakfasts emerged in five general categories, including (1) favorite taste sought in

breakfast options, (2) breakfast preparation, (3) breakfast serving style, (4) variety, and (5) the healthfulness of breakfast.

1- Favorite taste sought in breakfast options

This category emerged with two sub-categories, namely favorite healthy and unhealthy breakfast options.

1.1. Favorite healthy breakfast options

The findings of this study showed that the taste of breakfast is an important selection criterion for both healthy and unhealthy breakfasts. One participant said: "*Since I don't like breakfast, I often wake up late. What I care about in my breakfast is how it tastes ... like Sangak bread with some eggs is both tasty and nourishing*" (Boy, 13 years old).

1.2. Finding fast food too delicious (as a replacement for breakfast)

Students mentioned the following reasons for preferring the taste of fast food as a replacement for breakfast:

1.2.1. The good taste of fast food

The good taste of fast food was the most important reason given by the students to explain their preference for fast food. A student said: "*Sometimes I have a healthy sandwich in my bag, but I don't eat that; instead, I eat some of the more delicious stuff my friend brings, like cheese puffs and potato chips*" (Girl, 14 years old).

1.2.2. Tempting occasions

Some occasions make students crave fast food. A mother said: "*My children ask me to buy them pizza or make some at home to take out with us and eat out in the open; they say eating at home is no fun*" (Mother, 45 years old, bachelor's degree, employed).

1.2.3. Skipping breakfast

Skipping breakfast is one of the main reasons that make students eat junk food and fast food. A student said: "*When I skip breakfast, I like to get myself a Falafel sandwich from the vendors near my school, which is way better*" (Boy, 15 years old).

1.2.4. The taste of fast food more in sync with the preferences of adolescent

Growing up and psychological changes lead to changes in adolescents' nutritional behaviors and these changes demonstrate the need for breakfast options and other meals more in sync with adolescence. A mother said: "*After puberty, his taste in foods changed. Like, sometimes I tell him to have some milk instead of juice out of a box, but he says juice tastes better. If you ask him to choose between pizza and kebab, he'll take pizza*" (Mother, 47 years old, high school diploma, housewife).

According to the surveyed mothers, forcing children to do what is right for them becomes increasingly difficult during puberty. For example, one of the mothers said: "*It won't work if I set rules for their meals, because they are at puberty right now and will only oppose me more strongly ... I'm telling you this out of the experiences I've had with my daughter*" (Mother, 39 years old, master's degree, employed).

2- Breakfast preparation

Preparing hot or cold breakfast has an effect on how well it is received. Since most of the academic year is set in fall and winter, students prefer hot over cold options for breakfast. A student said: "*A hot breakfast is great in the cold winter mornings. For example, I love a watery and warm Tarhana (a kind of soup with grains and dairy) in the morning ...*" (Girl, 14 years old).

3- Breakfast serving style

According to the findings, students like to take their breakfast differently when at home and when at school.

3.1. Having sandwiches for breakfast at school

A mother said: *"The kids like to have a wrap ready to eat, something that's easy to eat, especially at school"*. A student also said, *"I like to have a ready-to-eat wrap at school for breakfast; otherwise, the class may start and you still haven't made your own sandwich"* (Girl, 13 years old).

3.2. Having fancy breakfast on a plate at home

The students liked to have a fancy breakfast on a plate at home. A student said: *"When I'm not in a hurry, I like to have my breakfast at home on a plate, but it's better to have a sandwich ready when you want to rush to school"* (Boy, 15 years old). Some of them said that they liked a fancy breakfast decorated neatly on a plate. A student said: *"I like my breakfast decorated on a plate; like, a slice of cheese or an egg shaped into a flower or a heart, and circles of tomato around it. This gives me more appetite"* (Girl, 14 years old).

A mother expressed her experience with this issue: *"I cut a baguette into circles and put a little cream on it and add some jam in the middle to mimic a flower. It attracts the kids and is easy to eat"* (Mother, 40 years old, PhD, employed).

4- Variety in breakfast options

This category shows the importance of variety in children's development of an appetite for breakfast. A student said: *"If you eat the same food every day, you get tired and are no longer eager to eat"* (Boy, 14 years old). Another student said: *"When there are a variety of dishes on the breakfast table, it catches your eye and you try to taste them all. This gives you both an appetite and the vitamins you need"* (Girl, 15 years old).

5- The healthy features of breakfast

This category emerged with two sub-categories, namely packed food and traditional or homemade breakfast.

5.1. Packed food

5.1.1. The need for properly packing food to make it healthier

The students emphasized that placing a snack in a proper package indicates its health and safety. A student said: *"You're more assured about the health and safety of packed food; for example, I won't buy a cheese sandwich that is made by hand at school and is not packed in a box. I prefer cheese puffs to it because those are packed and safe to eat"* (Focus group 7).

5.1.2. Displaying the expiry date and the ingredients list on the package

A student said: *"The ingredients are right there on the package and show if the food is nutritious or not ... and the expiry date is also there to show if the cheese is still good to eat or not"* (Girl, 15 years old).

5.1.3. The looks of the package

A student said: *"The packaging of food is very important because you're more eager to eat nicely packaged food and a simple package won't do the trick"* (Boy, 14 years old).

5.2. Traditional or homemade breakfast

The students considered a traditional or homemade breakfast healthy. One of them said: *"Homemade food has more nutritional value than the food you buy, like homemade jam and cheese ... My mother always makes our cheese herself"* (Girl, 15 years old).

• Place

This category shows the students' preferences about the place where the product (healthy breakfast) is distributed. This category emerged with two sub-categories, namely having breakfast at school and having breakfast in an outdoor space.

1. Having breakfast at school

The findings of this study showed that having breakfast at school alongside friends pleases students. A student said: *"Breakfast is more appetizing when we're at school and laughing at things with our friends, but at home, the older folks don't talk to us that much ..."* (Focus group 7).

A father said: *"If schools had dining facilities and gave them healthy food, I'd rather have my daughter eat breakfast at school, and I'd even pay for her to get a healthy meal there ... cause she's always in a hurry to catch the school bus on time when eating at home and so eats little for breakfast. Plus, they'll have a greater appetite when they're together"* (Father, bachelor's degree, 40 years old).

2. Having breakfast in an outdoor space

A student said: *"I like to have breakfast in the nature; like, when we travel and all of us are together, I enjoy breakfast much more, you know"* (Boy, 14 years old).

• Promotion

This category shows students' preferences about the communication channel promoting healthy breakfast as a product. The category of promotion emerged with three sub-categories, namely official channels, unofficial channels, and educational materials and equipment.

1. Official channels

In this study, students regarded people with special clothing and higher education as valid channels. A student said: *"We prefer well-educated folks like our teachers to tell us what to eat or not to eat, because we trust them"* (Girl, 15 years old). Another student said: *"As for healthy nourishment, I like those who are more experienced to train us, like doctors or those at the health center"* (Girl, 13 years old).

The role of official channels is so strong that the mother of one of the students who was in charge of the schools' health program in her province said: *"My child asks her questions from me because she knows I work for the medical university. My daughter won't believe it when others answer her unless I approve it too"* (Mother, 45 years old, bachelor's degree).

2. Unofficial channels

Some people have closer relationships with the student, such as family members and peers. As for the impact of intimate relationships on education, a student said: *"The family environment is much better because you're closer to your family and listen to them"* (Boy, 13 years old). As for the impact of intimate relationships, a mother said: *"I'm friends with my daughter and she asks her health-related questions from me"* (Mother, 42 years old, high school diploma, and housewife).

As for peer education, a mother said: *"Peer education is not professional, but it influences the kids more than any teacher's education"* (Mother, 48 years old, bachelor's degree, employed). A student said: *"I prefer to talk about our nutrition with my peers, because our views are similar and we use each other's experiences"* (Focus group 1).

3. Educational materials and equipment

This category identified the materials and equipment through which the students preferred to receive their education. A student said: *"I once read in the pamphlets at the health center that we shouldn't skip dinner at all and that we have to eat a variety of things for breakfast to provide us with all the vitamins we need"* (Focus Group 1). Another student said: *"I like to learn from videos, because videos are more intriguing, they have images and are remembered easier and are short, not like a long speech that bores you"* (Focus group 1).

Another student expressed the need for practical training: *"If they show us the things we should eat for breakfast in practice and say that this here is healthy and that over there is not, we'll remember it more easily"* (Focus group 2).

- **Price**

The category of price emerged with four sub-categories, including the time, psychological, social, and financial price paid by the audience for healthful breakfast as a product.

1. The time price

The time price refers to the time spent on the affairs related to healthful breakfasts. This category recommends reducing the time spent on sleeping and watching TV and devoting one of the break times at school to having healthy sandwiches.

A student said: *"If we get up half an hour earlier than usual for school, then we'll have more appetite ... I don't have time to make a sandwich for myself, since I get up late and might miss the school bus"* (Focus group 2). Another student said: *"The TV shows we like are broadcast late, and since we have school the next day, we need to sleep early to wake up on time and be able to have a good breakfast"* (Focus group 2). A school principal said: *"Although their rest and leisure hours are reduced this way, it is worth it to substitute one of the break times at school with a breakfast hour for the sake of their own health"* (A boys' school principal).

2. The psychological price

Psychological price refers to the unpleasant feelings students experience in order to adopt the behavior of eating healthy breakfasts. Examples include letting go of the pleasure of eating high-calorie dinners and fast food, feeling rushed as a result of having breakfast, feeling guilty when eating a healthy snack and the bad feeling of having no appetite.

A student said: *"There is a vendor next to our school that sells delicious Falafel sandwiches. I like to buy those sandwiches, but I refuse to, because they're not healthy and safe to eat"* (Focus group 3). Another student said: *"If I don't have dinner and put up with the late-night hunger I feel, I'll be super hungry the next morning and will have an appetite for breakfast"* (Focus group 3). As for the outcome of rushing, a student said: *"When I get busy eating breakfast, I end up being late for school and will then have to rush to get ready, since I might miss the school bus"* (Focus group 3). A student discussed feelings of guilt and said: *"Sometimes when my friends don't have a sandwich like mine I think to myself that they may want to have some of it too"* (Focus group 4).

A student discussed the unpleasant feeling of having no appetite and said: *"I don't feel like eating breakfast so early in the morning, but I eat something anyways"* (Focus group 4). Another student said: *"Both my parents are employed. During the summer break, when they're not home, I have no appetite to eat breakfast by myself, but I try to eat something for the sake of my own health"* (Focus group 4).

3. Financial price

Financial price is the most objective cost paid for adopting healthy behaviors, in this case, the eating of healthful foods for breakfast; for instance, spending money on different breakfast options and setting a table filled with various nutrients.

A student said: *"My father is not rich and we can't have all the things we like for breakfast. For example, I really like honey, but we don't buy it since it's expensive"* (Focus group 5). Another student said: *"We are rich and we always have good nourishing things at our breakfast table, such as pistachios, almonds and walnuts"* (Focus group 5).

4. Social price

Reduced social interactions is one of the social costs students have to pay for adopting the behavior of eating healthful breakfast foods; that is, having less time to spend with their family and friends.

A student said: "*I bring healthy things like cheese and vegetables wraps with me to school ... but my friends go to the school cafeteria and I eat alone*" (Focus group 6). Another student said: "*I don't go to late night parties with my family because we often return late and sleep late and then I wake up late and I won't have time to eat breakfast anymore*" (Focus group 6).

4- DISCUSSION

Formative research was conducted to investigate the experiences of students and other informants including parents, teacher, etc., concerning healthy breakfast consumption using a SM framework (product, place, price, and promotion). The first factor described in the study was "product", which showed the features of a desirable breakfast from the perspective of the surveyed students. The important point is for the product features to have a great impact on the target groups (34).

A systematic review of SM showed that offering the product in a cool and appealing form for the target audience is a common strategy in nutritional interventions (17). In one project, a SM campaign was designed using a child-friendly, colorful, and interactive program for increasing children's willingness to try new foods. This program was designed to suit the interests of children and to be attractive to them (14). For the surveyed participants, the taste of breakfast was an important feature for both healthy and unhealthy breakfasts. This finding was consistent with studies on European adolescents who showed that good taste was the most important criterion for selecting breakfast items (35-40). Examining the reasons for choosing to have fast food instead of a proper breakfast

is important for the development of effective interventions. This study found that one of the reasons for having fast food is the many occasions that encourage eating out with friends and family. This finding was in line with previous studies that showed that having unhealthy food is highly pleasing in specific joyful occasions, such as at parties, and leads to great pleasure (41, 42). The taste of fast food was also an important feature. A previous study had shown that younger people are more interested in the taste of fast food (41), as the specific physiological and psychological motivations in adolescence influence the food choice as a separate factor and lead to a desire for fast food (42). The present study showed that students are more inclined to have fast food when they reach adolescence and resist their parents' recommendations more than when they are young. According to some studies, mothers tend to use a variety of strategies to limit their children's consumption of fast food and junk food, such as offering them in small portions and keeping them out of reach (43).

The effectiveness of this solution in properly limiting adolescents' consumption of fast food and junk food is controversial (44). For instance, the present study showed that taking commanding approaches when dealing with adolescents (i.e. restricting their consumption of fast food) only leads to more resistance on their part. Instead, strategies such as taking advantage of peers' influence are more useful in adolescence, because, in this age, social factors such as interaction with peers determine eating behaviors more than do personal factors (45, 46). According to the findings of the present study, students like to have their breakfast ready to eat in the form of a wrap or sandwich when at school, but at home, they like to have their breakfast cooked and on a plate. The result of a one-week survey of breakfast

consumption showed that the highest demands were for cheese wraps and toast with butter and jam or grain cereals with milk during the weekdays, while on the weekends when at home, cooked items such as ham and eggs on a plate were more popular (47). Preparing wraps and sandwiches for breakfast were found to aid breakfast consumption among students. In the present study, the appeal of breakfast was mainly in how it looked. Previous studies have also reported that one of the factors affecting the choice of food is its appearance. A systematic review and meta-analysis reported that food choice is guided by vision. Appealing food images affect brain activity and increase the appetite (48). Preparing decorated dishes for breakfast encourage students to try them out and this attraction should be carefully considered, because just looking at appetizing food brings out one's appetite. Variety was another desirable feature sought in breakfast food according to the present findings. In one study, Triches and Giugliani showed that lack of variety in food items can easily ruin students' willingness to eat breakfast (49).

A study on Korean students showed that one of the factors affecting appetite is the number of food items on the breakfast table (50). Variety, like appearance, is a factor that affects appetite and provides students with many of the nutrients needed for their growth and health. In this study, students insisted on having only packed breakfast wraps and sandwiches. It has already been proven that the interaction between food and its packaging can harm food health and safety (51). In line with the results of a previous study, the insertion of useful nutritional information such as an ingredients list on food packages leads to a positive attitude toward the product and the intention to buy (52). In addition to keeping the food away from environmental pollution, nice packaging and the printing of an expiry

date and an ingredients list on the package also affect the willingness to consume that food. In the present study, traditional or homemade breakfasts were preferred by the students. According to previous studies, students show that they care about their health by replacing unhealthy foods such as potato chips and sweets with more healthy options such as fruits and vegetables (38, 53). A study on Korean students showed that one of the factors affecting appetite is having a variety of traditional breakfast items on the table (50). It can be inferred from these findings that increased nutritional awareness among students encourages their desire for healthier options. The present study found that, since students go to school primarily during the fall and winter, they tend to prefer hot breakfasts. In a study conducted in Qazvin, Iran (54), however, the most common breakfast item among students was bread and cheese, which is common in the Iranian culture and available to almost everyone, while hot foods were served only in the families of 1.2% of the students (54). Not serving the types of breakfast preferred by the students was one of the reasons for their unwillingness to eat this most important meal of the day.

The second factor explained in this study was promotion. In social marketing, promotion is the development and conveying of messages leading to behavior change using different materials and through different channels in order to raise the awareness of the target group regarding a given product (34). The sources available for promotion in the present study, i.e. official channels such as teachers and doctors, and unofficial channels such as family and friends, have been considered differently in other studies. For instance, a study in Qazvin examined the influence of family, peers, teachers, and doctors by examining their subjective norms (55). The effect of the encouragement offered by families concerning children's nutritional

behaviors has been confirmed in different studies (56, 57). Some studies have demonstrated the role of mothers in the incidence of poor (58) and proper nutritional behaviors in children (59). A study on adolescents in Hong Kong showed that parents' caring about breakfast consumption is a significant predictive factor in reducing the prevalence of skipping breakfast among adolescents (60). The peer education approach provides an effective strategy for behavior change. Peer groups have the greatest negative or positive impact on children's and adolescents' performance in all domains of life (61). Studies confirm that eating behaviors are influenced by interpersonal factors among peer groups (38, 53). According to these findings, the role of family and friends must be considered as an influential channel involved in shaping adolescents' behaviors if it is sought to foster proper eating behaviors in them.

Educational materials and equipment such as pamphlets, videos and exhibitions were found to be important channels for promoting the consumption of healthy breakfast in the present study. A SM campaign to increase fruit consumption among students reported that the channels used to promote fruit consumption students consisted of pamphlets and posters installed in places most visited by students (15). Moreover, in the present study, educational videos were one of the most attractive sources of acquiring nutritional information for the students. Using vision and providing a practical education make the lessons taught more attractive and easier to learn and remember (15). Place is the location where the audience is encouraged to adopt the new behavior, namely eating healthful breakfasts (34). Place was the third factor explained in the present study and referred to the students' favorite location for having healthy breakfast. In general, the findings

of this study showed that having healthy breakfast at school alongside friends pleases the students. A mother said: *"My son does not have breakfast at home because he eats at school among his friends and he finds that more fun"*. Place has to be able to reduce the costs of healthy breakfasts proximity of the place and its being enjoyable are incentives that help further engage the audience in eating healthy breakfasts (34). A systematic review of SM showed that the most common strategy is to use places that are more attractive to the audience and are frequently visited by them (17). In one SM campaign, for instance, the intended health message was offered through a TV program on a street that went to low-income preschoolers and their parents and awards were offered on that street in order to increase the audience's participation and interest (14).

The fourth factor was price. Price includes the (financial, emotional, psychological, and logical) costs the audience should pay for exchange. SM is based on exchange; that is, the audience gives something in return for a benefit (34). According to the findings, people show their readiness for adopting healthy breakfast eating behaviors as product by and economic prices. In social marketing, those who are more willing to pay the costs are more willing to adopt the intended healthy product. A systematic review of SM reported that the price strategy in nutritional interventions involves the lowering of prices and the providing of data about the cost-effectiveness of healthy eating. Providing social support for increasing participation and reducing prices is also effective (17). In one instance, a SM campaign was designed and given free of charge in order to raise participation and reduce the prices; however, spending time was still needed to participate in the program. Also, to reduce the fear of trying new foods (with the price

being to try new foods), a cheerful environment with new delicious dishes was prepared (14). The challenge of SM is to reduce the price/obstacles and use tangible or perceived incentives to increase the audience's participation in adopting the product, so that ultimately the likelihood of engaging in health-promoting behaviors increases.

4-1. Limitations of the study

The fact that the researcher could not observe the breakfast consumption behaviors of the students was among the limitations of the present qualitative study.

5- CONCLUSION

The features of healthy breakfast as a product, including taste, appearance and variety, should be able to compete with fast food so that students' choices can be positively influenced. The promotion of healthy breakfast also requires the use of channels such as the family, teachers and friends, and most importantly, the reduction of costs, such as time, money and pleasure (losing appetite) costs through the use of incentives such as serving breakfast at school as an attractive place for the students. In the present study, in addition to social marketing themes, other concepts, such as systems supporting the consumption of healthful breakfasts and snacks, giving priority to the consumption of breakfast, vicarious learning, the effect of stress on appetite, self-efficacy, and perceived benefits, fears of the negative consequences of skipping breakfast, previous behaviors, attitudes towards environmental factors, and the features of pubescence that affect breakfast and consumption behaviors, emerged, the discussion of which would make this article too long.

6- ABBREVIATIONS

BMI: Body Mass Index,
SM: Social Marketing.

7- AUTHORS' CONTRIBUTIONS

Fereshteh Zamani-Alavijeh and Fatemeh Bastami made substantial contributions to the conception, design, writing, and revising of the manuscript. Firozeh Mostafavi participated in the design of the study and data acquisition.

8- CONFLICT OF INTEREST

All authors have read and approved the content of the article. The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article. Informed consent was obtained from the participants. Consent for publication was included in the Consent for Publication form. The Ethics Committee of the Isfahan University of Medical Sciences approved the study protocol.

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