Impact of Television Advertising on Food Habit of Children

The Case of Lebanese Armenian Private Middle Schools' 8th and 9th Graders

Thesis submitted in accordance with the requirements of Haigazian University for the degree of Master in Marketing to the Faculty of Business Administration and Economics

By

Tamar Kevork Nalbandian

Beirut, Lebanon

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ABSTRACT

Children have always been a lucrative target for advertisers and marketers due to their spending power and their influence on their parent's purchasing decisions. Marketers reach children by all types of promotions from television to smart phones, internet, and newsprints. The observed growing interest of certain food categories marketers in targeting children and teen eventually started to create concerns about the effects of those aggressive advertising messages on children. Consequently, certain countries like the USA, Switzerland, Canada and Australia have discussed and even established laws that protect children from the excessive targeting through television advertisements by certain food categories marketers.

The purpose of the present study was to investigate the impact of television advertisements on the food habits of 8th and 9th graders of six Lebanese Armenian middle schools selected at random from the study target population of Lebanese Armenian middle schools. A thirty items Survey Questionnaire was administered to the 352 8thand 9th graders. A Cronbach Alpha and Factor Analysis were used to establish the reliability and validity of the administered Questionnaire.

Five research questions were investigated: (1) Do Television food advertisements targeting 8th and 9th graders have an impact on their food consumption habits? (2) Is there a relationship between socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit? (3) Is there a relationship between socio-economic status (tuition level) and TV watching habit of the 8th and 9th graders? (4) Do gender differences influence food consumption habits of the 8th and 9th graders? (5) Do gender differences influence TV watching habit of the 8th and 9th graders?

Results of this study showed that that the more the 8th and 9th graders view television, the more they are aware, know and like television food ads and the worse is their eating behavior habits. Furthermore, the more positive is their attitude toward those advertised food categories the worse is their eating behavior habits. Consequently, the more the 8th and 9th graders trust advertised food categories on television the worse is their eating behavior habits. The study also showed that the lower the socio economic status the higher is the consumption of

advertised food and television viewing habits. Finally, results showed that gender differences and nature of food consumption habit of the 8th and 9th graders are not dependent and they are dependent with their television viewing habit.

From the results of this study, we can conclude that certain food categories companies and marketers are relatively successful in targeting through television advertisements middle school age children (11-14 yrs). Thus, in order to minimize the negative impacts of television advertisements targeted to children, parents should be encouraged to monitor their children's television viewing habits, school officials need to introduce nutritional educational programs in their curriculum. Lebanese government and health organizational agencies should introduce laws that force advertisers to conduct themselves ethically to protect children from misleading television food commercial appeals.

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Table of Contents

List of Tables

Table of Figures

CHAPTER ONE

Introduction

1.1 General Background

Marketing communication is an important aspect in today's companies' overall marketing strategies and plays a major role in their successes or failures. The marketing communications component of the marketing mix has increased in importance dramatically in recent decades due to the changes in the market place at the national or international level. All organizations, whether involved in Business-to-Business (B2B) or engaged in Business-to-Consumer (B2C) exchanges, use various forms of marketing communication to promote their products or services and to achieve financial and nonfinancial goals.

In today's fast-paced, high-tech age, many communication technological tools and media are available for marketers to promote, advertise their offerings and target their market segment. Television possesses the unique capability to demonstrate a product in use and is differentiated from other medium as it can reach consumers simultaneously through both auditory and visual senses. Viewers can see and hear a product being used, identify with the product's users, and imagine using the product.

Television also has intrusion value unparalleled by other media. That is television advertisements engage one's senses and attract attention even when one would prefer not to be exposed to an advertisement. It is often easier to sit through a television commercial rather than changing the channel and missing on the program sponsored by the commercial. Another relative advantage of television advertising is its combined ability to provide entertainment and generate excitement. Advertised products can be brought to life or made to more exciting than perhaps they actually are.

International Companies and marketers of certain food categories such as: ready to eat sugared cereals, sweets and confectionaries, fast food restaurants and carbonated soft drinks including sugared juices, make a great use of sponsoring television programs targeted to children and teens worldwide. They continuously try to impact and influence through their food television commercials on children's and teens' food consumption habits. Critics, parents and certain governmental agencies fear that teen-agers and children are susceptible to the above food companies' commercial appeals and persuasive messages.

In sum, it is important to point out that one of the most advertised product categories during children television viewing pick hour have been found to be food items similar to above mentioned food categories in western countries such as USA (Cotugna,1998; Kotz & Story,1994), Great Britain (Lewis & Hill, 1998) and Australia (Hill & Radimer, 1997). Also the same figure is true during television prime-time for adults (Story & Faulkner, 1990).

1.2 Statement of the Problem

The purpose of this investigation was to study the impact of the television advertising by selected food categories on the 8th and 9th graders of Lebanese of Armenian origin children's food consumption and television viewing habits.

In particular, the focus was on the following research questions.

Research Question 1: Do television food advertisements targeting 8th and 9th graders have an impact on their food consumption habits?

Research Question 2: Is there a relationship between socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit?

Research Question 3: Is there a relationship between socio-economic status (tuition level) and television watching habit of the 8th and 9th graders?

Research Question 4: Do gender differences influence food consumption habits of the 8th and 9th graders?

Research Question 5: Do gender differences influence television watching habit of the 8th and 9th graders?

1.3 Definition of Terms

For the purpose of this study, the following terms, variable dimensions and variables were defined as follows:

Food Company: represented marketers and producers of the four food categories:

- Ready to eat sugared cereals
- Sweets and confectionaries
- Fast food restaurants
- Carbonated soft drinks and sugared juices

Children or Teens: were the 8th and 9th graders of a random sample from Lebanese Armenian private middle schools.

Impact of television ad message: was defined by the following dimensions:

- Awareness: was the participant's awareness of advertised brand acquired from the food company television ad message, defined by items 15, 16 and 20.
- Knowledge: was the participant's learning about the advertised food type properly conveyed from the food company television ad message, defined by items17 and 23.

- Liking: was the participant's positive feeling toward advertised brand acquired by the food company television ad message, defined by items 19 and 25.
- Preference: was the participant's choice preference of advertised brand acquired by the food company television ad message defined by items 21 and 24.
- Conviction: was participant's strong attachment toward advertised brand acquired by the food company television ad message, defined by items 18 and 22.

Purchase/Action: is the actual consumption of the food categories targeting children and teenagers, defined by items 6, 7, 8, 9 and 10.

Socio-Economic Status (SES): is limited to the tuition fees of each respective chosen school.

1.4 Theoretical Framework

For the purpose of this study the following theoretical framework have been applied:

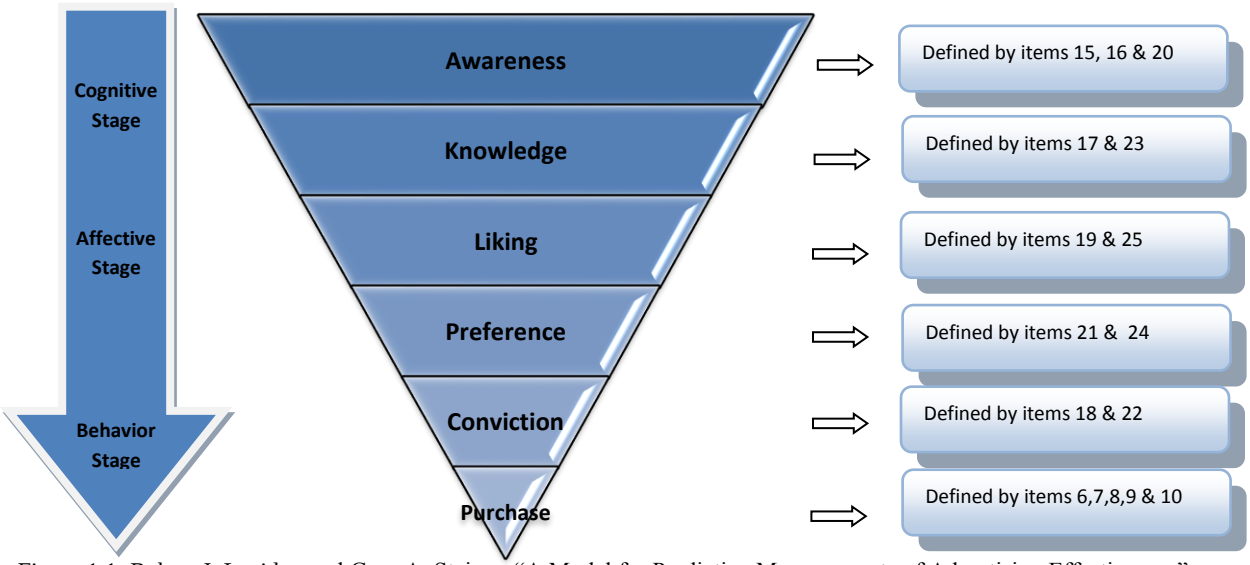

Figure 1.1: Robert J. Lavidge and Gary A. Steiner, "A Model for Predictive Measurements of Advertising Effectiveness" Journal of Marketing (October 1961), p61.

1.5 Research Hypothesis

Research hypothesis 1a: The more the 8th and 9th graders view TV, the more they are aware, know and like food ads on TV.

Research hypothesis 1b.1: The more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.

Research hypothesis 1b.2: The more 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.

Research hypothesis 1b.3: The more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.

Research hypothesis 2: There is a relationship between the socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit. The lower the socio economic status the higher is the consumption of advertised food.

Research hypothesis 3: There is a relationship between the socio-economic status (tuition level) and television watching habit of the 8th and 9th graders. The lower the socio economic status the more they watch TV.

Research hypothesis 4: Gender differences influence the nature of food consumption of the 8th and 9th graders.

Research hypothesis 5: Gender differences influence television watching habit of the 8th and 9th graders**.**

1.6 Significance of this Study

The purpose of this research was to investigate the impact of certain food companies' television advertisements on children and teens food consumption habits.

Research about time spent by children and teens in watching television comes second to time spent in sleeping (Dietz and Strasburger, 1991). While this research was applicable to American children, one may assume it is applicable to Lebanese children and teens due to the effect of globalisation of the above companies' operations.

In the USA, children's and teens' yearly exposure to television commercials is estimated to be anywhere from 23,000 to 40,000 (Harris J.L., Pomeranz J.L., Lobstein T. and Brownell, 2009). Also similar high level of exposure was recorded in many other countries in European Union and Australia (Federal Health Commission and the Department of Health and Human Services, 2005).

Information provided by this research can be useful to marketers, parents and policy makers. Since, marketers are keen to know if their target audiences are attending to the food commercials and if they are able to impact their purchase decision. While, parents need to be alert of the negative impacts on certain television commercials targeted to their children and guide them to make healthy choices. As for policy makers, they need to start initiating proper effective regulations in their local societies to protect the interests of the children and teens.

Although the issue of children and advertising is a reasonably explored subject in the USA and Europe, there has been very limited investigation on children's receptivity to food advertisement in MEA countries. Therefore, this study has much to contribute in adding up in the limited empirical information on this topic in the MEA cultures especially for Lebanon.

Moreover, the findings of this research will lead to a further debate about how much and what kind of protection do Lebanese children and teens need from improper and unhealthy advertising messages.

1.7 Limitation of this Research

This study was subject to the following limitations;

Correlation between television advertising exposure and children and teens food consumption habit has certain limitations in proving cause and effect relationship. Thus, more future causal research is needed in order to monitor children exposures to television ads and its effect on them.

Another limitation of this research might be that the participants in this study were ethnic Armenian Lebanese 8^{th} and 9^{th} grade students, with ages between 12 and 16 years old of a random sample of Armenian Lebanese private middle schools. Although the findings of these research for Lebanese Armenian 8^{th} and 9^{th} graders is assumed to be similar to that of Lebanese 8^{th} and 9^{th} graders, yet further study can be done on the same topic including Lebanese population to verify the above assumption.

Furthermore, this research depended on the honesty of the participants in responding to the survey questionnaires.

CHAPTER TWO

Literature Review

2.1 The Role of Marketing Communications

According to Kotler and Keller (2009; p. 510), "Marketing communications are the means by which firms attempt to inform, persuade, and remind consumers about the products and brands that they sell". It represents the voice of the brand through making use of the Marketing communication mix (advertising, sales promotion, events and experience, public relation and publicity, direct marketing and personal selling). Integrated Marketing Communication activities contribute to brand equity by:

- Creating awareness of the brand.
- Making appropriate associations of the brand image in consumer's mind.
- Bringing out positive feelings about the brand.
- Strengthening the bond between the consumer and the brand

2.2 Children and television

Studies have shown that the heaviest period of the child's television viewing comes in the neighborhood at the ages eleven to thirteen, when he is entering adolescence and has more freedom to stay up late at night. Children and teens view different programs including variety shows, adventure programs, science fiction, westerns, crime program, situation comedy, popular music shows, public affairs, drama, cartoon and animal world. In addition, other predictors of television viewing choices can be also considered such as age, sex, mental ability, family and social relationship (Wilbur Schramm, Jack Lyle and Edwin B. Parker, 1961).

The pattern seems to be that girls at earlier age than boys turn toward programs which relate to the responsibilities they will assume in adolescence and adult life. Boys, on the other hand, maintain "boy tastes" for adventure, excitement and physical combat well into adolescence. Boys pick up the taste for popular music several years later than the girls do and only in the teen years begin to have the interest in social public affairs. When a child becomes an adolescent, he is more likely to rebel against parental counsel, to experiment and try to discover his own identity and personality. At the same time he leans to a greater extent under the influence of his peer group. Consequently, his media habits become more likely to resemble those of other teen-agers that he admires or the general role of the teen-agers as he understands it (Ibid).

According to Freud's (Sigmund Freud, 1938) concept of human personality, the pleasure principle is related to the primary process and to the Id; while the reality principle is related to the secondary process and to the Ego. While a teen starts physically maturing, socially, he is in the process of preparing and being prepared to take part as an adult in society or, being socialized. At the same time, psychologically, he is in the process of discovery and goal-seeking. He is trying to form a picture of his environment, and trying to separate himself from that environment so as to form an image of his own identity. Since these are difficult experiences, often producing hard blows, fears, and frustrations, television becomes a door to a child or a teen to escape from the conflicts and frustrations of the real world, get away from real life boredom or perhaps, to seek aid and enlightenment on his problems. In other words, television presents all the gratification that come from having a superlative means of entertainment in one's living room, at one's command (Wilbur Schramm, Jack Lyle and Edwin B. Parker, 1961).

2.3 The Nature of Advertising to Children and Teens

The nature of advertising to children and teens is inseparable from their understanding of advertisements. According to Federal Trade Commission Bureau of Economics Staff Report (2007), children ages 2-11 see more than 25,000 advertisements per year only on television without taking into account the product placements. In addition to television, children and teens are targeted via internet, cell phones, video games, mp3 players, friends, school buses and even in schools. As Hayes (2007) mentioned that almost every major media program for children has a line of licensed merchandise that includes toys, food, clothing, accessories… Media brings messages, themes into the world of children that are beyond their control and sometimes contradicting with the preferences and values of parents (Comstock and Paik, 1991). The commercials designed specifically for teen audience are for attracting teen's interest and trying to affect his behavior (Kunkel, 2001).

The essence of the nature of advertising lies within the products that feature in the commercials and if there is a bias toward these products. Parents for instance usually are stressed by the excessive toy advertisements during Christmas season (Piachaud, 1998). On the other hand, organizations such as the Food Standards Agency in Britain emphasize on the quantity of advertising for sugary/fatty foods that eventually affect on children's dietary habits. According to Barcus (1980), after conducting a series of content analysis of American television, he categorized children's and teens' advertisements into four products: toys, cereals, candies, and fast food restaurants. However, food advertisement reported 60% of the total commercials, from which 70% were advertised for sugary and fatty foods like cookies, candies, cakes, chocolates, cereals, and confectionery. These product categories findings were also supported by other research (Lewis & Hill, 1998; Kunkel & Gantz, 1992; Gamble & Cotugna, 1999; Young, 1990). It is also worth mentioning that during Pre-Christmas season, toy commercials comprised more than half of the advertisements directed to children (Young, 1990; Barcus, 1980) where advertisers

use different appeals focusing on appearance, action, and fun nature of the products (O'Cass & Clarke, 2002).

According to Kunkel and Gantz (1992), the nature of advertising has changed due to the change in television environment through technology where children have access worldwide to cable and satellite channels beside their local television. Through their analysis of 600 hours of children's programming on three channel types: broadcast networks, independent stations and cable channels. They concluded toys commercials are advertised more on independent stations; snacks/drinks on broadcast networks which had the most advertising with an average of ten minutes per hour, while other product categories are more on cable channels.

2.4 Children's Early Understanding of Television Advertisements

The battle between marketers and parents, regulatory bodies and politicians exist around children's understanding of advertisements. According to publications like Principles of Internet Marketing (Hanson, 2000) and Marketing Week (Shannon, 2000), children as young as 3-4 years can already understand the persuasive agenda of advertisements, while other studies concluded differently. Researchers' main reasons for concluding different findings in their studies can be due to their inconsistency and variability in their definition of "understanding" and immateriality of age since learning is a continuous process that relies on other factors such as family and peers (Goldstein, 1994). Therefore, defining concept of "understanding" is crucial to avoid bias conclusions. According to Young (1986, 1990), basic level of "advertising literacy" for children is when they realize that the ads are created by sources that intend to persuade the audience to buy. This level is then developed into more advanced when children and teens realize who pays, who makes, who benefits from the ads and why they are presented on certain channels; In other words, the more comprehension, assessment of truthfulness, influence of characters children and teens involve in ads, the more cynicism is created toward ads.

Macklin (1987) distinguished between the informational function and persuasive function of ads that included four attributes. Moreover, according to Martin (1997) meta-analysis of the literature targeted to children and teens' understanding of ads revealed that the relationship between age and intent of ads is moderated by three different methodological factors: Use of verbal or non verbal assessment, distinction between types of intent and type of exposure before understanding is measured.

Marsh & Millard (2000) mentioned, critical ability in young children is absent but can be taught to acquire such skills (analytical and reflective understanding of advertising messages) through literacy programs. Critical viewing includes aesthetic, social, cultural, psychological, educational, economical, and regulatory aspects (Brown, 2001). Furthermore, research by Brucks, Armsrong, and Goldberg (1988) revealed that older children aware of persuasive nature of ads did not necessarily use cognitive defenses such as counterarguments, support arguments, and source derogation while watching ads. Hence, teens must be helped to use their defenses via programs in schools (ex. Media Smart advertising educational programs introduced in UK in November 2002), parental guidance during television viewing, and cues from broadcasters reminding them to be careful of ads.

According to studies carried out by Oates et al. (2002) on average it is only after age of 10, children demonstrate understanding for the persuasive intent of advertising. Moreover, Chan (2000) findings revealed that children at the age of eight develop knowledge and understanding of ads and by the age of twelve, two thirds of children showed medium knowledge of television ads and when asked about the purpose, nearly two thirds demonstrated understanding of promotion and persuasion. Nevertheless, confusion appeared about the financial aspect of ads.

Moreover, Robertson and Rossite (1974) proposed three hypotheses to investigate children's understanding of advertising intent. They concluded that children's attribution of persuasive intent to commercials was directly related to age and high level of parental

education, however other factors weren't relevant. Teens that understood the persuasive intent of television ads formed negative feelings and placed less trust and desire for promoted product. While others who understood the helpful intent of ads were more trusting to ads and tended to purchase the advertised products. Robertson and Rossite (1974) study also revealed that the recognition of discrepancy between a promoted product and its reality is a cognitive criteria developed in teens. Smith (1983) also stressed that as teens grow older, they become more aware of the persuasive aspects of ads and they become more appreciative for the techniques such as sound effects, tone of voice, choice of words, exaggeration and visual tricks used by marketers to enhance product's image.

Faber, Meyer and Miller (1984) found that children over eight years old were more affected by the nutritious messages as they were more able to recall and understand messages. They have also found that mild fear appeals used in ads resulted in greatest recall among children. Their research did not explore the link between learning and behavior change rather looked at short-term recall and understanding.

Hence, it is also important to notice how children and teens process commercials to evaluate their understanding. According to Randrup and Lac (2000) qualitative study's outcome, 7 to 9 year old children processed ads via the peripheral route that demonstrated memory for features, colors, slogans and jingles with little understanding of the central message. They considered ads as entertainment; Children aged 10 to 12 paid more attention to the central message and had more product knowledge. According to Pine and Veasey (2003) study, children from age of six started to show ability to produce self-promoting statements. Moreover, Young (2000) stated that 90% of 7 to 8 years old when they had to choose advertising ending, selected the promotional ending rather than entertainment which showed their awareness.

According to studies done by Gunter & McAleer (1997); Oates et al. (2002) and John (1999), reported that the average responses of 9 to 10 year olds to television commercials depended highly on their personal experience with misleading ad claims. The

same above references also indicated that children's and teens' personal experience to promoted products did not live up to their expectations as promoted. As children get older, their awareness increase and start to differentiate between the real characteristic of the advertised product and what is presented on television. However, this discrepancy shows teen's ability for assessment of commercial's truthfulness. For example Kellogg's Frosties advertisement that showed Tony, the animated Tiger, after eating Frosties was able to score amazingly in the basketball game, was not believable by the children. However, Martensen and Hansen (2001) concluded that "even though many children from age eight are able to discern the intention of ads, as well as the fact that ads are not always truthful, they still let themselves be influenced by ads to want the advertised products. The more often they watch ads, the more pronounced the wants created by advertising are…" (pp. 29-30).

Furthermore, a study conducted by Moore and Lutz (2000) on children and teens revealed that older children were more interested in the creative element of advertisements than the younger ones.

A study by Bartholomew and O'Donohoe (2003) concluded that children and teens were able to switch roles as required by the situation, each role offering a degree of power in their experiences with advertising. Their findings supported the point of view of marketers who considered children and teens sophisticated consumers of advertising.

Finally, adolescents have been difficult target to reach and appeal, yet they have always been attractive target to marketers due to their spending power and their significant influence on family purchasing. The factors that involve in their skepticism toward ads include peer influence, parental attitudes, television exposure and marketplace knowledge (Mangleburg and Bristol 1999).

2.5 Theoretical Perspectives

Barrie Gunter, Caroline Oates & Mark Blades (2005) stated that cognitive development of logical thinking of children and teens by Piaget has been used by many researchers to explain that the child's ability to comprehend advertising is determined by their current cognitive stage of the four stages stated below, and each characterized with certain abilities and limitations:

1. Sensorimotor (from birth to two years); Children develop early independent thought with simple problem solving. Their limited language and cognitive development prohibits any possibility of advertisement understanding.
2. Preoperational (two to seven years); Children's cognitive abilities develop rapidly during this stage but they are still limited in many ways like they are unable to overcome the perceptual qualities of a stimulus, find hard to reason logically in problem-solving tasks since they are not able to consider more than one aspect. Kunkler (1988) added that because of this reason children view television as "monolithic entity" and hardly distinguish programs from ads. Kunkel (2001) further added that another drawback at this stage will be "egocentrism" because children only consider their own point of view and can't understand the others which will make it difficult to understand the persuasive nature of ads.
3. Concrete Operational (seven to eleven years); At this stage children can reason logically in problem solving tasks and start to consider two aspects of the task at the same time. According to Piaget, children develop their reasoning abilities by experience and by interacting with materials in the world. However, children are passive receiver while watching television and do not have the opportunity to question the images they see. Therefore, since there is no direct experience, it is expected that children's reasoning about television to be less developed than their reasoning in different fields where they have more opportunities to interact with stimuli.

4. Formal Operational (eleven to adulthood); At this stage children start to develop abstract reasoning. This is the beginning period where children start to think like adults to develop their reasoning from experience and learning. The difference between adults' and children's understanding can be a result of difference in experience rather than cognitive abilities.

According to John (1999), children in the preoperational stage can distinguish between advertisements and programs based on perceptual cues rather than any understanding of the persuasive intent. They have positive attitude toward ads and consider them as truthful and funny. Roedder (1981) who focused on children's ability to process information by stating that as children grow older, their information processing becomes more adept, he categorized children till eight years of age as "limited processors", meaning that they accept ads at face value as entertaining, informative and truthful, from the age of eight till twelve they become "Cued processors", meaning they can retrieve information, and from the age of twelve and over as "Strategic processors", meaning able to store and retrieve information efficiently.

Young (2000), in his research on children's and teens' ability to understand television commercials, concluded that under age of six children consider ads as entertainment without having appreciation for their assistive intent, it is only after age of eight children can recognize that the information presented in ads is for commercial, persuasive intent.

Studies on logo and brand recognition done by Dammler and Middelmann-Motz on preschool children (2002), showed that kids can describe the products after seeing the logo.

Clark and Delia (1976) conducted a study on children and teens aged 7 to 14 years old to see how they ask parents for things they want. Their findings revealed that only after age of eight they used counterarguments against parent's beliefs to persuade them. Furthermore, children's and teens' understanding of beliefs and persuasion develops as their experience increase through interacting with others.

Barrie Gunter, Caroline Oates & Mark Blades (2005) concluded that, both Piaget's or Roedder's theories were referred to by most researches in conducting studies about children's understanding of ads. However, both theories have limitations when it comes to assessing of the influence of ads in advertising researches as these theories were not discovered to be used to advance specific hypotheses or expectations about children's understanding of advertisements.

2.6 Food Advertising

Studies about food advertisement to children tended to be more in the category of food containing high sugar, fat and low-fiber diet. This significant imbalance between the advertised foods to children and the nutritional intake recommendations in dietary guidelines has been the focus of researches on health and advertising by De Bruin & Eagle (2002). Referring to Kunkel & Gantz (1992) findings, only 2.8% of all food advertising to children features healthy foods. The National Heart Forum (1996) in UK estimated the amount spent on advertising for fresh fruits, vegetables and nuts to be around £3 million compared to more than £70 million for chocolate confectionery.

According to National lnstitute of Mental Health report, "Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties" (1982), advertising and programming messages communicated via television are wrongfully educating people about health and nutrition in addition to presentation of inaccurate role models for good and healthy practices. Moreover the same updated health report research revealed that children who watch a lot of television have poorer nutritional habits than children who do not watch as much. According to Gerbner, Morgan, & Signorielli (1982), although these are not the purpose of television commercials, still incidental learning from those messages may be contributing to unhealthy lifestyles.

Kotz and Story (1994) monitored five major American television networks and found out that 56.5% of all ads were for foods, 43.6% of which classified in the fats, oil and sweet groups. The most frequently advertised item was for high sugared breakfast cereals. Another study by Ostbye et al. (1993), aimed to assess the type, number and nutritional content of food advertised on the five Canadian channels during Saturday morning children's television commercials. The results revealed that more than 50% were for fast food and high- sugar cereals which were low in healthy nutrient.

The findings of research done by Barcus (1971) showed that 67% of ads during children's programs were for sugared cereals, candies and other sweets. Signiorelli in his 1988 research stated that when non-nutritious foods were included in both children's television program and in the commercial itself, seven out of ten children considered fast foods as more nutritious than homemade foods and believed that in order to maintain good health, drinking coke and eating fast food is important. According to Goldberg, Gorn and Gibson (1978), children who viewed nutritious ads by Public Service Announcements, were inclined to eat more vegetables and fruits. On the other hand, children who were targeted by commercials of high sugared food companies tended to lean toward eating more sugary snacks. In a follow up study, Goldberg, Gorn and Gibson (1982), concluded that food television ads have an impact on children's food consumption behavior.

Connor & Armitage (2002) pointed out the different messages that advertising tries to send to teens including when, where and with whom specific food items should be consumed. During their research, they noted the different techniques such as branding, exposure, role models, repetition, and reinforcement that marketers use to induce positive shift in attitude and mood, suitable for television medium, to persuade children for unhealthy foods. They also added that Teens' food choices depend on many inter-related factors. Some of it individual such as personal food preference, while others social such as parents, peers and marketer's attempts through media specially television and advertisements.

Advertisements not only market products but also feelings and styles of life. They go beyond needs to tackle personal dissatisfactions (Berman, 1981). For example, one of the common images that the local television stations (Lebanese) use to promote certain brands of breakfast cereals include gaining super power or ability to solve problems immediately after eating the sugared cereals. With regard to marketers in this respect, they use the four marketing mix element in making tactical decisions on how to market food items. By providing the optimal combination of price, place, promotion and product, marketers target teens to impact on their food choice.

Nestle et al. (1998) stated that media and advertising are listed among the major societal influence that impact the food choice and eating behavior besides cultural values, perceptions, social influences and availability. Marketers through advertising tend to increase the brand knowledge among teens in order to foster more positive attitudes towards consumption of heavily advertised snack foods.

2.7 The Issues about Television Advertising to Children

There has been so many debates concerning about television advertising to children since it is considered to be the most visible and persuasive medium. Marketers have always dedicated large slice of marketing communications budget on television ads as they are effective and efficient tool to target their audience via specific programs and timings (Barrie Gunter, Caroline Oates & Mark Blades, 2005).

Advertisements ultimate aim is to persuade its audience. Persuasion takes many forms like proposing children to change brands, use a product more, changing viewer's belief etc. television offers beliefs and images mostly about existing products. It rarely provides new information by promoting novel products (Barrie Gunter, Caroline Oates & Mark Blades, 2005).

Almost all media at a certain point in time initiated concerns with regard to children as they were able to reach them in their natural environment. According to Comstock and Paik (1991), media communicates messages into the homes that are out of control and sometimes even contradictory with the preferences and values of parents. One of the main issues regarding television and teens are violence, viewing time, passive lifestyle consequent and exposure to television non-nutritious food ads in relation with their health.

Since most of the ads are for non-nutritious foods, eventually the use of these products will have negative impact on children's health. Obesity is agreed to be caused by complex interactions of genetics, lifestyle and environment, yet marketing directly to children is considered to be a factor in the childhood obesity epidemic (Food Marketing to Children and Youth, 2006). Further researches like the one conducted by Gamble & Cotugna (1999) revealed a link between television viewing and obesity through the correlation between the numbers of hours viewed and the consumption of food advertised. They also found out that the proportion of advertisements for sugary cereals compared with low-sugar cereals was nearly 20 to 1. Furthermore, it was noticed that the heavy viewers considered advertised sugary foods to be highly nutritious. More studies by Lewis & Hill (1998) through experimental research explored the impact of food advertising on self-perception of overweight children.

A correlation between television viewing and eating disorders including obesity, anorexia and bulimia were hypothesized by many scholars (Dietz, 1990; Dietz & Gortmaker, 1985). A direct relationship between heavy television viewing and frequency of obesity in children and adolescents (Dietz, 1990) were shown in the preliminary outcomes which were due to displacement meaning that a child passively sits in front of television and snacks instead of involving in an energetic activity. On the other hand, anorexia and bulimia were less explicit in the results but it was possible to make some associations between these nutritional diseases and television consumption and media portrayals of females. Furthermore, as a result of unhealthy food habit consumption, dental health concerns were also raised by Young (1990).

Another reference by Revill (2002), where he mentioned that childhood obesity is increasing in UK. 1 in 5 of all nine-year-old children were overweight, while 1 in 10 were obese and the figure did double in the last 20 years. Revill concluded that the findings could be the result of the aggressive marketing tactics practiced by Pepsi, McDonald's Happy Meals and Spiderman cereal to advertise junk foods in US through unfairly exploiting children's and teens' desires. Marketers practice of targeting teens through television commercials, encourages eating disorders, pre-cautious sexuality, youth violence and family stress and eventually leads to diminishing the capability of teens to play creatively (Linn, 2005; Schor, 2004).

Furthermore, Tucker (1986) offered a logical argument in stating that the physical fitness of high schools students is partially related to the amount of television they watch due to passivity.

According to Dietz and Gortmaker (1985), the occurrence of obesity increases by 2% for every extra hour of television viewing by children of ages between 12 till 17; Dietz and Gortmaker observed that the non-nutritious messages were more often promoted during prime time programming when most elementary school age children watch television. Their research used both cross sectional and longitudinal studies. The data analysis was from samples of children (ages 6-11) and adolescents (ages 12-17) who participated in two National Health Examination Surveys. The total exceeded 13,000 respondents. The researchers found a significant positive relationship between obesity and super-obesity and television watching while controlling for variables affecting obesity like socioeconomic class, prior obesity, region, parental obesity, race etc… No significant difference were found between obese and non-obese children with regard to their ability to socialize, this finding ruled out the probability of the idea that obese children are lonely and therefore spend more time watching television. Dietz and Gortmaker (1985) suggested that reducing television viewing time and snacking while watching and consumption of advertised foods will help in the treatment or avoidance of childhood obesity.

According to Falciglia & Gussow (1980), television food ads stimulate eating by obese subjects as they seem to be powerful environmental cues affecting children's eating behavior. Obese subjects were found to be more responsive to television ads as an eating cue than the normal weight subjects. Moreover, the pervasiveness of television and its advertisements for high caloric non-nutritious foods could be an adding factor for unnecessary caloric intake by the obese children.

Silverstein, Perdue, Peterson, and Kelly (1986) undertook content analysis examining male and female body images presented in the print media. They found that women receive more television messages to stay in shape and diet than do men. Meanwhile, women also receive many contradictory messages about eating food and the fun of preparation. Hence, these images send conflicting messages to the teens during their development of self-concepts about their body images which eventually lead to unhealthy lifestyle.

Furthermore, Dietz in 1990 discovered the relationship between the frequency of food ads on television related to the social, aspect of eating as being fun and the "ideal" body images that a child sees in ads and programs. The explicit message that children receive is that they should eat everything they want specially sweets and enjoy eating them. On the other hand, the implicit message that they get is that they will not get fat as fatness in female characters on screens are absent. Hence, Dietz concluded that the only answer that adolescents get is bulimia since only the bulimic can take in calories without gaining weight. In the same study Kaufman added on Dietz findings that since television characters were always presented happy when eating and snacking, mostly to satisfy their emotional and social needs rather than hunger.

Furthermore, it has been observed during dental research, a positive correlation between regularity of eating sweet carbohydrate or snack foods and the increase of decayed, missing and filled teeth. On the other hand, a negative correlation was found between eating apples and drinking fruit juice and the above increments. Also, an inverse

relationship was found between children's intake of foods with high calories and parent's educational level and social class.

Unlike Goldberg, Gorn & Gibson (1978) who indicated the short term effect of food advertisements on children's preferences, Bolton (1983) looked at the long- term effect taking into consideration ads, parental influence and children's characteristics into account. Results revealed small but significant long-term effect of television food ads and child's nutritional status. Children from limited budget families, limited knowledge of nutrition and limited parental supervision (for different reasons) are the ones whose nutritional intake is already severely compromised. Hence, the influence on those children is expected to be more harmful as they are the ones whose television exposure is very high and consequently to non-nutritious messages.

Clancy-Hepburn, Hickey, & Nevill (1974) studies indicated a direct positive relationship between frequency of snacking behaviors and the purchase and consumption of heavily advertised snack foods. Galst and White (1976) confirmed the positive relation between purchase-influencing attempts at the supermarket by children with the amount of television viewing at home. Children mostly requested sweetened cereals and candies (68% of all purchasing-influencing attempts).

In sum, most of the health studies have confirmed the relationship between heavily eating sugared cereals, sweets and snacking heavily promoted by television to teens, with the increase of nutritional diseases including dental caries, obesity etc.

2.8 Techniques Used to Mislead Children and Teens about Products

Factors affecting differentiation process between programs and commercials that initiate confusions among teens include; Host selling that uses popular television

characters in commercials who also appear in adjacent programs (Kunkel, 1988a); Featuring characters available for purchase by development of product-related shows and Sponsorships of children's and teens' programs (Kunkel, 2001).

On the other hand, the use of bumpers and separators by marketers help in increasing the awareness of differentiation. In addition to the clustering of ads in blocks before and after programs can also aid in the differentiation even though this might lead to cluttering effect (Gunter and Furnham, 1998). However, other researchers like Kunkel and Gantz (1992) stated that these techniques were not that effective.

Children's and teens' trusting outlook toward television ads is manipulated by marketers by easily misleading teen's judgment for the true size, action, performance of products through the following below techniques:

Exaggeration: Bandyyopadhyay, Kindra & Sharp (2001) stated that consumer protection groups and parents believe that children are largely ill equipped to distinguish the techniques used by marketers to present brands. Hence, words like "Best", "Better than" can be subjective and misleading. For instance, (Barcus, 1980) mentioned that phrases like "Part of a balanced breakfast"(used in advertisements for cereals) can be interpreted as "necessary" part of balanced breakfast.

Fantasy: Bandyyopadhyay et al. (2001) noted that using fantasy in television ads can bring imaginations of children into life which most of the time confuses them from reality. Marketers heavily use fantasy situations and settings in television ads to promote foods since they are the most attractive way to grab the attention of children. Moreover, fantasy advertisements are successful and increase both awareness and purchase (Barcus 1980; Lewis & Hill, 1998).

Appeals: Kunkel and Gantz (1992) stated that there are three advertising "pitches" used for children: fun/happiness, taste/flavor/smell and product performance. Each theme

designated for specific product category advertised. Furthermore, Lewis & Hill (1998) added that food advertisements generally use animation, stories, humor and the promotion of fun compared to other product categories.

Celebrities: Marketers use celebrities in advertisement to associate positive perceived attributes of celebrities with the product being promoted in order to induce positive feelings. Marketers usually use animated celebrity characters such as cartoon heroes and practice host selling when they will target children and teens through television (Kunkel, 1988). This creates confusion among teens because it becomes difficult for them to differentiate between advertising and program material. Also, teens believe in the television ads' messages because they consider these characters as credible and trustworthy sources that can validate their choices for products (Bandyopadhyay et al. 2001). As Lawlor and Prothero (2003) stated, celebrities have a powerful effect in persuading children. Football players and pop groups attract the audience and make the product "cool" in the minds of children by associating to them. Chan & McNeal (2002) notified that selection of celebrities must be done carefully since choosing a celebrity not liked by children will have a negative impact on the product. Furthermore, they found out that the children of all ages preferred cartoon characters as endorsers specially those products with strong brand identities. Although endorsers increase the liking and trust, but this method alone does not guarantee the purchase of products. Finally, evidence on the impact of celebrity endorsement is mixed since some studies suggest greater influence among children who lack cognitive defense while others found the impact equally strong between older and younger children (Gunter & Furnham, 1998).

Metaphors: this technique is considered to be linguistic tool through which transfer of qualities occur from one object to another. It creates strong visual images that stimulates imagination and helps in recall. This is useful if the metaphor lies within the teen's experience (Young 1990).

Special Effects: Includes sound techniques, speeded up actions, animated characters interacting with real children, "Camera magic". All these help in gaining teens' attention and recall but exaggerations can lead to disappointments and product dissatisfaction among them.

Stereotyping: Television effects on viewer's perception of social reality. Unfortunately, advertisements can sometimes encourage viewers to set unrealistic and clichéd opinions about varied topics including appropriate body size (Lewis & Hill, 1998), gender roles and racial stereotyping. Marketers use different approaches and characters in television advertisement targeted to children whenever they will address boys and girls. Sometimes, the activities, interest, background of advertisement like music, colors, nature etc, are represented in a way that reinforces stereotyped perceptions of gender and family role. The bias in race was also significant in advertisements, for example white colored humans are exposed more in commercials (Barcus 1980).

2.9 Subtle Forms of Advertising

After the threat of banning advertising to children like in UK, Switzerland and other countries, marketers tried to find alternative ways to reach children and teens via television as supplement.

Sponsorship: Many conditions are involved in sponsorship like type of the program, nature of the sponsor, influence of the sponsor on program and the way sponsorship is declared. According to ITC (2000), sponsorship is a paid program by a sponsor to promote its own or another's name, product or services. It is crucial to be cautious about this matter since young children and teens have difficulty in recognizing a sponsorship relationship (Oates et al. 2002).

Merchandising: Kunkel (2001, p.376) stated that, "program-length commercials allow advertisers to promote products directly within the body of the program, thus blurring the boundary between commercial and noncommercial content. Disney stores are a perfect example."

2.10 Advertising Impact: Knowledge, Attitudes and Values

According to Bandura and Walters (1963), the acquisition of attitudes and behaviors among children and teens is done by modeling these traits from media portrayals besides other sources. Referring to Tan (1986) and McQuail (1988), the modeling process among teens includes five stages:

1- Observation of the image or behavior
2- Identification with that model
3- Realization of the desirability of the image and the positive outcome that it brings as a reward
4- Reproduction of the modeled image/behavior in some form of satisfaction
5- Reinforcement of the behavior and possibility of repetition

The influence of advertising can be differentiated into effects on knowledge and attitudes and effects on actual purchase choices and consumption behavior. Influence can also be divided into intended and unintended effects of advertising. As well as having an effect on product purchase and consumption, some advertising may have spin-off effects, shaping social values or influencing behavior beyond immediate purchase and use of the advertised product. Concerns have been voiced about advertising side effects on diet, alcohol, and tobacco consumption; drug taking; sexual behavior; and the wider health of children.

Effective advertisements tend to influence in a number of ways including increasing awareness of brands and product attributes, influence attitudes toward brands and products, influence intentions to buy or actual purchase behavior. Moreover, exposure to ads increases children's desire for products and push them to ask their parents to buy for them the advertised products. Lavidge & Steiner (1961) added that awareness leads to knowledge which manipulates liking and impacts on preferences that form conviction and gradual purchase. The stages of this decision making process for brands are related to the degree of involvement either psychological or financial in the product. Low involvement leads to quick purchase decision with minimal thought since the cost of making wrong decision is low. However, high involvement takes more time to decide.

Study conducted by Corcoran (2007) showed that teens between 13 and 17 years old make around 145 conversations about brands per week, which is twice as many as adults do. This shows that one of the most important models of advertising effects on young consumers is making them more and more brand conscious.

Most of the theories of advertising effects have primarily touched psychological level by considering the way consumers process information from ads, and the impact of that ads on their emotions and motivations to awaken their behavioral reinforcement mechanism and shape their consumer behavior.

Hierarchical Model: Lavidge & Steiner's (1961) theory mentioned above, advertising influence is considered to be a series of stages each with distinct psychological processes as mentioned in the below figure. McGuire (1969), in this model added that the process of being exposed to ads till the purchase of advertised ads goes through the following stages: exposure (awareness), attention, comprehension (evaluation), yielding (setting beliefs and attitudes), retention (comparing with other products), and decision to buy.

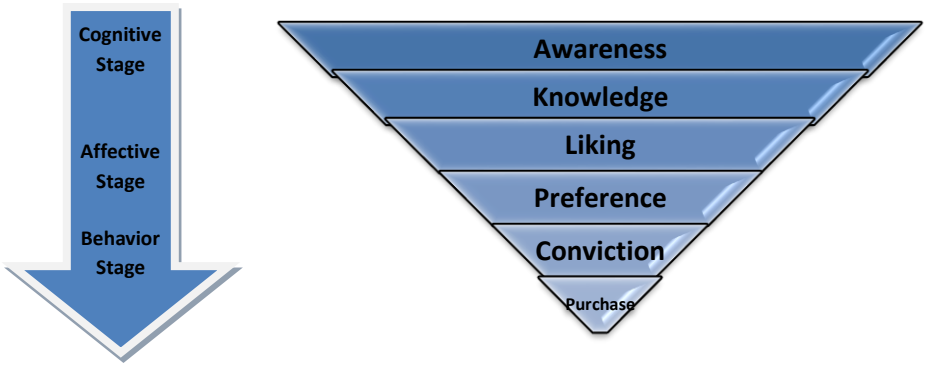

Figure 1.1: Robert J. Lavidge and Gary A. Steiner, "A Model for Predictive Measurements of Advertising Effectiveness" Journal of Marketing (October 1961), p61.

Multiattribute Model: Fishbein & Ajzen (1975) studied about advertising influences on brand related attitudes; the findings revealed that as the favorable attitude increases, the likelihood of product purchase will increase as well. This model considered consumer's attitude towards a brand as the sum of the opinion that he holds for the attributes of the product multiplied by his own subjective perceptional probability that the product holds for those attributes.

Involvement Models: In this model, outside factors are considered in behavior influence. Sherif and Hovland (1961) mentioned that as the importance of situation increases, the involvement in performing different behavior increases. Moreover, Ray (1973) stated that increase in the motivation to learn about a product, development of attitude and purchase intention are all dependent from the level of the consumer's involvement with the product. Krugman (1965) defined involvement as formation of the verbal responses during exposure of ads. Petty & Cacioppo (1979) stated that the central route is used when there is high involvement and effort required while the peripheral route is used more when there are low involvement products that need superficial level of analysis. Furthermore, television is considered to be of low involvement activity since viewers are usually passive as they usually do not make efforts to link between what's provided on television with their own experience.

Attitude Toward the Ad (Aad) Models: This model is similar to the multi-attribute model but it goes beyond simply considering the global attitude "likes v/s dislikes" rather it examines specific features in ads as music, type of endorsers etc., and their impact on consumer's feelings. Furthermore, attitudes formed by ads has a direct impact on the attitudes toward products advertised (Shimp, 1981).

Behavioral Models: This model explains the behavioral conditioning processes. Classical conditioning is the associative learning via specific stimuli connected to a behavioral response. This method is used by advertisers to influence brand-related thoughts, attitudes and eventual purchase. According to Mitchell (1983) and Gom (1982), repetitive association of brands with positive feelings increases the possibility of choosing the advertised brand.

Information Processing Models: Also called as Attentional model, is the formation of brand-related beliefs and attitudes via the amount of details and information processed while being exposed to advertisements. Level of involvement and ways the information are presented, are all factors affecting attention, information encoding, comprehending and responding. When customers are exposed to a lot of information within limited time, they will end up losing details due to limited capacity attention theory. Also, the more complex and faster is the stimulus, the more attention is needed to be able to comprehend (Thorson, Reeves & Schleuder, 1985, 1987). Adjacent programming also effects in viewer's mood states and interferes in the processing of the information presented in ads (Singh, Churchill & Hitchon, 1987). Studies have shown that program environment exerts feelings which in turn effect on viewer's memory to recall (Johnson, 1992).

2.11 Levels of Advertising Influence

Advertising communicates a message about the product being promoted. Hence, it is a source for consumers to learn which impacts on their cognitive and emotional levels first then their behavioral one. Thus, the effects of advertising on learning process can be occurred at three levels:

1. Brand level learning: This is connected to specific brands of a product/service. According to McNeal (1992), major child items include toys, confectionery, breakfast cereals, eating at fast food outlets, cartoons, music and computer or video games. Marketers associate their brands with specific desirable attributes valued by young consumers in order to overcome competing brands. For example, Atkin and Gibson (1978) interviewed children about breakfast cereal called "Honeycombs" and another one "Cocoa Pebbles", after they were exposed to the television advertisements that both used character endorsers called Boris and Fred Flintstone-Barney Rubble respectively. Children showed liking toward the brands not because of any attractive attributed that they were associated with but because they enjoyed the characters and liked them.

2. Product level learning: This refers to the information about product categories rather than brands. Advertisements inform general information to children who then are able to evaluate specific brands by comparison with other individual brands.

3. Wider consumer socialization: This type is more general learning through which children start to understand the role of consumerism in society (Gunter & Furnham, 1998). Consumerism helps maintain certain lifestyle and basis of business activity resulting employment. The role of advertising and other mass media content on children's socialization is related to parental communication style and socioeconomic class of child's family household. According to Moore & Moschis

(1978), children from wealthier families show stronger brand preferences and ask for more information before purchasing. Also child's media consumption habits, attitudes and behavior are influenced by how parents interact with their children for example, being open and democratic leads to more literate young consumers.

According to John (1999a), skepticism starts to emerge in advertising by children in different forms including; critically assessing the artistic qualities of an advertisement, questioning the reality of its central message, maybe refusing the brand on the basis of personal experience. Peer groups can also influence.

In addition to the above, there is a non-behavioral advertising "learning" effects that consists of factual learning, acquisition of attitudes and finally conditioning of wider values about consumerism as a concept.

2.12 Factors which Increase Advertising Effect

Advertising Exposure: As children usually see television advertisements more than once, the question worth exploring is how much does repeated exposure to an advertisement has effect on brand knowledge and attitude. Different studies revealed different results but one thing for sure is that the child's memory for the advertisement improves with repetition. According to Gorn & Goldberg (1978), repeat exposure not only enhances brand recognition but also affects brand – related attitudes and purchase disposition in positive ways.

Age of the child: Older children and younger children respond to advertisements differently. As they get older, they start to re-evaluate advertising messages based on their personal experiences and intellectual abilities (Rossiter and Robertson, 1974).

Role of Parents: The degree at which parents mediate the influence of ads on their children, varies with their educational and social level. They can directly influence on the amount of their children's television exposure, enhance the advertising literacy among their children and offer moral judgments and comments on advertising messages (Goldberg, 1990).

Cognitive Defenses: According to Rossiter & Robertson (1974), "cognitive defense" against advertising is developed when the child understands the selling intent.

2.13 How Food Marketers Target Children

Marketing to children-teens has made companies spend $17 billion annually (James McNeil, 2006) compared to corporate advertisers spent combined budget of $100 million advertising to children on television in 1983 Schor (2004).

In return, $40 billion annually is spend by children under 14 (James McNeal, 2006), compared to $6.1 billion spend by children between ages 4 to 12 in 1989 (Schor, 2004). Also it is worth mentioning that as per Tru. (2005) $159 billion is spent by teens.

On the other hand, studies have shown that children under 12 have influences on purchases per year around $500 billion. This increase in the spending of children is a reflection of the willingness of parents to buy more for their children which can be result of many factors including smaller family size, dual incomes, postponing of child birth until later in life where families have more disposable incomes. Moreover, guilt plays its role in spending decision where time-stressed parents try to substitute material goods for time spent with their children (Campbell & Davis-Packard, 2000).

Food and beverage advertisers alone spend between $10 billion to $12 billion a year targeting youth (IOM, 2004). Most of the food marketed to children is high in

calories, fat, salt, and/or sugar. Studies conducted by organizations like World Health Organization, the Kaiser Family Foundation and the British Food Commission all show a link between child-targeted marketing and childhood obesity.

The above figures reflect marketers intend to target children since besides their purchasing power they represent very effective tool to persuade parents to buy the promoted products. As per the Y television Kids and Tweens Report (2008), children and teens influence:

- Breakfast choices by 97% of the time, and lunch choices by 95% of the time.
- Where to go for casual family meals by 98% of the time, with 34% of kids always having a say on the choice of casual restaurant.
- Clothing purchases by 95% of the time.
- Software purchases by 76% of the time, and computer purchases by 60% of the time.
- Family entertainment choices by 98% of the time, and family trips and excursions by 94% of the time.

It is also worth mentioning that in spite of development of internet and other media, television is still the primary electronic medium to reach children (Donald Roberts et al., 2005) as do 68% of children ages 8 to 18 have a television in their bedrooms. Food advertising is frequently used on television. According to Katherine Battle Horgen (2001), exposure to television commercials has its influence on children's requests for food products, misperceptions about nutrition, increased caloric intake and parental purchases. According to Kristen Harrison (2005), cereals, sweets and snack foods are among the most advertised during children's programs, almost all products high in calories, fat, salt and/or sugar.

Moreover, as television viewing programs start to decrease, marketers now extend beyond the traditional 15-30 second ads. Through various techniques, marketers wanted to

create an environment for children where they are exposed to their brands in every possible way throughout the day in the course of their daily activities. These techniques include:

- **Brand licensing products with characters children love:** It happens when an image or logo is leased for use on products other than the one for which it was created. Examples, Nickelodeon's hit program "The SpongeBob SquarePants Movie" the November 2004 release accompanied many products including Kellogg's *The SpongeBob SquarePants Movie* Cereal, Kellogg's *The SpongeBob SquarePants* Rice Krispie Treats, Kellogg's SpongeBob SquarePants Pop Tarts, Keebler *The SpongeBob SquarePants Movie E.L.* Fudge Cookies. The same characters were also used by Burger King in the form of toys and watches distributed to children in their restaurants. However, in respond to concerns about childhood obesity linked with unhealthy food advertisement, Nickelodeon's in 2005 announced to associate characters of SquarePants, Dora the Explorer on packages of carrots, vegetables and spinach (Feeney, 2005).

- **Junk food promotions through Tie-ins**: This is used by food companies and restaurant in the form of promotions, giveaways at fast-food restaurants like prizes such as toys, puzzles, contests etc… Some examples, Star Wars: Episode III-Revenge of Sith, released in May 2005, had 16 food promotions that featured around 25 different products targeted to children most of it high in calories, fat and sugar. In order to collect all 72 *Star Wars M&M wrappers*, 45 pounds M&Ms children were supposed to purchase which is around 10,000 grams of sugar; to collect 31 *Star Wars* Super D toys kids, children supposed to buy more than 5 meals of Burger King (a typical child's Burger King meal contains 690 calories of which 28g of fat and 35g of sugar). This technique is also used by Movie studios to market films by promoting their characters on foods and beverages. Before a month of *King Kong* film release, the giant gorilla character appeared on 18 million boxes of Apple Jacks and Corn Pops, 10 million packages of Butterfinger and Baby Ruth Bars and in Burger King promotions (Feeney, 2005).

- **Product placement:** Happens when a company pays in return to have its products inserted into the content of media that could be in films, video games and even songs targeted to children. According to Business Week, Coca Cola paid $20 million for product placement in *American Idol* (Dean Foust & Brian Grow, 2004). McDonald's promoted its food products in *Spy Kids* (one of children's hit product) (Greydanus, 2001); Burger King in the film *Scooby Doo 2*; Mountain Dew went beyond product placement into producing a film about snowboarding called *First Descent* (Christopher Lawton, 2005). Besides movies, marketers made used of video and online games to target children. For instance, Burger King placed its ads in sports video games and online game; *Everquest,* a game made players able to have a real pizza delivered to them by clicking on a Pizza Hut icon; *Crazy Taxi*, a video game has KFC and Pizza Hut as destinations. "Immersive Advertising" term is applied by a popular children's Website *Neopets*, where Disney, McDonald's, General Mills and other brands incorporate through their brands into the usage of website (E. Winding, 2002). "Advergaming" is a kind of product placement tool where games are completely build around products to grab and keep children's attention on specific brands much longer than the traditional ways (Chris Powell, 2003). In this method, marketers give advantage to players who purchase their products. For example, *Disney's Virtual Magic Kingdom* reward players enter secret codes found on specially marked packages of Kellogg's cereal with extra game credits and virtual accessories for their characters. Music is also used by marketers to promote products like McDonald's that promoted its Big Mac by rap songs.

- **Marketing adult entertainment to kids:** In 2008, an estimated 17 million children watched the Superbowl with their families. Besides football, children were exposed to highly creative ads for beer and alcohol. Although many regulations tried to restrict marketing of adult entertainment to children, yet the real challenge does not necessarily fall within the parameters outlined by regulatory agencies such as the FTC. The emerging technologies help in facilitating easy access by children to

adult rated entertainment. For example, Nickelodeon's 2011 Kids Choice Awards were hosted by hip-hop artist Snoop Dog, who besides music not rated for children, also endorses fruity alcoholic beverage, Blast.

Other forms of marketing tools to target children include:

- **Mobile Phones:** Today, not only almost every child owns a mobile phone but also its majority has smartphones which provides marketers a new way of easily targeting children. Pepsico conducted cell phone-based contest called "Call Upon Yoda" sweepstakes, Nestle "Grab. Gulp. Win!", and even whole phone applications are created under brand names like "Cola Battery Widget", "M&M Liquors", "Nestle Weight Control" etc.

- **Marketing through books and toys:** Through books published under brand names even sometimes with the shape of their products, companies try to gain that warm snuggly feeling among babies about the brands. Some examples include Charlesbridge published *The M&M's Brand Counting Book*, HarperFestival published *Kellogg's Foot Loops:* Color Fun Book, Hershey Kisses: Counting Board Book or the Skittles Riddles Math all target to children. In addition to books, toys are used to target children for example HotWheels makes toy cars sporting the M&M candy logo, Barbie dolls work at both Pizza Hut and McDonald's, Coca Cola sells toys to children as young as eight, six and even three such as Coca Cola Uno, Coca Cola Checkers in a Tin, Coca Cola Wipe Off Memo Board with Coke Magnets & Dry Erase Makers. Sometimes marketers even target preschool children like Kellogg's creation of "educational program" under the name "Spark Creativity with Froot Loops".

- **Word of Mouth/ Buzz Marketing/ Street Marketing:** After providing children with free samples, marketers urge kids to discuss the product with their friends. Usually they choose the coolest kids in a community to use the product and create

buzz. This method is also well-suited for internet, where young people in particular use social networking platforms to spread promoted products. It should come as no surprise that the top 10 buzz marketing campaigns (as of 2008) relied heavily on YouTube, Twitter, Hotmail, Facebook… to reach millions of people. As an example, P&G has a section called "Tremors" has a team composed of children that promote products such as Pringles potato chips to their friends. Dairy Queen used a marketing campaign through young customers as young as thirteen to tell their friends about ice cream called "Blizzards". Burger King re-launched its "Subservient Chicken" television commercial online in 2004, attracted 15 million hits within the first 5 days and more than 450 million hits over the next few years.

Marketers went beyond media to target children. They started to search for places where children become captive audience unable to avoid commercial messages. These methods include:

- **Corporate – Sponsored School Programming:** Schools agree to show a Channel One program every day to their students in exchange for free video equipment. This program includes 10 minutes of news and 2 minutes of commercials. During the survey of 100 random episodes broadcast between 1997 and 2002, the results revealed that 27% of ads were for junk food which was the leading category of products advertised. In 2005, the regular advertisers on Channel One were Pepsi, Mountain Dew, Snickers and Kellogg's Pop Tarts.

- **Vending Machines, Direct Sales and Exclusive Agreements:** According to a national survey done in 2000, 93.6% of high schools, 83.5% of middle schools, and 58.1% of elementary schools sold soda or other sugar-laden soft drinks on their premises. At the same time, nearly two thirds of all schools allowed the sale of "salty snacks not low in fat" while more than half of all schools allowed the sale of candy. Moreover, it was significant that more than 20% of schools sell brand-name fast food on their premises. Many school districts sign "pouring rights" contracts

with beverage companies like Coca Cola or Pepsi to give them the exclusive rights to sell their products at school events and place vending machines on school property.

- **Incentive Programs:** Many schools use corporate-sponsored incentive program as reward for students. For example, Pizza Hut's Book-It program offers free pizzas to students who read a certain number of books (Eric Schlosser, 2002).

- **Direct Advertising on School Space:** Marketers locate their ads on interior and exterior school walls, gymnasiums, scoreboards, at school athletic events and school busses. Much of these ads are for sugar-laden drinks and snack foods. Also the Cover Concepts (distribution of free textbooks, posters…) to school children is mostly advertised by McDonald's, Pepsi, Frito Lay, M&M's and General Mills (Mary Story & Simone French, 2004).

- **Sponsored Educational Materials and Programs have their own agenda:** Companies produce educational materials for use in classrooms where most of these kits are found to be biased or incomplete as they tend to promote a favorable viewpoint for consumption of their products. For example, Kellogg's nutritional curriculum mentions that students should only be concerned about fat content when choosing breakfast failing to mention sugar, a major ingredient in many cereals. Frito-Lay distributed poster about nutrition with slogan "Snack for Power, Snack for Fun!" emphasizing that Cheetos, Doritos and other Frito-Snacks give you brain power according to the food guide pyramid. Coca Cola has launched reading program called "The Coca Cola Story Chasers Mobile" while McDonald's sends its character Ronald to school to promote literacy and first aid.

- **Corporations push their brands through school franchising:** Programs like Campbell's Soup Labels and General Mills Box for Education encourage children to make their parents buy brands that usually don't buy (either they are more

expensive, less desirable…) to raise money for their school. Similar program includes making children sell M&M candies for the same purpose.

- **The Marketing Maelstrom and the Nag Factor:** The extensive line of products marketed to children is stressful to families as most parents struggle to set limits, corporations on the other hand undermine parental authority by encouraging children to nag. They also inundate children with images that portray adults as incompetent, mean, or absent while encouraging children to engage in behaviors that are troublesome to parents. A 1999 article in "Advertising Age" says: "Mothers are known for instructing children not o play with their food. But increasingly marketers are encouraging them to".

- **The Internet:** It is considered to be extremely desirable medium for marketers to target children as it is considered to be part of the youth culture. Parents usually are unaware of how much their child is exposed to ads online. Also, this medium unlike others is unregulated for marketing codes and is kept without parental supervision (kids go online alone). Through sophisticated technological advancement, marketers easily gather data, target children in an interactive environment that eventually helps in building relationship by making use of customized ads.

- **Government Regulation versus Self-Regulation:** An online poll published in Advertising Age revealed that 77% of AdAge.com voters believe that there is a direct link between television ads and childhood obesity. In 2004, survey of youth marketers found the following figures related to advertising targeted to children which raised serious concerns about urgency of applying regulations:

  -91% agreed that young people are "marketed to in ways they don't even notice"

  -73% agreed that "companies put pressure on children to pester their parents to buy things"

  -61% agreed that "advertising to children begins at too young an age"

-58% agreed that “there is too much marketing and advertising directed toward children”

Furthermore, Ward (1984) conducted a content analysis of letters for television advertising to children and teens written to FTC. The data was as follows:

- 42% supported the ban of television commercials for heavy sugared foods
- 10% supported total ban of ads directed to children
- 13% thought that FTC should not take any action

As noted, the majority of writers were against advertising to children since they were concerned about the health and nutrition of children. Although these findings can’t be considered as a reflection of total population or generalize to public, but most letter writers know very well the subject that they are writing and are highly educated. Also, in July 23, 1991 the American Academy Pediatrics, suggested that television advertisements for food targeting children and teens should be banned as their purpose is to promote profits rather than healthy eating in addition to the increase in the parental control of television sets should be increased.

*2.*14 *Conclusion*

The rise of childhood obesity along with unhealthy trend of food habits are reflection of unprecedented increase of food marketing aimed at children and teens. Companies are directly targeting children and teens in every possible way. The negative side effects lead into formation of organizations and coalitions (including the Campaign for a Commercial-Free Childhood) to stop the commercial exploitation of children and teens. On international level, organizations such as American Psychological Association, the American Academy of Pediatrics, World Health Organization, and the Institutes for Medicine have called for restrictions on marketing to children (WHO Forum, 2006).

In our today's environment, where parental control over media consumption is getting tougher, an urgent need for centralized regulation and control over media should be developed. Those regulations should take into consideration that advertisers should not take the advantage of natural credulity and sense of loyalty of children. Furthermore, the exposure of advertising information should not result neither in physical, mental or moral harm among children.

CHAPTER THREE

PROCEDURE AND METHODOLOGY

3.1 Introduction

The purpose of this investigation was to study the impact of the television food advertisements by selected food category companies on Lebanese Armenian Private Middle Schools' 8th and 9th graders food consumption habits.

As stated in the theoretical framework section, in order to measure the impact of television food ads, the Hierarchical model for Lavidge & Steiner's (1961) was used. The goal is to measure the impact of television food ads by the combined effects of awareness, knowledge, liking, preference and conviction on the purchase / consumption of advertised food categories.

Furthermore, this research also tried to find relationships between different demographic variables like tuition levels, gender, on consumption habits of 8th and 9th graders of advertised food categories and television watching habits.

3.2 Research Questions and Research Hypotheses

In particular, the focus was on the following research questions:

Research Question 1: Do television food advertisements targeting 8th and 9th graders have an impact on their food consumption habits?

Research Question 2: Is there a relationship between Socio-Economic Status (tuition level) and attitude toward 8th and 9th graders' food consumption habit?

Research Question 3: Is there a relationship between Socio-Economic Status (tuition level) and television watching habit of the 8th and 9th graders?

Research Question 4: Do gender differences influence food consumption habits of the 8th and 9th graders?

Research Question 5: Do gender differences influence television watching habit of the 8th and 9th graders?

Thus, the research hypotheses were formulated as follows:

Research hypothesis 1a: The more the 8th and 9th graders view TV, the more they are aware, they know and they like food ads on TV.
Research hypothesis 1b.1: The more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.
Research hypothesis 1b.2: The more 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.
Research hypothesis 1b.3: The more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.

Research hypothesis 2: There is a relationship between the socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit. The lower the socio economic status the higher is the consumption of advertised food.

Research hypothesis 3: There is a relationship between the socio-economic status (tuition level) and television watching habit of the 8th and 9th graders. The lower the socio economic status the more they watch TV.

Research hypothesis 4: Gender differences influence the nature of food consumption of the 8th and 9th graders.

Research hypothesis 5: Gender differences influence television watching habit of the 8th and 9th graders**.**

3.3 Selected Variables

3.3.1 The Independent Variables

- For H1a, H1b.1, the independent variable is the impact on the attitude of the 8th and 9th graders that was defined by the five dimensions; awareness, knowledge, liking, preference and conviction of the Hierarchical model for Lavidge & Steiner's (1961) was used., measured by the items 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25.

- For H1b.2, the independent variable is the trust of 8th and 9th graders toward advertised food items measured by item 18.

- For H1b.3, the independent variable is the mostly seen advertised food items on television by the 8th and 9th graders measured by item 30.

- For H2 and H3, the independent variable is the Socio-Economic Status defined by tuition level of the Lebanese Armenian Middle schools of the 8th and 9th graders measured by item 1.

- For H4 and H5, the independent variable is the gender of the student participants, measured by item 2.

3.3.2 The Dependent Variables

- For H1a and H3 the dependent variable is the television viewing habits of the 8th and 9th graders measured by the items 13 and 14.

- For H1b.1, H1b.2, H1b.3 and H2 the dependent variable is the consumption of the advertised food categories targeting children and teenagers, measured by items 6, 7, 8, 9 and 10.

- For H4, the dependent variable is the mean consumption of the advertised food categories targeting children and teenagers, measured by computing the mean of items 6, 7, 8, 9 and 10.

- For H5, the dependent variable is the mean television viewing habits of the 8th and 9th graders, measured by computing the mean of items 13 and 14.

3.4 Research Methodologies Used for Data Collection

3.4.1 Focus Group

A random sample of 15 students of ages between 13 and 15 were chosen for a focus group in order to discuss their television viewing habits, favorite programs, television characters and television advertisements.

3.4.2 Television Monitoring

Since the time for television watching among teens was not restricted to a set of rigid time schedules, the monitoring was limited to programs targeted to teens from the time the program were starting till finishing.

Date: The monitoring was conducted from March 29, 2013 till April 1, 2013. That week was considered as a normal week in a regular month, no minimal seasonal variability like campaigns for Christmas, Summer, back to school etc. was not observed.

Channels: The monitoring channels were the Lebanese Broadcasting Corporation International (LBCI), Future Television (FTV), Murr Television (MTV) and Orange Television (OTV).

Time: The time schedule varied between 4:30 p.m. and 10:00 p.m. for weekdays and from 9:00 a.m. till 10:00 p.m. for weekends.

Food advertisement breaks broadcasted during programs viewed by teens were documented on an excel sheet for four consecutive days and the extracted advertisements were classified into four product categories as mentioned above.

3.4.3 The Survey Questionnaire

The method used to obtain the information and data needed was through the administration of a survey questionnaire based on the dependent and the independent variables. It was developed to asses four key areas: demographics, food consumption habits, television watching habits and impact of television food ads. Prior to the development of the final questionnaire, a pilot study with 27 participants was conducted in order to test logistics, explore issues and gather information to improve the methodological part of the study. As a result, a preliminary questionnaire was designed that was tested on

15 participants in order to make sure of the validity and reliability of the questionnaire design. Consequently, few amendments and deletions of certain questions were performed to come up with the final questionnaire design formed of 30 questions.

For the purpose of the measurement of the responses of the participant on the questionnaire items, mainly a Likert Scale was utilized. The respondents were asked to respond to the questionnaire by reading each item and rating them: “1” for Never, “2” for Seldom, “3” for Occasionally, “4” for Often and “5” for Always”.

3.4.3.1 Population, Sampling and Procedures

The targeted total population of Armenian Middle schools in Lebanon was contacted by phone and in writing (see Appendix A). Out of the total population of twenty Armenian Middle schools, seventeen agreed to participate. Approval of the school administration was obtained to distribute and administer in person the survey questionnaire to the students during class sessions (Appendix B). A clustering sampling method was used to divide schools according to three socio-economic status (SES) which was defined by the level of school tuition fees for the 8^{th} and 9^{th} graders. The three Socio-Economic Status (SES) groups were considered as follows:

(1) High Socio-Economic Status (SES) – The tuition fees were within the range of 2301000 and 4000000 LBP.

(2) Middle Socio-Economic Status (SES) - The tuition fees were within the range of 2101000 and 3000000 LBP.

(3) Low Socio-Economic Status (SES) - The tuition fees were within the range of 600000 to 2100000 LBP.

Once the three clusters of school were identified, out of each cluster two schools were chosen randomly. Then, the questionnaire was circulated in the chosen six Armenian schools representing different socio-economic status among the 8th and the 9th graders.

The survey Questionnaire was written in English (Appendix). No translation to the Arabic language was necessary since the students had the verbal and the written skills to read, understand and respond to the Questionnaire in English. Furthermore, the survey was administered in person by the researcher to respond to any further needed inquiry by the participants. After the distribution of the survey Questionnaires, the students were given enough time to finish and hand in the survey. Following the collection of all survey Questionnaires, the data was entered in the Statistical Package for the Social Sciences (SPSS) program for analysis.

3.4.3.2 Reliability Test

Reliability refers to the extent to which a scale produced consistent results if repeated measurements are made. Reliability is assessed by determining the proportion of systematic variations in a scale. This is done by determining the association in the scores and between the scores obtained from different administration of the scale. For the purpose of validity and reliability, a vast array of literatures was reviewed, articles, textbooks, journals, etc. Then the exploratory findings were systemized and the information was linked together with the facts extracted through the survey.

3.4.3.3 Validity Testing

Validity is arguably the most important criteria for the quality of a test. Validity refers to the extent to which differences in observed scale scores reflect true differences among objects on the items being assessed. There are several ways to estimate the validity

of a test including Content validity, Construct validity and Criterion Related validity that represents Concurrent and Predictive validity (Brown 1996, pp. 231-249).

- Content validity refers to the degree to which a test measures an intended area, and experts in the field are asked to judge whether the instrument is content valid in accordance with the researched theme.
- Construct validity involves the test of the hypothesized constructs which represent the concept that researchers try to measure, and a number of replicated studies will. It also refers to the choice of the items in the questionnaire, and the choice of the scale used in the study.
- Concurrent validity means to justify the intended test scores by correlating some other established test or criterion such as GPA scores.
- Predictive validity refers to the degree that a test can predict the outcomes theoretically expected. For example, use SAT scores to predict the performance of the freshman year at the university.

For the justification of the construct validity, this study utilized exploratory factor analysis to examine factors of the empirical data. Through the operation of the empirical data analysis, important results are accordingly illustrated by the exploratory factor analysis such as factor loading, the rotated simple structure and the plot of Scree test. Consequently, the obtained solutions from the factor analysis procedures provide reasonable justification to construct validity of this research.

As stated in the definition of terms, the questionnaire was composed of 30 questions. The five items defining consumption of advertised food constitute one construct which is the consumption (purchase) of the four television advertised food categories. Furthermore, the eleven items defining impact of television food ads make up the five dimensions of Awareness, Knowledge, Liking, Preference and Conviction.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter discusses the results and findings of the conducted survey.

Descriptive research approach such as frequency distributions, percentages, pie charts, histograms, means and standard deviations, were used to describe sample characteristics such as age, gender, school tuition and weekly pocket money of respondents. Other variables such as what type of advertisements do respondents see, how many own television in their bedrooms are introduced as categorical variables so as to make comparison between groups.

For the five research questions, the tests run varied between reliability, Cronbach's alpha, validity paired t-tests, Simple Linear Regression analysis using stepwise method, One Way ANOVA, Least Significant Differences (LSD post hoc analyses) where significant differences were depicted.

All data were analyzed by computer software program Statistical Package for Social Science (IBM SPSS) version 20.

4.2 Reliability Results

Long questionnaires designed for children increases the chances of wrong answers. Children reply best for short and simple questionnaires that need little amount of concentration and time from them. That is why this questionnaire included limited number and style of questions. So, it did not state every single construct for awareness, knowledge, liking, preference and conviction tested as a multi-item scale. Thus, at some instances it was necessary to check the reliability item by item to see their effects.

Testing was done on the consumption of the televised food categories measured by items (Q6, "I eat chips, chocolates, candies, cookies, cupcakes for snacks", Q7, "I drink sodas, energy drinks, sugared juices when I am thirsty during the day", Q8, "When I eat out, I go to my preferred fast food restaurant", Q9, "I eat more than 2 snacks per day", Q10, "I like to eat sugared or sweet cereals for breakfast", Q26, "When buying alone, I use my pocket money to buy food items I like: such as chocolates, candies and chips", Q27, "When shopping alone, I buy the food items I like regardless of price", Q28, "I share in the decision with my parents when buying certain food items". Results for the Cronbach's Alpha was 0.579, which is considered to be in the upper part of the range for low to moderate and can consider the items reliable (see Table 4.1).

Table 4.1: Reliability Statistics for Food Consumption Habits

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.579	.586	8

Another reliability test was done on the impact of television food advertisements that was measured by the five dimensions. Awareness made up of items (Q15, "I watch food TV advertisement", Q16, "I pay attention to food advertisement messages" and Q20, "TV ads make me remember food brands"); Knowledge made up of items (Q17, "I learned about some of the food I eat from the TV advertisements" and Q23, "TV food advertisements provide me with information about foods"); Liking made up of items (Q19, "TV ads are enjoyable and fun to watch" and Q25, "When I like a TV ad, I tell my friends to watch also"); Preference made up of items (Q21, "My preference of food brands is based on TV food advertisements" and Q24, "TV food advertisements, help me choose easily the brand food items"); Conviction made up of items (Q18, "I trust food advertisements on TV" and Q22, "Watching TV food ads make me hungry"). Results for the Cronbach's Alpha was 0.501, which is considered to be in the upper part of the range for low to moderate and can consider the items reliable (see Table 4.2).

Table 4.2: Reliability Statistics for Impact of Television Food Ads

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.501	.481	11

4.3 Results of Validity Testing

Validity refers to the extent to which differences in observed scale scores reflect true differences among objects on the items being selected.

A factor analysis was conducted for the independent variable "impact" of television food ads which is composed of the dimensions of knowledge, awareness, liking, preference and conviction for the purpose of describing the variability among observed, correlated variables. The aim was to find how many items constitute the construct of impact.

In table 4.3.1, Initial communalities are estimates of the variance in each variable accounted for by all components or factors. Extraction communalities are estimates of the variance in each variable accounted for by the factors (or components) in the factor solution.

The higher the score, the more variable fits with the factor solution. For example, 66.3% of the variation in preference of food brands based on television food ads is explained by the factor model.

Table 4.3.1: Communalities for the Impact of Television Food Advertisements

	Initial	Extraction
I watch food television advertisement	1.000	.640
I pay attention to food advertisement messages	1.000	.504
I learned about some of the food I eat from the television ads	1.000	.487
I trust food advertisements on television	1.000	.551
Television ads are enjoyable and fun to watch	1.000	.647
Television ads make me remember food brands	1.000	.375
My preference of food brands is based on television food ads	1.000	.663
Watching food television ads make me hungry	1.000	.523
Television food ads provide me with info about foods	1.000	.504
Television food ads, help me choose easily the brand food items	1.000	.287
When I like a television ad, I tell my friends to watch also	1.000	.397

Extraction Method: Principal Component Analysis.

The KMO measures the sampling adequacy which should be greater than 0.5 for a satisfactory factor analysis to continue. Looking at Table 4.3.2, the KMO measure is 0.623 with a 0 value for significance that are satisfactory indications for the factor analysis to continue further.

Table 4.3.2: KMO and Bartlett's Test for the Impact of Television Food Advertisements

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.623
Bartlett's Test of Sphericity	Approx. Chi-Square	226.594
	Df	55
	Sig.	.000

As results in table 4.3.3 shows, the first five factors together are sufficient to account for 51.088% of the total variance.

Table 4.3.3: Total Variance Explained for Impact of Television Food Advertisements

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.160	15.426	15.426	2.160	15.426	15.426	1.657	11.835	11.835
2	1.532	10.943	26.369	1.532	10.943	26.369	1.395	9.967	21.803
3	1.244	8.889	35.258	1.244	8.889	35.258	1.386	9.899	31.702
4	1.170	8.360	43.618	1.170	8.360	43.618	1.367	9.764	41.466
5	1.046	7.470	51.088	1.046	7.470	51.088	1.347	9.622	51.088
6	.977	6.975	58.063						
7	.945	6.749	64.812						
8	.864	6.173	70.985						
9	.830	5.928	76.913						
10	.746	5.328	82.241						
11	.683	4.875	87.116						
12	.647	4.621	91.737						
13	.586	4.185	95.922						
14	.571	4.078	100.000						

Extraction Method: Principal Component Analysis.

The Scree plot suggests that we can group our variables into a maximum number of 6 factors. However, for the purpose of this research, it was chosen to group into 5 factors as this grouping is considered to be more helpful in better explanation.

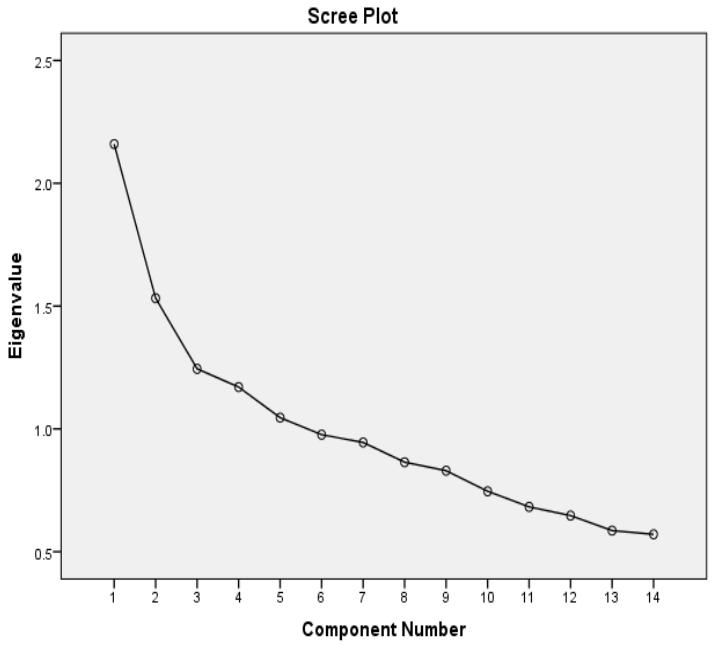

Figure 4.3.1: Screeplot for the Impact of Television Food Advertisement

The pattern of factors was clarified by "Rotated Component Matrix". The values in the matrix were factor loadings and the correlations between each variable and each factor.

The "Rotated Component Matrix" suggested the same as the component matrix in what concerns grouping the variables into five factors (Table 4.3.4).

Across each row, the highest score was highlighted that presented the factor that each variable loaded most strongly on. Then among highlighted scores, the highest one was chosen from each column. Based on these factor loadings, the factors according to the rotated component matrix are as follows:

Factor 1 or the item "My preference of food brands is based on television food ads" has the highest correlated score of 0.531.

This factor is a part of the dimension of “Preference” for the independent variable of impact of television food advertisement on the 8th and 9th grader participants.

Factor 2 or the item “Television food ads provide me with information about foods” has the highest correlated score of 0.644. It has also “I watch television food advertisement” as the second highest score of 0.635, as well as “I pay attention to food ads” as 0.498 and “Television food ads help me choose easily the food brands” as 0.450.

This factor is a part of dimension of “Knowledge” for the independent variable of impact of television food advertisement on the 8th and 9th grader participants.

Factor 3 or the item “Television ads are enjoyable and fun to watch” has the highest correlated score of 0.739. It has also high scores for the following: “When I like television ads, I tell my friends to watch also” 0.450, and “I learned about some of the food that I eat from the television food ads” score of 0.105.

This factor is a part of the dimension of “Liking” for the independent variable of impact of television food advertisement on the 8th and 9th grader participants.

Factor 4 or the item “I trust food advertisements on television” has the highest correlated score of 0.696. It also has a high score for “I learned about some of the food that I eat from the television ads” as 0.663.

This factor is a part of dimension of “Conviction” for the independent variable of impact of television food advertisement on the 8th and 9th grader participants.

Factor 5 or the item “Television ads make me remember food brands” has the highest score of 0.782. It also has a high score for “Watching food television ads make me feel hungry” as 0.335.

This factor is a part of dimension of “Awareness” for the independent variable of impact of television food advertisement on the 8th and 9th grader participants.

Table 4.3.4: Rotated Component Matrix[a]

	Component				
	1	2	3	4	5
I watch food television advertisement	.186	.635	-.046	-.447	.030
I pay attention to food advertisement messages	-.141	.498	-.059	.277	-.395
I learned about some of the food I eat from the television ads	.079	.083	.105	.663	-.155
I trust food advertisements on television	-.017	.163	-.102	.696	.170
Television ads are enjoyable and fun to watch	.156	.142	.739	-.218	-.095
Television ads make me remember food brands	.174	.163	.231	-.005	.782
My preference of food brands is based on television food ads	.531	.115	-.094	.017	.515
Watching food television ads make me hungry	-.170	-.020	.318	.163	.335
Television food ads provide me with info about foods	-.007	.644	.200	.143	.171
Television food ads, help me choose easily the brand food items	.091	.450	-.026	.221	.163
When I like a television ad, I tell my friends to watch also	.351	.004	.454	.061	.254

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Clearance test was conducted to make sure that sure that the socio-economic status of participants based on tuition fee of schools, is a good indicator of the participants' income status from the angle of purchasing power.

First, the answers for weekly pocket money of respondents were decoded on the SPSS program into categorical data by ranging them as follows: (less than 15,000 LBP; 15,001 LBP - 30,000 LBP; 30,001 LBP - 45,000 LBP; 45,001 LBP - 60,000 LBP; 60,001 LBP and more). Then, a post HOC test was done using LSD to see if there is a significant difference between the three socio-economic statuses of students and their weekly pocket money (purchasing power). As the results showed in table 4.3.5 (see Appendix C), there is a significant difference between the weekly pocket money of students who are enrolled in schools with high tuition fees versus low tuition fees with a significant average difference of 5,478.084 LBP. (p value = 0.041 < α = 0.05). Furthermore, as expected, the results showed that there is no significant difference for the middle tuition fees as it lies in the middle. Thus, using socio-economic class based on tuition fees is valid.

4.4 Descriptive Research Approach

The respondents sample consisted of 352 participants made up of 161 male (45.7%) and 191 female (54.3%) (see the Pie Chart in Figure 4.4.1). In terms of age of the respondents, 95.2% were in the age range of 13 to 16 (see the Pie Chart in Figure 4.4.2) and the rest is distributed as follows: 1.7%, 2.8% and 0.3% of the sample were respectively of the ages 12, 17 and 18. As for the school grade level of the respondents, 171 were 8^{th} graders (48.6%) and 181 were of 9^{th} graders (51.4%) (see the Pie Chart in Figure 4.4.3).

The distribution of students based on socio-economic status were: 121 participants or 34.38% attending schools of high tuition fee, 119 or 33.81% attending schools of middle tuition fee and 112 or 31.81% attending schools of low tuition fee (see the Pie Chart in Figure 4.4.4).

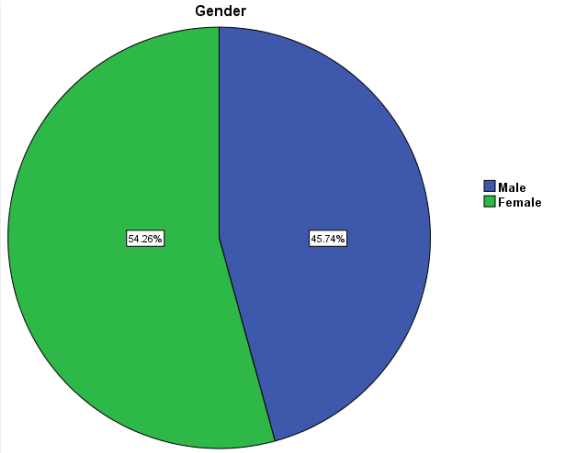

Figure 4.4.1: Gender Distribution

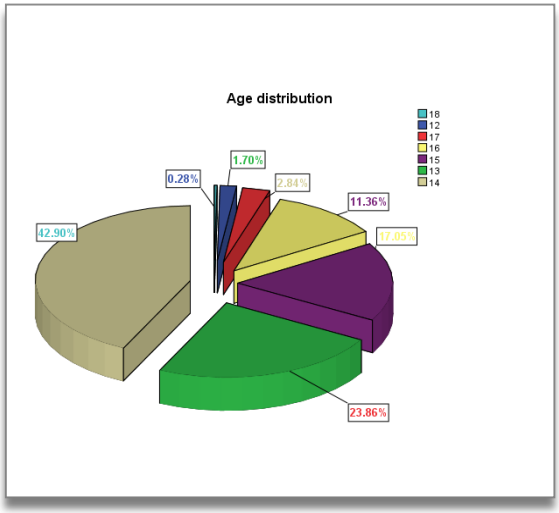

Figure 4.4.2: Age Range Distribution

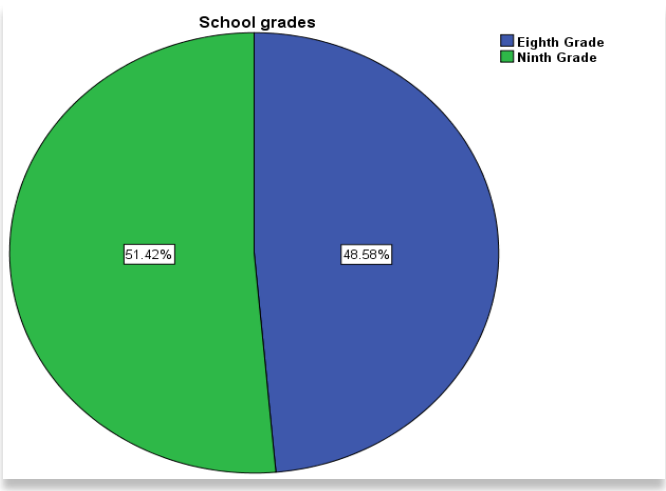

Figure 4.4.3: School Graders Distribution

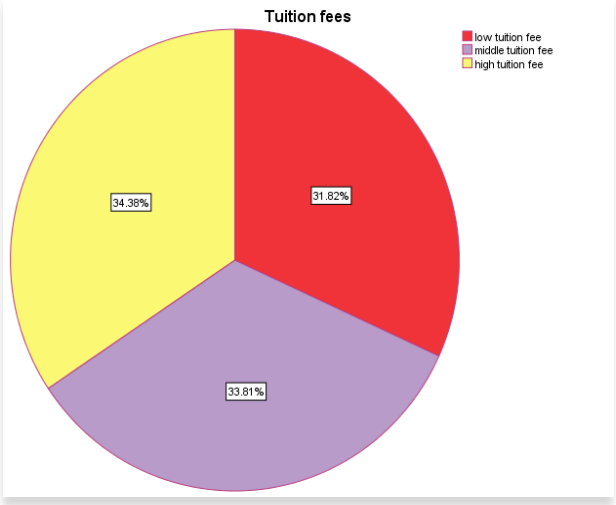

Figure 4.4.4: School Tuition Distribution

As it is observed in Tables 4.4.1 and 4.4.2, as well as in the Bar Chart in Figure 4.4.5, the majority of the respondents (88.6%) have on average a weekly pocket money within the range from 0 to 40000 LBP.

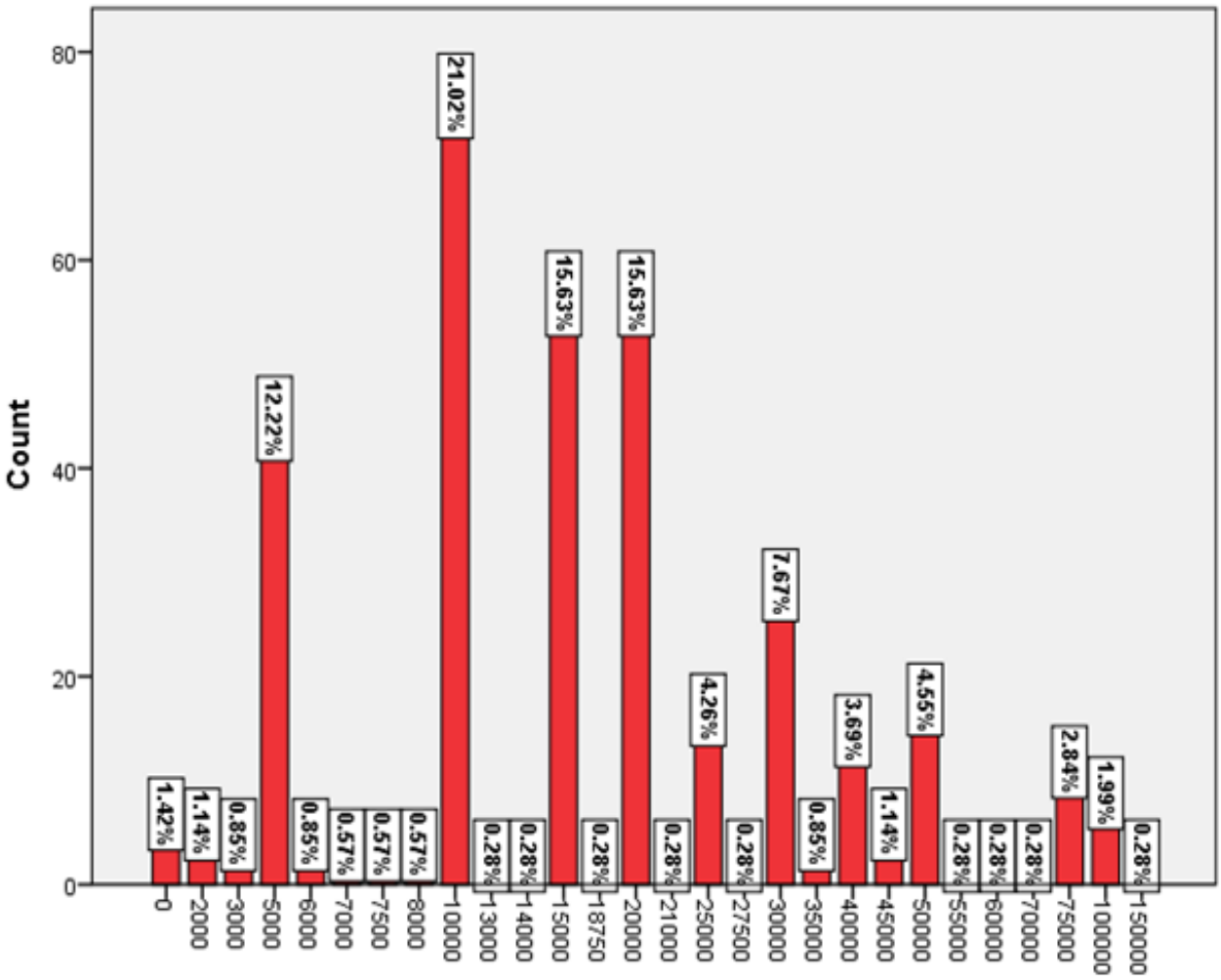

Figure 4.4.5: Distribution of Weekly Pocket Money of Students in LBP

Table 4.4.1: Distribution of Weekly Pocket Money in Percentages

	Frequency	Percent	Cumulative Percent
0-10000	138	39.3	39.3
11000-20000	113	32.1	71.4
21000-30000	44	12.6	84
31000-40000	16	4.6	88.6
41000-50000	20	5.6	94.2
51000-60000	2	0.6	94.8
61000-70000	1	0.3	95.1
71000-80000	10	2.8	97.9
100000-150000	8	2.1	100
Total	**352**	**100**	

Table 4.4.2: Statistics for Weekly Pocket Money of Respondents.

352	Valid	N
0	Missing	
21674.01	Mean	
15000.00	Median	
10000	Mode	
20424.408	Std. Deviation	
417156423.510	Variance	
0	Minimum	
150000	Maximum	

Participants were asked to choose the food category type advertisement that they mostly see on television. Not surprisingly, the majority of the respondents (184 out of 352) chose Chocolate as the most television advertised food category (52.3%), followed by Fast food restaurants (110 out of 352) equivalent to (31.3%). Milk and Cereals were seen evenly on television, each 5.7% while Fresh juices scored the lowest 5.1% (see Figure 4.4.6).

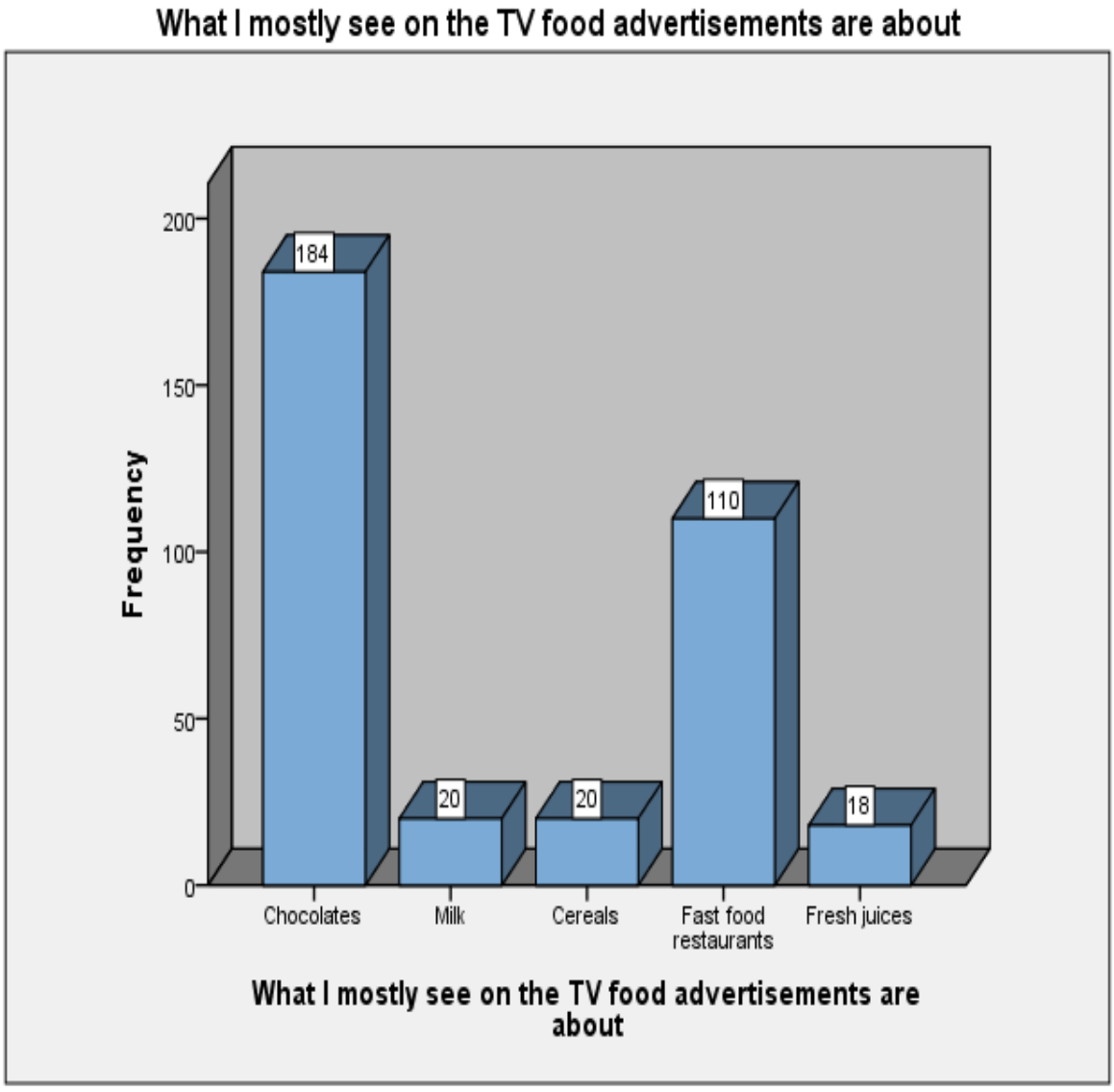

Figure 4.4.6: Frequency distribution of what respondents mostly see on television food advertisements.

As per Fugure 4.4.7 and Table 4.4.3 below, 59.1% of all the participants own television in their bedrooms. Furthermore, males owning television in their bedrooms is much more than non-owner males (107 versus 54) while female television owners in bedrooms versus female non owners are almost even (101 versus 90). This shows that males have more freedom for watching television. The difference in gender television ownership figure could also be a result that the males have entertainment games on television like PlayStation.

Table 4.4.3: Gender of respondent * Do you have a television in your bedroom? Cross tabulation

		Do you have a television in your bedroom?		Total
		Yes	No	
Gender of respondent	Male	107	54	161
	Female	101	90	191
Total		208	144	352

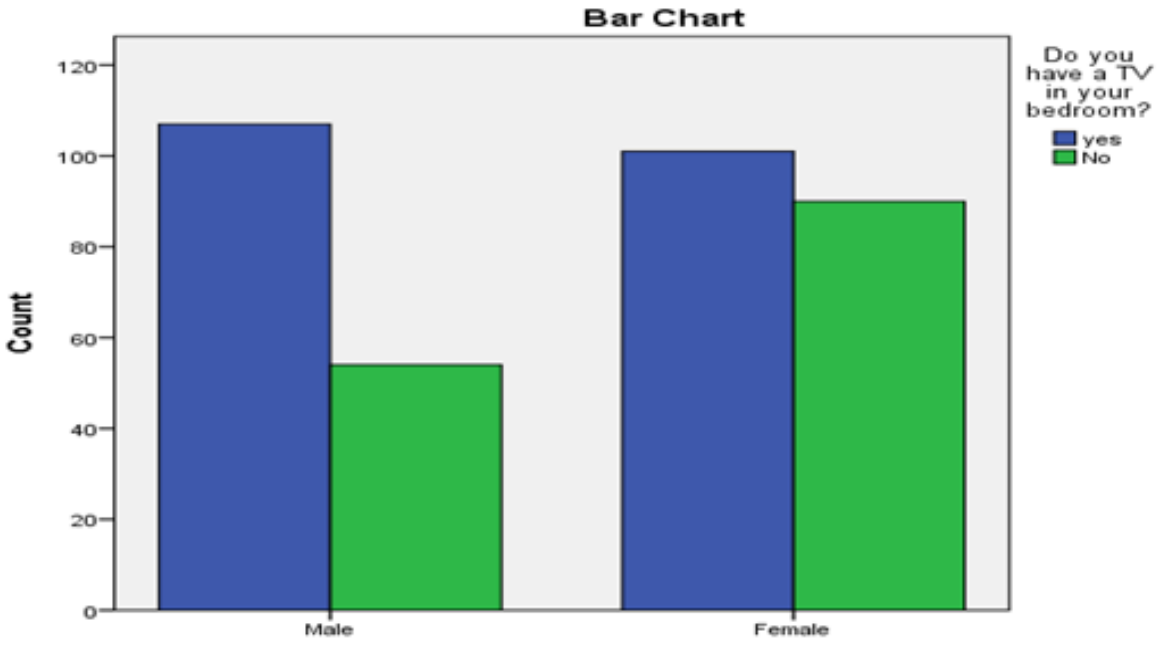

Figure 4.4.7: Ownership of television in bedroom with respect to gender

As per figure 4.4.8, when respondents were asked what do they do after seeing food advertisement, out of 352 respondents, 123 chose asking friends about the brand and 114 said that they buy the brand. This shows the effective impact of television advertisement on 8th and 9th graders food choice.

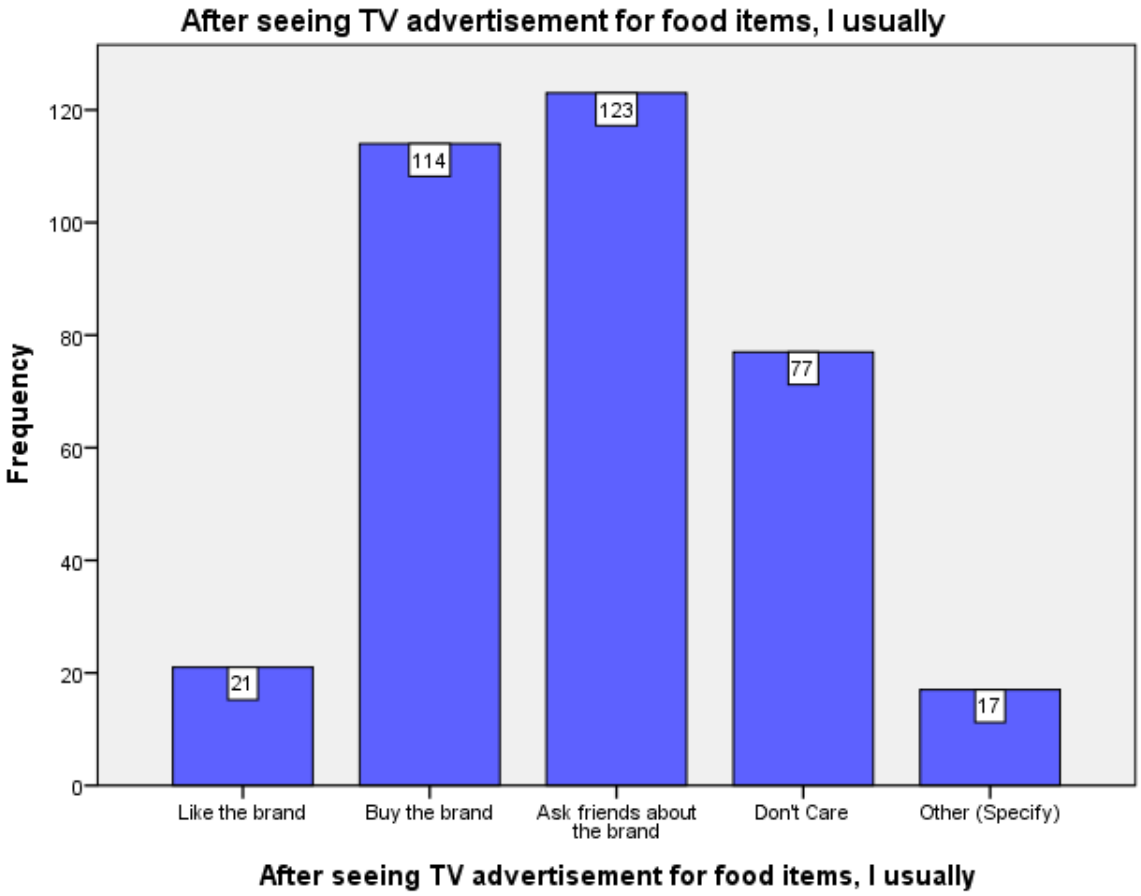

Figure 4.4.8: Respondents choices for after viewing television food advertisements

Tables 4.4.4 and 4.4.5 (see Appendix C) show that, respondents of low socio-economic status (tuition level) watch more television during weekdays than respondents of high and middle socio-economic status (tuition level). Distribution of answers for watching television during weekdays more than four hours each day was as follows: 24.1% for low socio-economic status (tuition level), 10.1% for middle socio-economic status (tuition level) and 10.7% for high socio-economic status (tuition level). However, during weekends the figure was reversed. Distribution of answers for watching television during weekends more than four hours each day was as follows: 20.5% for low socio-economic status (tuition level), 26.1% for middle socio-economic status (tuition level) and 25.6% for high socio-economic status (tuition level).

4.5 Hypotheses Testing

Research Question 1: Do television food advertisements targeting 8th and 9th graders have an impact on their food consumption habits?

H1a: The more the 8th and 9th graders view TV, the more they are aware, they know and they like food ads on TV.

Using one way ANOVA and Post Hoc LSD testing, results were as follows for the consumption of advertised food items and number of television viewing hours during weekdays:

In the ANOVA table 4.5.1, with respect to "TV ads make me remember food brands" ($p = 0.024 < \alpha = 0.05$) and "Watching food TV ads make me hungry" ($p = 0.01 < \alpha = 0.05$) and "When I like a TV ad, I tell my friends to watch also" ($p = 0.043 < \alpha = 0.05$), results showed enough evidence to support that there is a relationship between television viewing hours during weekdays and remembering brands, triggering hunger and liking of television food advertisements.

Table 4.5.1: ANOVA Table for H1a

		Sum of Squares	df	Mean Square	F	Sig.
I watch food TV advertisement	Between Groups	3.481	4	.870	.862	.487
	Within Groups	350.291	347	1.009		
	Total	353.773	351			
I pay attention to food advertisement messages	Between Groups	4.877	4	1.219	1.386	.238
	Within Groups	305.203	347	.880		
	Total	310.080	351			
I learned about some of the food Ieat from the TV ads	Between Groups	6.765	4	1.691	1.773	.134
	Within Groups	330.951	347	.954		
	Total	337.716	351			
I trust food advertisements on TV	Between Groups	1.327	4	.332	.377	.825
	Within Groups	305.080	347	.879		
	Total	306.406	351			
TV ads are enjoyable and fun to watch	Between Groups	11.341	4	2.835	1.709	.147
	Within Groups	575.656	347	1.659		
	Total	586.997	351			
TV ads make me remember food brands	Between Groups	16.872	4	4.218	2.857	.024
	Within Groups	512.208	347	1.476		
	Total	529.080	351			
My preference of food brands is based on TV food ads	Between Groups	1.412	4	.353	.378	.825
	Within Groups	324.406	347	.935		
	Total	325.818	351			
Watching food TV ads make me hungry	Between Groups	26.559	4	6.640	3.352	.010
	Within Groups	687.395	347	1.981		
	Total	713.955	351			
TV food ads provide me with info about foods	Between Groups	5.832	4	1.458	1.036	.389
	Within Groups	488.528	347	1.408		
	Total	494.361	351			
TV food ads, help me choose easily the brand food items	Between Groups	4.084	4	1.021	.805	.523
	Within Groups	440.277	347	1.269		
	Total	444.361	351			
When I like a TV ad, I tell my friends to watch also	Between Groups	18.094	4	4.524	2.488	.043
	Within Groups	630.804	347	1.818		
	Total	648.898	351			

Furthermore, the Post Hoc LSD table (see Appendix C, Table 4.5.2), showed the following:

- Respondents, who view television between 2-3 hours during weekdays, pay more attention to television food ads than the ones who watch television more than 4 hours ($p = 0.022 < \alpha = 0.05$).
- Respondents, who view television between 3-4 hours during weekdays, learn more about food items from television than the ones who never watch television ($p = 0.028 < \alpha = 0.05$). Also the same respondents, who view television between 3-4 hours during weekdays, learn more about food items from television than the ones who watch television more than four hours ($p = 0.036 < \alpha = 0.05$). This result can be explained by the above paying attention finding. Since, children pay less attention to television food ads when watching more than 4 hours; they can learn less about those ads.
- Respondents, who view television between 3-4 hours during weekdays, find food ads more enjoyable and fun than the ones who watch television less than two hours ($p = 0.045 < \alpha = 0.05$). Also, respondents, who view television more than 4 hours during weekdays, find food ads more enjoyable and fun than the ones who watch television less than two hours ($p = 0.034 < \alpha = 0.05$). Thus, we can conclude that two hours is the breaking point for children to enjoy the television food ads.
- Respondents, who view television between 3-4 hours during weekdays, remember more about food ads than the ones who never watch ($p = 0.014 < \alpha = 0.05$). Also, the same respondents, who view television between 3-4 hours during weekdays, remember more about food ads than the ones who watch less two hours ($p = 0.010 < \alpha = 0.05$). Finally, the respondents who view television more than 4 hours during weekdays, remember more about food ads than the ones who never watch ($p = 0.047 < \alpha = 0.05$). This means, the more children view television, the more they remember about the advertised food items.
- Respondents, who view television between 2-3 hours during weekdays, food ads trigger their hunger more than the ones who watch less than 2 hours ($p = 0.008 < \alpha$

= 0.05). Also, the respondents, who view television more than 4 hours during weekdays, food ads trigger their hunger more than the ones who watch less than 2 hours ($p = 0.003 < \alpha = 0.05$). This means, the more children watch television food ads, the more they feel hungry.

- Respondents, who view television more than 4 hours during weekdays, tell their friends about the ads they liked more than the ones who watch less than 2 hours ($p = 0.003 < \alpha = 0.05$). This means, the more children watch television, the more they feel confident about sharing the ads that they like with friends.

As for the consumption of advertised food items and number of television viewing hours during weekends, the one way ANOVA and Post Hoc LSD tests showed the following results:

The ANOVA table (see Appendix C, Table 4.5.3), did not showed enough significant evidence to support the relationship between television viewing habits during weekends and different impacts of television food ads on the respondents (p values $> \alpha = 0.05$).

However, the Post Hoc LSD test revealed enough significant evidence to support the relationship between the following items (see Appendix C, Table 4.5.4):

- Respondents, who view television less than 2 hours during weekends, learn more about food items from television than the ones who never watch television ($p = 0.025 < \alpha = 0.05$). Also the same respondents, who view less than 2 hours during weekends, learn more about food items from television than the ones who watch television between 3 – 4 hours ($p = 0.013 < \alpha = 0.05$). Thus, we can conclude that television viewing less than 2 hours for children presents the breaking point for learning from television food ads.
- Respondents, who view television more than 4 hours during weekends, remember more about food ads than the ones who never watch ($p = 0.014 < \alpha = 0.05$). This

means, the more children view television, the more they remember about the advertised food items.

- Respondents, who view television between 2-3 hours during weekends, prefer for food brands based on television food ads more than the ones who never watch ($p = 0.021 < \alpha = 0.05$). Also, the respondents, who view television more than 4 hours during weekends, prefer for food brands based on television food ads more than the ones who never watch ($p = 0.024 < \alpha = 0.05$). This means, the more children watch television food ads, the more it is likely that their preference for food brands will be based on television food ads.
- Respondents, who view television more than 4 hours during weekends, food ads trigger their hunger more than the ones who watch less than 2 hours ($p = 0.02 < \alpha = 0.05$). This means, the more children watch television food ads, the more they feel hungry.
- Respondents, who view television between 2-3 hours during weekends, tell their friends about the ads they liked more than the ones who never watch ($p = 0.024 < \alpha = 0.05$). This means, the more children watch television, the more they feel confident about sharing the ads that they like with friends.

In the light of the above results, we have enough significant evidence to support the hypothesis H1a and conclude that the more the 8th and 9th graders view television, the more they are aware, know and like food ads on television.

<u>H1b.1</u>: The more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.

The mean of the dependent variable that is the consumption of television food advertised categories was computed on the SPSS (items 6, 7, 8, 9 and 10). Then linear regression analysis was conducted using stepwise method.

As can be seen from Table 4.5.5, the most effective independent dimensions on the mean dependent variable that is the food consumption are watching television food advertisement make children hungry and television food advertisement help children to remember food brands. The value of our R^2 is 0.08, which means that 8 percent of the total variance in the Mean of Dependent variable which is consumption of television advertised food categories has been 'explained' by the predictors feeling hungry and remembering together. Unlike significance tests, there aren't thresholds for R squared to tell if the value is 'good enough'. In social sciences like this research, where even if measurements are precise the environment is noisy and there are often other influences that could affect how dependent and independent variables are connected. Thus, although R squared is not impressive, it is not considered as bad either compared with the R^2 values one tends to get in analyses of social survey data.

ANOVA table showed the test results for the significant of variance. As it is apparent in Table 4.5.5, ($p = 0.000 < \alpha = 0.05$) means that the independent variables do a good job explaining the variation in the dependent variable.

Table 4.5.5: Model Summary for H1b.1

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.240[a]	.057	.055	.74062
2	.282[b]	.080	.074	.73285

a. Predictors: (Constant), Watching food TV ads make me hungry

b. Predictors: (Constant), Watching food TV ads make me hungry, TV ads make me remember food brands

Table 4.5.5: ANOVA[a] for H1b.1

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.685	1	11.685	21.303	.000[b]
	Residual	191.982	350	.549		
	Total	203.667	351			
2	Regression	16.232	2	8.116	15.111	.000[c]
	Residual	187.436	349	.537		
	Total	203.667	351			

a. Dependent Variable: Mean_dep

b. Predictors: (Constant), Watching food TV ads make me hungry

c. Predictors: (Constant), Watching food TV ads make me hungry, TV ads make me remember food brands

As shown in the coefficients table 4.5.6 (see Appendix C), the constant is equal to 2.473. This means that the least-squares line touches the ordinate axis at a value of Y = 2.473. Hence, if there is no impact for television food advertisement, (i.e., X = 0 we disregard television), then the expected or predicted value for the food consumption of advertised food categories is 2.473 (i.e., Y' = 2.473).

The equation of this linear regression is Y' = 2.473 + .111 (x) +.095 (z)

The interpretation of the slope is as follows: for every one-unit increase in feeling hungry after watching television food ads (x), the mean consumption of advertised food categories will increase by .111 units. Furthermore, for every one-unit increase in television food ads that make children remember food brands (z), the mean consumption of advertised food categories will increase by .095 units.

The histogram in Figure 4.5.1 (see Appendix D) shows that the data is normally distributed with a bell shape.

The Scatterplot in Figure 4.5.2 (see Appendix D) does not show "correlated" errors nor that their variances vary with the effects being modeled. Consequently, it does not show any pattern for heteroscedasticity. The fact that the points bounce randomly around zero line makes the assumption Normal distribution reasonable for the model.

In the light of the above findings, further one way ANOVA test was conducted separately for the most significant items (television food ads make children hungry and television food ads make children remember food brands) with the five individual advertised food categories. Then a Post HOC LSD test was done. The results were shown as follows:

As shown in the ANOVA table 4.5.7, with respect to "I drink sodas, energy drinks... when thirsty during the day" ($p = 0.014 < \alpha = 0.05$) and "When I eat out, I go to

my preferred fast food restaurant" ($p = 0.018 < \alpha = 0.05$), and "I eat more than 2 snacks per day" ($p = 0.022 < \alpha = 0.05$), there was enough significant evidence to support the relationship with the television food ads make children remember food brands.

Table 4.5.7: ANOVA for H1b.1

		Sum of Squares	Df	Mean Square	F	Sig.
I eat chips, chocolates... for snacks	Between Groups	1.919	4	.480	.391	.815
	Within Groups	426.010	347	1.228		
	Total	427.929	351			
I drink sodas, energy drinks... when thirsty during the day	Between Groups	21.915	4	5.479	3.171	.014
	Within Groups	599.528	347	1.728		
	Total	621.443	351			
When I eat out, I go to my preferred fast food restaurant	Between Groups	17.722	4	4.430	3.017	.018
	Within Groups	509.525	347	1.468		
	Total	527.247	351			
I eat more than 2 snacks per day	Between Groups	19.746	4	4.937	2.908	.022
	Within Groups	588.970	347	1.697		
	Total	608.716	351			
I like to eat sugared corn flakes for breakfast	Between Groups	10.024	4	2.506	1.392	.236
	Within Groups	624.837	347	1.801		
	Total	634.861	351			

Furthermore, the Post Hoc LSD test (see Appendix C, Table 4.5.8) revealed the following:

- Among the respondents who drink sodas, energy drinks, sugared juices when thirsty during the day, the ones who often remember the food brands from television ads are more than the ones who never remember the food brands from television ($p = 0.002 < \alpha = 0.05$). Also the same respondents, are more than the ones who seldom remember food brands from television ads ($p = 0.040 < \alpha = 0.05$). Moreover, the ones who always remember food brands from television ads are more than the ones who never do ($p = 0.011 < \alpha = 0.05$).

- Among the respondents who go to their preferred fast food restaurants whenever they will eat out, the ones who often remember the food brands from television ads are more than the ones who never remember the food brands from television ($p = 0.005 < \alpha = 0.05$). Also the same respondents, are more than the ones who occasionally remember food brands from television ads ($p = 0.044 < \alpha = 0.05$). Moreover, the ones who always remember food brands from television ads are more than the ones who never do ($p = 0.01 < \alpha = 0.05$).
- Among the respondents who eat more than two snacks per day, the ones who often remember the food brands from television ads are more than the ones who never remember the food brands from television ($p = 0.017 < \alpha = 0.05$). While the ones who always remember food brands from television ads are more than the ones who never do ($p = 0.001 < \alpha = 0.05$). Also the same respondents, are more than the ones who occasionally remember food brands from television ads ($p = 0.044 < \alpha = 0.05$).
- Among the respondents who like to eat sugared cereals for breakfast, the ones who always remember the food brands from television ads are more than the ones who never remember the food brands from television ($p = 0.036 < \alpha = 0.05$).

Thus, we can conclude that television food ads make children remember food brands for soda drinks, energy drinks, sugared juices, fast food restaurants, snacks and sugared cereals.

In addition, the ANOVA table 4.5.9, with respect to “I drink sodas, energy drinks... when thirsty during the day” ($p = 0.003 < \alpha = 0.05$) and “When I eat out, I go to my preferred fast food restaurant” ($p = 0.000 < \alpha = 0.05$), and “I eat more than 2 snacks per day” ($p = 0.022 < \alpha = 0.00$), showed enough significant evidence to support the relationship with the television food ads make children feel hungry.

Table 4.5.9: ANOVA for H1b.1

		Sum of Squares	Df	Mean Square	F	Sig.
I eat chips, chocolates... for snacks	Between Groups	9.461	4	2.365	1.961	.100
	Within Groups	418.468	347	1.206		
	Total	427.929	351			
I drink sodas, energy drinks... when thirsty during the day	Between Groups	27.939	4	6.985	4.084	.003
	Within Groups	593.504	347	1.710		
	Total	621.443	351			
When I eat out, I go to my preferred fast food restaurant	Between Groups	32.980	4	8.245	5.788	.000
	Within Groups	494.268	347	1.424		
	Total	527.247	351			
I eat more than 2 snacks per day	Between Groups	40.987	4	10.247	6.263	.000
	Within Groups	567.729	347	1.636		
	Total	608.716	351			
I like to eat sugared corn flakes for breakfast	Between Groups	16.182	4	4.045	2.269	.061
	Within Groups	618.679	347	1.783		
	Total	634.861	351			

Furthermore, the Post Hoc LSD test (see Appendix C, Table 4.5.10) revealed the following:

- Among the respondents who eat chips, chocolates, candies, cookies, cupcakes for snacks, the ones who often feel hungry by television food ads are more than the ones who seldom feel huger by television ads ($p = 0.03 < \alpha = 0.05$). Also the same respondents, are more than the ones who occasionally feel hunger by television ads ($p = 0.037 < \alpha = 0.05$).
- Among the respondents who drink sodas, energy drinks, sugared juices when thirsty during the day, the ones who occasionally feel hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.02 < \alpha = 0.05$). The ones who often feel hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.001 < \alpha = 0.05$) and who seldom feel huger by television ads ($p = 0.000 < \alpha = 0.05$). The ones who always feel

hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.001 < \alpha = 0.05$) and who seldom feel huger by television ads ($p = 0.04 < \alpha = 0.05$).

- Among the respondents who go to their preferred fast food restaurants whenever they will eat out, the ones who often feel hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.009 < \alpha = 0.05$) and the ones who occasionally feel huger by television ads ($p = 0.042 < \alpha = 0.05$). The ones who always feel hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.000 < \alpha = 0.05$), who seldom feel huger by television ads ($p = 0.002 < \alpha = 0.05$) and who occasionally feel hunger by television ads ($p = 0.001 < \alpha = 0.05$).
- Among the respondents who eat more than two snacks per day, the ones who often feel hungry by television food ads are more than the ones who seldom feel huger by television ads ($p = 0.009 < \alpha = 0.05$). The ones who always feel hungry by television food ads are more than the ones who never feel huger by television ads ($p = 0.000 < \alpha = 0.05$), who seldom feel huger by television ads ($p = 0.000 < \alpha = 0.05$) and who occasionally feel hunger by television ads ($p = 0.013 < \alpha = 0.05$).
- Among the respondents who like to eat sugared cereals for breakfast, the ones who never feel hungry by television food ads are more than the ones who seldom feel huger by television ads ($p = 0.03 < \alpha = 0.05$) and who always feel huger by television ads ($p = 0.05 = \alpha = 0.05$). The ones who occasionally feel hungry by television food ads are more than the ones who always feel huger by television ads ($p = 0.042 < \alpha = 0.05$).

Thus, we can conclude that television food ads for chips, chocolates, candies, cookies, cupcakes, soda and energy drinks, sugared juices, fast food restaurants and snacks trigger children's hunger. On the other hand, this result was reversed for cereals which can be due to cultural reasons as most of the Lebanese Armenian children usually eat "Mankoushe" and home-made sandwiches for breakfast (supported by the Focus Group).

Thus, with these results we have enough evidence in favor of the hypothesis H1b.1 and can conclude that the more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.

H1b.2: The more 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.

One way ANOVA test and Post Hoc LSD test showed the following results:

In the ANOVA table 4.5.11, the only enough significant evidence was shown to support the relationship with the item for children trusting in television food ads, was with respect to "I eat more than 2 snacks per day" ($p = 0.031 < \alpha = 0.05$).

Table 4.5.11: ANOVA for H1b.2

		Sum of Squares	Df	Mean Square	F	Sig.
I eat chips, chocolates... for snacks	Between Groups	2.086	4	.522	.425	.791
	Within Groups	425.842	347	1.227		
	Total	427.929	351			
I drink sodas, energy drinks... when thirsty during the day	Between Groups	8.806	4	2.202	1.247	.291
	Within Groups	612.637	347	1.766		
	Total	621.443	351			
When I eat out, I go to my preferred fast food restaurant	Between Groups	12.179	4	3.045	2.051	.087
	Within Groups	515.068	347	1.484		
	Total	527.247	351			
I eat more than 2 snacks per day	Between Groups	18.268	4	4.567	2.684	.031
	Within Groups	590.448	347	1.702		
	Total	608.716	351			
I like to eat sugared corn flakes for breakfast	Between Groups	2.222	4	.555	.305	.875
	Within Groups	632.639	347	1.823		
	Total	634.861	351			

However, the Post Hoc LSD test (see Appendix C, Table 4.5.12) revealed more results in different items as follows:

- Among the respondents who drink sodas, energy drinks, sugared juices when thirsty during the day, the ones who occasionally trust television food ads are more than the ones who often trust ($p = 0.03 < \alpha = 0.05$).
- Among the respondents who go to their preferred fast food restaurants whenever they will eat out, the ones who always trust television food ads are more than the ones who never trust ($p = 0.016 < \alpha = 0.05$), seldom trust ($p = 0.021 < \alpha = 0.05$), occasionally trust ($p = 0.01 < \alpha = 0.05$) and often trust ($p = 0.017 < \alpha = 0.05$).
- Among the respondents who eat more than two snacks per day, the ones who always trust television food ads are more than the ones who never trust ($p = 0.02 < \alpha = 0.05$), seldom trust ($p = 0.007 < \alpha = 0.05$), occasionally trust ($p = 0.046 < \alpha = 0.05$) and often trust ($p = 0.006 < \alpha = 0.05$).

Thus, as the results showed, the more children trust television food ads, the more they will consume soda and energy drinks, sugared juices, snacks and go to fast food restaurants. **Hence, we have enough significant evidence to support the hypothesis H1b.2 and can conclude that the more the 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.**

<u>H1b.3</u>: The more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.

One way ANOVA test and Post Hoc LSD test showed the following results:

In the ANOVA table 4.5.13, the only enough significant evidence was shown to support the relationship with respect to "I eat chips, chocolates, candies, cookies, cupcakes for snacks" ($p = 0.00 < \alpha = 0.05$) and mostly seen television advertisement by the 8th and 9th graders.

Table 4.5.13: ANOVA for H1b3

		Sum of Squares	Df	Mean Square	F	Sig.
I eat chips, chocolates... for snacks	Between Groups	38.000	4	9.500	8.454	.000
	Within Groups	389.929	347	1.124		
	Total	427.929	351			
I drink sodas, energy drinks... when thirsty during the day	Between Groups	10.941	4	2.735	1.555	.186
	Within Groups	610.502	347	1.759		
	Total	621.443	351			
When I eat out, I go to my preferred fast food restaurant	Between Groups	7.466	4	1.867	1.246	.291
	Within Groups	519.781	347	1.498		
	Total	527.247	351			
I eat more than 2 snacks per day	Between Groups	11.952	4	2.988	1.737	.141
	Within Groups	596.764	347	1.720		
	Total	608.716	351			
I like to eat sugared corn flakes for breakfast	Between Groups	11.540	4	2.885	1.606	.172
	Within Groups	623.320	347	1.796		
	Total	634.861	351			

However, the Post Hoc LSD test (see Appendix C, Table 4.5.14) revealed more results in different items as follows:

- Respondents who eat chips, chocolates, cookies, cupcakes for snacks, see more ads for chocolates than milk ($p = 0.02 < \alpha = 0.05$), more ads for chocolates than fresh juices ($p = 0.000 < \alpha = 0.05$), more ads for milk than fresh juices ($p = 0.01 < \alpha = 0.05$), more ads for cereals than fresh juices ($p = 0.000 < \alpha = 0.05$), more ads for fast food restaurants than milk ($p = 0.032 < \alpha = 0.05$) and more ads for fast food restaurants than fresh juices ($p = 0.000 < \alpha = 0.05$).
- Respondents who drink sodas, energy drinks, sugared juices when thirsty during the day, see more ads for chocolates than fresh juices ($p = 0.05 = \alpha = 0.05$) and more ads for cereals than fresh juices ($p = 0.000 < \alpha = 0.05$).
- Respondents who go to their preferred fast food restaurants whenever they will eat out, see more ads for fast food restaurants than fresh juices ($p = 0.000 < \alpha = 0.05$).

- Respondents who eat more than two snacks per day, see more ads for fast food restaurants than milk ($p = 0.021 < \alpha = 0.05$).
- Respondents who eat sugared cereals for breakfast, see more ads for milk than fresh juices ($p = 0.025 < \alpha = 0.05$) and more ads for cereals than fresh juices ($p = 0.08 < \alpha = 0.05$). This is because most of the advertisements for cereals are associated with milk.

Thus, as results show, fresh juices are the least seen advertisement on television by children. Moreover, advertisements for chocolate, fast food restaurants, cereals and milk lead to children to the consumption of the food categories that are considered to be unhealthy.

Furthermore, a cross tabulation was used to verify/assess the associations for the above findings between mostly seen television advertisements and "I eat chips, chocolates… for snacks" as one of the negative eating behavior habits of the 8^{th} and 9^{th} graders through Pearson's chi-square test.

As the table 4.5.15 (see Appendix C) showed that the most seen ads by children which were the Chocolates (184 out of 352 replies), followed by fast food restaurants (110 out of 352 replies), are the ones whose consumption rates high within the ranges of occasionally and often. This figure is the same for Milk and Cereals but is the opposite for fresh juices. Fresh juices in the mind of children is categorized as healthy item while milk and cereals contain fat and are usually associated in the television ads targeted to children with unhealthy items (ex. Milk and Cereals with chocolates). Therefore, we can conclude that television food ads that mostly advertise for unhealthy products, result in higher consumption of unhealthy food categories among children and less consumption of healthy items.

As the Chi-Square Tests in table 4.5.16 showed (see Appendix C) that ($p = .000 < a = 0.05$), which means that there is enough significant evidence that viewing television food ads and negative eating behavior and dependent.

Thus, we have enough significant evidence in favor of the hypothesis H1b.3 and can conclude that the more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.

Research Question 2: Is there a relationship between socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit?

H2: There is a relationship between the socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit. The lower the socio economic status the higher is the consumption of advertised food.

A linear regression analysis test was done between the average mean of the consumption for the food categories measured by items 6, 7, 8, 9 and 10, and the socio-economic status based on the tuition fees of the schools. As shown in table 4.5.17 (see Appendix C), the value of R^2 is 0.027, which means that 2.7 percent of the total variance in the Mean of Dependent variable which is consumption of television advertised food categories has been 'explained' by the socio- economic status. Although R squared is very small, it is not considered as bad either compared with the R^2 values one tends to get in analyses of social survey data.

The ANOVA table 4.5.18 showed the test results for the significance of variance. ($p = 0.002 < \alpha = 0.05$) means that the independent variables do a good job explaining the variation in the dependent variable.

Table 4.5.18: ANOVA for H2

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.475	1	5.475	9.669	.002[b]
	Residual	198.192	350	.566		
	Total	203.667	351			

a. Dependent Variable: Mean_dep

b. Predictors: (Constant), Tuition fees

As shown in the coefficients table 4.5.19 (see Appendix C), the constant is equal to 3.433. This means that the least-squares line touches the ordinate axis at a value of Y = 3.433. Hence, if there is no effect of tuition fees (i.e., X = 0), then the expected or predicted value for the food consumption of advertised food categories is 2.473 (i.e., Y' = 3.433).

The equation of this linear regression is Y' = 3.433 - .153 (x)

The interpretation of the slope is as follows: for every one-unit increase in the tuition fees of the respondents (x), the mean consumption of advertised food categories will decrease by .153 units.

Furthermore, one way ANOVA test was done as well that showed the following results (see Table 4.5.20):

With respect to drinking soda, energy drinks and tuition level ($p = .000 < a = 0.05$) and eating more than two snacks ($p = 0.015$), results indicated that there is enough significant evidence to support that there is a relationship with the socio-economic status (tuition levels).

Table 4.5.20: ANOVA for H2

		Sum of Squares	Df	Mean Square	F	Sig.
I eat chips, chocolates... for snacks	Between Groups	7.165	2	3.583	2.972	.053
	Within Groups	420.764	349	1.206		
	Total	427.929	351			
I drink sodas, energy drinks... when thirsty during the day	Between Groups	62.299	2	31.150	19.443	.000
	Within Groups	559.144	349	1.602		
	Total	621.443	351			
When I eat out, I go to my preferred fast food restaurant	Between Groups	1.105	2	.552	.366	.694
	Within Groups	526.143	349	1.508		
	Total	527.247	351			
I eat more than 2 snacks per day	Between Groups	14.502	2	7.251	4.259	.015
	Within Groups	594.214	349	1.703		
	Total	608.716	351			
I like to eat sugared corn flakes for breakfast	Between Groups	.261	2	.131	.072	.931
	Within Groups	634.600	349	1.818		
	Total	634.861	351			

However, the Post Hoc LSD test (see Appendix C, Table 4.5.21) revealed more results in different items as follows:

- Respondents who eat chips, chocolates, cookies, cupcakes for snacks, the ones who are from low tuition middle schools eat more of the above food items than the ones who are in high tuition middle schools ($p = 0.015 < \alpha = 0.05$).
- Respondents who drink sodas, energy drinks, sugared juices when thirsty during the day, the ones who are from low tuition middle schools consume more of the above food items than the ones who are in middle tuition schools ($p = 0.012 < \alpha = 0.05$) and high tuition schools ($p = 0.000 < \alpha = 0.05$). Also the ones who are from

middle tuition middle schools consume more of the above food items than the ones who are in high tuition middle schools ($p = 0.000 < \alpha = 0.05$).

- Respondents who eat more than two snacks per day, the ones who are from low tuition middle schools eat more of the above food items than the ones who are in high tuition middle schools ($p = 0.008 < \alpha = 0.05$). Also the ones who are from middle tuition middle schools eat more of the above food items than the ones who are in high tuition schools ($p = 0.02 < \alpha = 0.05$).

Thus, as results show, the lower tuition fee students who are of low socio-economic status, consume more of the advertised unhealthy food items than the ones who are of high socio-economic status. This can be a result of many factors such as influence of family background, education, lifestyle, nutritional knowledge and awareness and so on.

Hence, in the light of these findings, **we have enough significant evidence to support the hypothesis H2 and can conclude that the lower is the socio economic status the higher is the consumption of advertised food.**

Research Question 3: Is there a relationship between socio-economic status (tuition level) and television watching habit of the 8^{th} and 9^{th} graders?

H3: There is a relationship between the socio-economic status (tuition level) and television watching habit of the 8^{th} and 9^{th} graders. The lower the socio economic status the more they watch TV.

The one way ANOVA test (see table 4.5.22) showed the following results:

With respect to watching television during weekdays ($p = .000 < a = 0.05$), and watching television during weekends ($p = .013 < a = 0.05$), there was enough significant evidence to support that there is a relationship with the socio-economic status (tuition levels).

Table 4.5.22: ANOVA for H3

		Sum of Squares	Df	Mean Square	F	Sig.
Show the number of hours that you watch TV during weekdays	Between Groups	26.170	2	13.085	11.125	.000
	Within Groups	410.486	349	1.176		
	Total	436.656	351			
Show the number of hours that you watch TV during weekends	Between Groups	12.539	2	6.269	4.394	.013
	Within Groups	497.981	349	1.427		
	Total	510.520	351			

Furthermore, the Post Hoc LSD test (see Appendix C, Table 4.5.23) revealed more detailed results in different items as follows:

- Respondents who watch television during weekdays, the ones who are from low tuition middle schools watch more television than the ones who are from middle tuition middle schools ($p = 0.000 < \alpha = 0.05$) and high tuition middle schools($p = 0.000 < \alpha = 0.05$).
- Respondents who watch television during the weekends, the ones who are from low tuition middle schools watch more television than the ones who are in low tuition middle schools ($p = 0.014 < \alpha = 0.05$). Also the ones who are from high tuition middle schools watch television more than the ones who are from middle tuition middle schools ($p = 0.008 < \alpha = 0.05$).

Results show that during weekends participants from lower socio-economic status watch more television than the higher socio-economic status participants. This figure is reversed during weekends. This outcome can have many interpretations some of them extracted from the focus group discussions that include the following: Most of the children from higher socio-economic status have private tutors at home during weekdays, which do not let them watch television as they have so many homeworks to accomplish. Parental guidance and television watching restrictions were more significant in higher socio-economic status children during weekdays, but they had more freedom to watch television during weekends.

Hence, in the light of these findings, although watching habits differ between weekends and weekdays, the intensity and exposure of television viewing hours during weekend (Saturday and Sunday) can be considered much less than the weekdays (Monday till Friday).

Thus we have enough significant evidence to support the hypothesis H3 and can conclude that the lower is the socio economic status, the higher is their television viewing habits.

Research Question 4: Do gender differences influence the nature of food consumption of the 8^{th} and 9^{th} graders?

H4: Gender differences influence food consumption habits of the 8^{th} and 9^{th} graders.

For the two categorical variables (dependent and independent) such as gender and mean of 8^{th} and 9^{th} graders' food consumption habit, a cross tabulation was used to verify/assess their association through Pearson's chi-square test (see table 4.5.24) in addition to Phi and Cramer's V (see table 4.5.25). The Pearson Chi-Square ($p = .681 > a = 0.05$), means that **we do not have enough evidence to support the hypothesis H4. Therefore, we cannot conclude that gender differences and nature of food consumption habits of the 8^{th} and 9^{th} graders are dependent.**

Table 4.5.24: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.101[a]	44	.681
Likelihood Ratio	44.891	44	.434
Linear-by-Linear Association	3.190	1	.074
N of Valid Cases	352		

a. 62 cells (68.9%) have expected count less than 5. The minimum expected count is .46.

Research Question 5: Do gender differences influence television watching habit of the 8th and 9th graders?

H5: Gender differences influence television watching habit of the 8th and 9th graders.

For the two categorical variables (dependent and independent), cross tabulation used to verify/assess the associations between gender and mean television viewing habits of 8th and 9th graders through Pearson's chi-square test revealed the following results (see table 4.5.25). The (p value = 0.048 < α = 0.05), meant that **we have enough significant evidence in favor of the hypothesis H5 and can conclude that the gender differences and television watching habit of the 8th and 9th graders are dependent.**

Table 4.5.25: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.602[a]	8	.048
Likelihood Ratio	17.728	8	.023
Linear-by-Linear Association	2.835	1	.092
N of Valid Cases	352		

a. 2 cells (11.1%) have expected count less than 5. The minimum expected count is 2.29.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this research was to study the impact of television advertisements on food habit of the 8th and 9th graders of Lebanese-Armenian Middle Private schools. In addition, the study investigated the correlations between demographic characteristics such as gender and tuition level with television viewing and food habits of the 8th and 9th graders.

Three hundred and fifty two 8th and 9th graders responded to the survey questionnaire and their answers were statistically analyzed to test the research hypotheses raised in this study.

5.2 Main Findings and Analysis of Main Results

Specifically, the present research tested the following hypotheses:

- **H1a**: The more the 8th and 9th graders view TV, the more they are aware, know and like food ads on TV.
- **H1b.1:** The more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.
- **H1b.2**: The more 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.
- **H1b.3**: The more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.

- **H2:** There is a relationship between the socio-economic status (tuition level) and attitude toward 8th and 9th graders' food consumption habit. The lower the socio economic status the higher is the consumption of advertised food.
- **H3**: There is a relationship between the socio-economic status (tuition level) and television watching habit of the 8th and 9th graders. The lower the socio economic status the more they watch TV.
- **H4:** Gender differences influence the nature of food consumption of the 8th and 9th graders.
- **H5:** Gender differences influence television watching habit of the 8th and 9th graders**.**

Our statistical analysis resulted in the following findings:

- We found enough significant evidence to support H1a and conclude that the more the 8th and 9th graders view TV, the more they are aware, know and like food ads on TV.
- We found enough significant evidence to support H1b.1 and conclude that the more positive is the attitude of the 8th and 9th graders toward advertised food categories the worse is their eating behavior habits.
- We found enough significant evidence to support H1b.2 and conclude that the more 8th and 9th graders trust advertised food categories on television, the worse is their eating behavior habits.
- We found enough significant evidence to support H1b.3 and conclude that the more the 8th and 9th graders view television food ads, the worse is their eating behavior habits.
- We found enough significant evidence to support H2 and conclude that the lower the socio economic status the higher is the consumption of advertised food.
- We found enough significant evidence to support H3 and conclude that the lower the socio economic status the more they watch TV.

- We did not find enough significant evidence to support that gender differences and the nature of food consumption habit of the 8th and 9th graders are dependent.
- We found enough significant evidence to support that gender differences and television viewing habits of the 8th and 9th graders are dependent.

5.3 Recommendations and Limitations

Promoting healthy eating patterns in childhood and adolescence ensures the optimal intellectual, social and physical growth of the child. With this study, I succeeded in achieving my aim to show that certain food companies that promote unhealthy items high in sugar, fat and calories, aggressively target children through television and succeed in affecting negatively children's eating habits specially the children who are from lower socio-economic status.

Hope that the findings of this study will contribute to the increasing of knowledge and awareness of the concerned entities that are directly responsible for our children's health. Furthermore, in order to minimize the harmful effects of advertising on children, all kinds of efforts should be unified by marketers, government, and parents to a set of clear standards that protect children from harmful advertising messages.

- Parental involvement

  Parents should monitor and control their children's television viewing habits. This can be done by setting specific television hours, removing television from bedrooms etc. They should also continuously communicate and discuss with their children about advertisements' commercial intent. Besides this, parents should be a role model for their children by living healthy lifestyle and providing their children with healthy foods.

- Government intervention

  In Lebanon there is no law that controls children-targeted advertisements and there is no data about the society's or parental viewing of these ads. Thus, Lebanese government should protect those children through:

  - Banning of harmful food advertisements directly targeted to children
  - Allocate funds for researches that investigate the effects of those advertisements on children and finds ways to overcome the negative impacts.
  - Promote healthy food items by advertising healthy foods essential for children's growth.

- Advertising industry

  It is essential for marketers to be aware of their responsibility in shaping their target market's perceptions, attitudes and values that directly will effect on their lifestyle. Ethical behavior in business is crucial for maintaining healthy society, that is why marketers should abide by ethical standards that protect consumer's rights especially children's who are vulnerable consumers.

- School intervention

  Schools should implement programs promoting healthy lifestyle by educating children how to make healthy food choices through making them aware of the negative consequences of bad food choice.

This study tried to measure the impact of television advertisements on the food habits of 8th and 9th graders of a sample of Lebanese Armenian middle schools, to lend support for generalizing the findings more similar research is needed to be done in other Lebanese middle schools. Moreover, the importance of the findings, related to the health issues, deserve further in-depth research about the topic, not only covering 8th and 9th graders, but also covering Lebanese children from all different backgrounds.

It is also important to note that the measurement of the impact is not a straight forward task, nor an immediate result that could be easily calculated. Impact is a result of a continuous exposure of television advertisement messages along with other promotional campaigns that use different integrated marketing communication tools to reach the target market.

In closing, and as stated prior, aggressive targeting of children and teenagers by food companies such as: “Ready to eat sugared cereals”; “Sweets and confectionaries”; “Fast food restaurants”; “Carbonated soft drinks and sugared juices” is not limited to television advertising alone, thus, further research of this major issue is highly recommended for different communication tools that marketers use to impact children’s behavior specially the ones that are rapidly increasing like the internet, online games and smart phones.

Appendices

Appendix A: Target Population

	School Name	8th Grade Student Number	9th Grade Student Number	Tuition Fees
Low Tuition Fees	Sahagian	21	14	600000
	Hay Aved varj anjar	26	19	1350000
	Anjari Hay Gatoghige	9	9	1500000
	St. Aknes	12	9	1850000
	Haratch K. Gulbenkian	20	19	1750000
	Souren Khanamirian	18	16	1800000
	Levon & Sophia Hagopian	42	51	2100000
Mid Tuition Fees	Torossian	13	14	2300000
	Shamlian Tatigian	22	22	2750000
	Mesrobian	49	33	2500000
	Yeghishe Manoukian	32	52	2850000
High Tuition Fees	Hovaguimian	27		2600000
			39	3300000
	Jemaran	49	42	3750000
	Hay Aved College	12		3500000
			9	3550000
	Hay Aved get. Parts	13	19	3625000
	Kevork Harboyan	21		2900000
			22	3200000
	Hripsimiants	22	14	3800000

Out of 20 schools:

* 3 declined to give information

* 17 schools are divided as follows:

Levels	Tuition Range	No. of Schools	Total Number of Students		Total Sample Number		Sample Percentage	
			8th Grade	9th Grade	8th Grade	9th Grade	8th Grade	9th Grade
Low Income	600000- 2100000	7	148	137	63	65	43%	47%
Middle Income	2101000-3000000	4	116	121	54	74	47%	61%
High Income	2301000-4000000	6	144	145	62	61	43%	42%
Total		**17**	**408**	**403**	**179**	**200**	**44%**	**50%**

Original Letter Distributed to the Selected Schools in Armenian Language

Փետրáõ³ñ 25, 2013

ä³ïáõ³ñÅ³Ý ïÝûñ¿ÝáõÃÇõÝª

²Ûë Ý³Ù³ïáí Ó»½Ù¿ ³ñïûÝáõÃÇõÝ ÏÁ ËÝ¹ñ»Ù Ó»ñ í³ñÅ³ñ³ÝÇ 8-ñ¹ »õ 9-ñ¹ ¹³ë³ñ³ÝÝ»ñáõ ³ß³Ï»ñïÝ»ñáõÝ Ñ³ñó³Ã»ñÃÇÏÝ»ñ µ³ÅÝ»ÉáõÉ Îþáõë³ÝÇÙ Ð³ÛÏ³½»³Ý Ð³Ù³Éë³ñ³ÝÇÝ Ù¿ç »õ ÏÁ å³ïñ³ëï»Ù Ø³ùÇëïñáëÇ Ã»½ë, áñ ÏÁ Ïñ¿ Ñ»ï»õ»³É Ëáñ³·ÇñÁ. §Ч³ïÏ»ñ³ë÷éáõ³Í ·áí³½¹Ý»ñáõ ³½¹»óáõÃÇõÝÁ Ù³ÝáõÏÝ»ñáõ áõï»Éáõ ëáíáñáõÃ»³Ý íñ³Û¦ª ÃÇñ³Ë áõÝ»Ý³Éáí 13-¿Ý 15 ï³ñ»Ï³Ý Ñ³Û å³ï³ÝÇÝ»ñ, áñáÝù ÏÁ Ñ³Ù³å³ï³ëË³Ý»Ý 8-ñ¹ »õ 9-ñ¹ Ï³ñ·Ç ³ß³Ï»ñïÝ»ñáõ£

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English Translation of the above Letter

February 25, 2013

Dear Sirs,

I am writing to you to ask your permission to distribute my survey questionnaire to the 8th and 9th graders of your school. I am a graduate student at Haigazian University who is preparing her MBA Thesis that is about "Impact of Television Advertisement on Food Habit of Children". My target population is the 8th and 9th graders with an age range between 13 and 15 years old.

Please find attached research to this letter a copy of my questionnaire that needs around 10 to 15 minutes to be filled by students.

Thank you in advance for your cooperation.

Yours Faithfully,

Tamar Nalbandian

Original Thank You Letter Distributed to the Participated Schools in Armenian Language

7 Ù³ñï, 2013

ä³ïáõ³ñÅ³Ý ïÝûñ¿ÝáõÃÇõÝª

²Ûë Ý³Ù³Ïáí Ïáõ ·³Ù ßÝáñÑ³Ï³ÉáõÃÇõÝ Û³ÛïÝ»Éáõ Ó»ñ ·áñÍ³ÏóáõÃ»³Ý »õ ³ç³ÏóáõÃ»³Ý Ñ³Ù³ñ£ Ò»ñ ³ñ³· ³ñÓ³·³Ý·áõÙÁ »õ ³ßË³ï³ÝùÇ ³ÙµáÕç³óáõÙÁ Ù»Í³å¿ë Ýå³ëï»óÇÝ ÇÙ Íñ³·ÇñÇë Û³çáÕáõÃ»³Ý »õ Ñ»½³ë³Ñ ÁÝÃ³óùÇÝ£

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Ú³ñ·³Ýûùª

Â³Ù³ñ Ü³Éå³Ýï»³Ý

English Translation of the above Letter

March 7, 2013

Dear Sirs,

I am writing to thank you for your cooperation and support. Your immediate response and facilitation of survey completion process has contributed positively in the success of my project.

I wish you stability and constant growth..

Yours Faithfully,

Tamar Nalbandian

Appendix B: Questionnaire

I- Personal Information

1- School Name: ……..

2- Sex: Male ☐ Female ☐

3- Age: …….

4- Class: Eighth Grade ☐ Ninth Grade ☐

5- How much pocket money you have weekly? (in LL) …….

II- Current Eating Pattern

Direction:

a) Read each item carefully

b) Describe your behavior by circling the appropriate answer.

		أبدا **Never** **1**	قليلا **Seldom** **2**	أحيانا **Occasionally** **3**	بعض الأوقات **Often** **4**	**دائما** **Always** **5**
6-	I eat chips, chocolates, candies, cookies, cupcakes for snacks.	a	B	C	d	e
7-	I drink sodas, energy drinks, sugared juices when I am thirsty during the day.	a	B	C	d	e
8-	When I eat out, I go to my preferred fast food restaurant.	a	B	C	d	e
9-	I eat more than 2 snacks per day.	a	B	C	d	e
10-	I like to eat sugared or sweet cereals (corn flakes) for breakfast.	a	B	C	d	e

* **Snack**: Food eaten between meals

II- Television Watching and Exposure Intensity

11- Do you have a TV in your bedroom?

☐ Yes
☐ No

12- How many days per week you watch TV?

☐ Never
☐ 1-2 days
☐ 3-4 days
☐ 5-6 days
☐ 7 days

		Never	Less than 2 hours	Between 2-3 hours	Between 3-4 hours	More than 4 hours
13-	Show the number of hours that you watch TV during the weekdays.	☐	☐	☐	☐	☐
14-	Show the number of hours that you watch TV during the weekends.	☐	☐	☐	☐	☐

Direction:

a) Read each item carefully

b) Describe your behavior by circling the appropriate answer.

		أبدا **Never** **1**	قليلا **Seldom** **2**	أحيانا **Occasionally** **3**	بعض الأوقات **Often** **4**	**دائما** **Always** **5**
15-	I watch food TV advertisement	a	b	c	d	e
16-	I pay attention to food advertisement messages	a	b	c	d	e
17-	I learned about some of the food I eat from the TV advertisements	a	b	c	d	e
18-	I trust food advertisements on TV	a	b	c	d	e
19-	TV ads are enjoyable and fun to watch	a	b	c	d	e
20-	TV ads make me remember food brands (marks)	a	b	c	d	e
21-	My preference of food brands is based on TV food advertisements	a	b	c	d	e
22-	Watching food TV ads make me hungry	a	b	c	d	e
23-	TV food advertisements provide me with information about foods	a	b	c	d	e
24-	TV food advertisements, help me choose easily the brand food items	a	b	c	d	e
25-	When I like a TV ad, I tell my friends to watch also	a	b	c	d	e
26-	When buying alone, I use my pocket money to buy food items I like: such as chocolates, candies and chips	a	b	c	d	e
27-	When shopping alone, I buy the food items I like regardless of price	a	b	c	d	e
28-	I share in the decision with my parents when buying certain food items	a	b	c	d	e

29- After seeing TV advertisement for food items, I usually:

- ☐ Like the brand
- ☐ Buy the brand
- ☐ Ask friends about the brand
- ☐ Don't care
- ☐ Other (Specify) ……..

30- What I mostly see on TV food advertisements are about:

- ☐ Chocolates
- ☐ Milk
- ☐ Cereals
- ☐ Fast food restaurants
- ☐ Fresh juices

Thank you !
Have a nice day

Appendix C : Hypotheses Tables

Tables

Table 4.3.5 - Multiple Comparisons Between the Respondents' Weekly Pocket Money and Their School Tuition Level

Dependent Variable: Weekly pocket money of respondent

	(I) Tuition fees	(J) Tuition fees	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
LSD	low tuition fee	middle tuition fee	-1467.962	2679.079	.584	-6737.13	3801.21
		high tuition fee	-5478.084*	2668.322	.041	-10726.10	-230.07
	middle tuition fee	low tuition fee	1467.962	2679.079	.584	-3801.21	6737.13
		high tuition fee	-4010.122	2627.250	.128	-9177.36	1157.11
	high tuition fee	low tuition fee	5478.084*	2668.322	.041	230.07	10726.10
		middle tuition fee	4010.122	2627.250	.128	-1157.11	9177.36

*. The mean difference is significant at the 0.05 level.

Table 4.4.4: Tuition fees * Show the number of hours that you watch television during weekends Cross tabulation

			Show the number of hours that you watch television during weekends					Total
			Never	Less than 2 hours	Between 2-3 hours	Between 3-4 hours	More than 4 hours	
Tuition fees	low tuition fee	Count	9	33	28	19	23	112
		% within Tuition fees	8.0%	29.5%	25.0%	17.0%	20.5%	100.0%
	middle tuition fee	Count	7	19	30	32	31	119
		% within Tuition fees	5.9%	16.0%	25.2%	26.9%	26.1%	100.0%
	high tuition fee	Count	3	19	39	29	31	121
		% within Tuition fees	2.5%	15.7%	32.2%	24.0%	25.6%	100.0%
Total		Count	19	71	97	80	85	352
		% within Tuition fees	5.4%	20.2%	27.6%	22.7%	24.1%	100.0%

Table 4.4.5: Tuition fees * Show the number of hours that you watch television **during weekdays Cross tabulation**

			Show the number of hours that you watch television during weekdays					Total
			Never	Less than 2 hours	Between 2-3 hours	Between 3-4 hours	More than 4 hours	
Tuition fees	low tuition fee	Count	4	23	40	18	27	112
		% within Tuition fees	3.6%	20.5%	35.7%	16.1%	24.1%	100.0%
	middle tuition fee	Count	4	51	39	13	12	119
		% within Tuition fees	3.4%	42.9%	32.8%	10.9%	10.1%	100.0%
	high tuition fee	Count	6	56	34	12	13	121
		% within Tuition fees	5.0%	46.3%	28.1%	9.9%	10.7%	100.0%
Total		Count	14	130	113	43	52	352
		% within Tuition fees	4.0%	36.9%	32.1%	12.2%	14.8%	100.0%

Table 4.5.2: Multiple Comparisons for H1a

Dependent Variable		(I) Show the number of hours that you watch TV during weekdays	(J) Show the number of hours that you watch TV during weekdays	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I watch food TV advertisement	LSD	Never	Less than 2 hours	.476	.283	.093	-.08	1.03
			Between 2-3 hours	.369	.285	.196	-.19	.93
			Between 3-4 hours	.365	.309	.238	-.24	.97
			More than 4 hours	.310	.303	.306	-.28	.91
		Less than 2 hours	Never	-.476	.283	.093	-1.03	.08
			Between 2-3 hours	-.107	.129	.410	-.36	.15
			Between 3-4 hours	-.110	.177	.533	-.46	.24
			More than 4 hours	-.165	.165	.316	-.49	.16
		Between 2-3 hours	Never	-.369	.285	.196	-.93	.19
			Less than 2 hours	.107	.129	.410	-.15	.36
			Between 3-4 hours	-.004	.180	.984	-.36	.35
			More than 4 hours	-.059	.168	.728	-.39	.27
		Between 3-4 hours	Never	-.365	.309	.238	-.97	.24
			Less than 2 hours	.110	.177	.533	-.24	.46
			Between 2-3 hours	.004	.180	.984	-.35	.36
			More than 4 hours	-.055	.207	.791	-.46	.35
		More than 4 hours	Never	-.310	.303	.306	-.91	.28
			Less than 2 hours	.165	.165	.316	-.16	.49
			Between 2-3 hours	.059	.168	.728	-.27	.39
			Between 3-4 hours	.055	.207	.791	-.35	.46
I pay attention to food advertisement messages	LSD	Never	Less than 2 hours	.049	.264	.851	-.47	.57
			Between 2-3 hours	-.063	.266	.812	-.59	.46
			Between 3-4 hours	.113	.289	.696	-.45	.68
			More than 4 hours	.299	.282	.290	-.26	.85
		Less than 2 hours	Never	-.049	.264	.851	-.57	.47
			Between 2-3 hours	-.113	.121	.351	-.35	.12
			Between 3-4 hours	.064	.165	.701	-.26	.39
			More than 4 hours	.250	.154	.105	-.05	.55
		Between 2-3 hours	Never	.063	.266	.812	-.46	.59
			Less than 2 hours	.113	.121	.351	-.12	.35
			Between 3-4 hours	.176	.168	.295	-.15	.51
			More than 4 hours	.363*	.157	.022	.05	.67
		Between 3-4 hours	Never	-.113	.289	.696	-.68	.45

			Less than 2 hours	-.064	.165	.701	-.39	.26
			Between 2-3 hours	-.176	.168	.295	-.51	.15
			More than 4 hours	.186	.193	.335	-.19	.57
		More than 4 hours	Never	-.299	.282	.290	-.85	.26
			Less than 2 hours	-.250	.154	.105	-.55	.05
			Between 2-3 hours	-.363*	.157	.022	-.67	-.05
			Between 3-4 hours	-.186	.193	.335	-.57	.19
I learned about some of the food leat from the TV ads	LSD	Never	Less than 2 hours	-.436	.275	.113	-.98	.10
			Between 2-3 hours	-.384	.277	.166	-.93	.16
			Between 3-4 hours	-.661*	.301	.028	-1.25	-.07
			More than 4 hours	-.236	.294	.422	-.81	.34
		Less than 2 hours	Never	.436	.275	.113	-.10	.98
			Between 2-3 hours	.052	.126	.679	-.20	.30
			Between 3-4 hours	-.225	.172	.191	-.56	.11
			More than 4 hours	.200	.160	.213	-.12	.52
		Between 2-3 hours	Never	.384	.277	.166	-.16	.93
			Less than 2 hours	-.052	.126	.679	-.30	.20
			Between 3-4 hours	-.277	.175	.115	-.62	.07
			More than 4 hours	.148	.164	.366	-.17	.47
		Between 3-4 hours	Never	.661*	.301	.028	.07	1.25
			Less than 2 hours	.225	.172	.191	-.11	.56
			Between 2-3 hours	.277	.175	.115	-.07	.62
			More than 4 hours	.425*	.201	.036	.03	.82
		More than 4 hours	Never	.236	.294	.422	-.34	.81
			Less than 2 hours	-.200	.160	.213	-.52	.12
			Between 2-3 hours	-.148	.164	.366	-.47	.17
			Between 3-4 hours	-.425*	.201	.036	-.82	-.03
I trust food advertisements on TV	LSD	Never	Less than 2 hours	-.058	.264	.825	-.58	.46
			Between 2-3 hours	.070	.266	.794	-.45	.59
			Between 3-4 hours	-.003	.289	.991	-.57	.56
			More than 4 hours	.088	.282	.756	-.47	.64
		Less than 2 hours	Never	.058	.264	.825	-.46	.58
			Between 2-3 hours	.128	.121	.290	-.11	.36
			Between 3-4 hours	.055	.165	.739	-.27	.38
			More than 4 hours	.146	.154	.343	-.16	.45
		Between 2-3 hours	Never	-.070	.266	.794	-.59	.45

			Less than 2 hours	-.128	.121	.290	-.36	.11
			Between 3-4 hours	-.073	.168	.665	-.40	.26
			More than 4 hours	.018	.157	.907	-.29	.33
		Between 3-4 hours	Never	.003	.289	.991	-.56	.57
			Less than 2 hours	-.055	.165	.739	-.38	.27
			Between 2-3 hours	.073	.168	.665	-.26	.40
			More than 4 hours	.091	.193	.637	-.29	.47
		More than 4 hours	Never	-.088	.282	.756	-.64	.47
			Less than 2 hours	-.146	.154	.343	-.45	.16
			Between 2-3 hours	-.018	.157	.907	-.33	.29
			Between 3-4 hours	-.091	.193	.637	-.47	.29
TV ads are enjoyable and fun to watch	LSD	Never	Less than 2 hours	.200	.362	.581	-.51	.91
			Between 2-3 hours	-.027	.365	.942	-.74	.69
			Between 3-4 hours	-.256	.396	.519	-1.04	.52
			More than 4 hours	-.250	.388	.520	-1.01	.51
		Less than 2 hours	Never	-.200	.362	.581	-.91	.51
			Between 2-3 hours	-.227	.166	.172	-.55	.10
			Between 3-4 hours	-.456*	.227	.045	-.90	-.01
			More than 4 hours	-.450*	.211	.034	-.87	-.03
		Between 2-3 hours	Never	.027	.365	.942	-.69	.74
			Less than 2 hours	.227	.166	.172	-.10	.55
			Between 3-4 hours	-.229	.231	.321	-.68	.22
			More than 4 hours	-.223	.216	.301	-.65	.20
		Between 3-4 hours	Never	.256	.396	.519	-.52	1.04
			Less than 2 hours	.456*	.227	.045	.01	.90
			Between 2-3 hours	.229	.231	.321	-.22	.68
			More than 4 hours	.006	.265	.983	-.52	.53
		More than 4 hours	Never	.250	.388	.520	-.51	1.01
			Less than 2 hours	.450*	.211	.034	.03	.87
			Between 2-3 hours	.223	.216	.301	-.20	.65
			Between 3-4 hours	-.006	.265	.983	-.53	.52
TV ads make me remember food brands	LSD	Never	Less than 2 hours	-.362	.342	.291	-1.03	.31
			Between 2-3 hours	-.615	.344	.075	-1.29	.06
			Between 3-4 hours	-.919*	.374	.014	-1.65	-.18
			More than 4 hours	-.731*	.366	.047	-1.45	-.01
		Less than 2 hours	Never	.362	.342	.291	-.31	1.03

			Between 2-3 hours	-.254	.156	.106	-.56	.05
			Between 3-4 hours	-.557*	.214	.010	-.98	-.14
			More than 4 hours	-.369	.199	.065	-.76	.02
		Between 2-3 hours	Never	.615	.344	.075	-.06	1.29
			Less than 2 hours	.254	.156	.106	-.05	.56
			Between 3-4 hours	-.304	.218	.164	-.73	.12
			More than 4 hours	-.116	.204	.570	-.52	.28
		Between 3-4 hours	Never	.919*	.374	.014	.18	1.65
			Less than 2 hours	.557*	.214	.010	.14	.98
			Between 2-3 hours	.304	.218	.164	-.12	.73
			More than 4 hours	.188	.250	.454	-.30	.68
		More than 4 hours	Never	.731*	.366	.047	.01	1.45
			Less than 2 hours	.369	.199	.065	-.02	.76
			Between 2-3 hours	.116	.204	.570	-.28	.52
			Between 3-4 hours	-.188	.250	.454	-.68	.30
My preference of food brands is based on TV food ads	LSD	Never	Less than 2 hours	-.097	.272	.722	-.63	.44
			Between 2-3 hours	-.156	.274	.569	-.69	.38
			Between 3-4 hours	-.015	.298	.960	-.60	.57
			More than 4 hours	-.220	.291	.451	-.79	.35
		Less than 2 hours	Never	.097	.272	.722	-.44	.63
			Between 2-3 hours	-.059	.124	.633	-.30	.19
			Between 3-4 hours	.082	.170	.631	-.25	.42
			More than 4 hours	-.123	.159	.438	-.44	.19
		Between 2-3 hours	Never	.156	.274	.569	-.38	.69
			Less than 2 hours	.059	.124	.633	-.19	.30
			Between 3-4 hours	.141	.173	.416	-.20	.48
			More than 4 hours	-.064	.162	.695	-.38	.26
		Between 3-4 hours	Never	.015	.298	.960	-.57	.60
			Less than 2 hours	-.082	.170	.631	-.42	.25
			Between 2-3 hours	-.141	.173	.416	-.48	.20
			More than 4 hours	-.205	.199	.305	-.60	.19
		More than 4 hours	Never	.220	.291	.451	-.35	.79
			Less than 2 hours	.123	.159	.438	-.19	.44
			Between 2-3 hours	.064	.162	.695	-.26	.38
			Between 3-4 hours	.205	.199	.305	-.19	.60
Watching food TV	LSD	Never	Less than 2 hours	.633	.396	.111	-.15	1.41

ads make me hungry			Between 2-3 hours	.147	.399	.713	-.64	.93
			Between 3-4 hours	.502	.433	.248	-.35	1.35
			More than 4 hours	-.063	.424	.882	-.90	.77
		Less than 2 hours	Never	-.633	.396	.111	-1.41	.15
			Between 2-3 hours	-.486*	.181	.008	-.84	-.13
			Between 3-4 hours	-.131	.248	.596	-.62	.36
			More than 4 hours	-.696*	.231	.003	-1.15	-.24
		Between 2-3 hours	Never	-.147	.399	.713	-.93	.64
			Less than 2 hours	.486*	.181	.008	.13	.84
			Between 3-4 hours	.355	.252	.160	-.14	.85
			More than 4 hours	-.210	.236	.374	-.67	.25
		Between 3-4 hours	Never	-.502	.433	.248	-1.35	.35
			Less than 2 hours	.131	.248	.596	-.36	.62
			Between 2-3 hours	-.355	.252	.160	-.85	.14
			More than 4 hours	-.565	.290	.052	-1.14	.01
		More than 4 hours	Never	.063	.424	.882	-.77	.90
			Less than 2 hours	.696*	.231	.003	.24	1.15
			Between 2-3 hours	.210	.236	.374	-.25	.67
			Between 3-4 hours	.565	.290	.052	-.01	1.14
TV food ads provide me with info about foods	LSD	Never	Less than 2 hours	.327	.334	.327	-.33	.98
			Between 2-3 hours	.037	.336	.913	-.62	.70
			Between 3-4 hours	.143	.365	.696	-.58	.86
			More than 4 hours	.239	.357	.504	-.46	.94
		Less than 2 hours	Never	-.327	.334	.327	-.98	.33
			Between 2-3 hours	-.291	.153	.058	-.59	.01
			Between 3-4 hours	-.185	.209	.377	-.60	.23
			More than 4 hours	-.088	.195	.650	-.47	.29
		Between 2-3 hours	Never	-.037	.336	.913	-.70	.62
			Less than 2 hours	.291	.153	.058	-.01	.59
			Between 3-4 hours	.106	.213	.618	-.31	.52
			More than 4 hours	.202	.199	.310	-.19	.59
		Between 3-4 hours	Never	-.143	.365	.696	-.86	.58
			Less than 2 hours	.185	.209	.377	-.23	.60
			Between 2-3 hours	-.106	.213	.618	-.52	.31
			More than 4 hours	.096	.245	.694	-.38	.58
		More than 4 hours	Never	-.239	.357	.504	-.94	.46

			Less than 2 hours	.088	.195	.650	-.29	.47
			Between 2-3 hours	-.202	.199	.310	-.59	.19
			Between 3-4 hours	-.096	.245	.694	-.58	.38
TV food ads, help me choose easily the brand food items	LSD	Never	Less than 2 hours	.136	.317	.667	-.49	.76
			Between 2-3 hours	.349	.319	.275	-.28	.98
			Between 3-4 hours	.103	.347	.767	-.58	.78
			More than 4 hours	.159	.339	.639	-.51	.83
		Less than 2 hours	Never	-.136	.317	.667	-.76	.49
			Between 2-3 hours	.213	.145	.143	-.07	.50
			Between 3-4 hours	-.033	.198	.867	-.42	.36
			More than 4 hours	.023	.185	.901	-.34	.39
		Between 2-3 hours	Never	-.349	.319	.275	-.98	.28
			Less than 2 hours	-.213	.145	.143	-.50	.07
			Between 3-4 hours	-.246	.202	.224	-.64	.15
			More than 4 hours	-.190	.189	.316	-.56	.18
		Between 3-4 hours	Never	-.103	.347	.767	-.78	.58
			Less than 2 hours	.033	.198	.867	-.36	.42
			Between 2-3 hours	.246	.202	.224	-.15	.64
			More than 4 hours	.056	.232	.808	-.40	.51
		More than 4 hours	Never	-.159	.339	.639	-.83	.51
			Less than 2 hours	-.023	.185	.901	-.39	.34
			Between 2-3 hours	.190	.189	.316	-.18	.56
			Between 3-4 hours	-.056	.232	.808	-.51	.40
When I like a TV ad, I tell my friends to watch also	LSD	Never	Less than 2 hours	.365	.379	.337	-.38	1.11
			Between 2-3 hours	.118	.382	.757	-.63	.87
			Between 3-4 hours	-.038	.415	.927	-.85	.78
			More than 4 hours	-.297	.406	.465	-1.10	.50
		Less than 2 hours	Never	-.365	.379	.337	-1.11	.38
			Between 2-3 hours	-.247	.173	.156	-.59	.09
			Between 3-4 hours	-.403	.237	.090	-.87	.06
			More than 4 hours	-.662*	.221	.003	-1.10	-.23
		Between 2-3 hours	Never	-.118	.382	.757	-.87	.63
			Less than 2 hours	.247	.173	.156	-.09	.59
			Between 3-4 hours	-.156	.242	.518	-.63	.32
			More than 4 hours	-.415	.226	.067	-.86	.03
		Between 3-4 hours	Never	.038	.415	.927	-.78	.85

			Less than 2 hours	.403	.237	.090	-.06	.87
			Between 2-3 hours	.156	.242	.518	-.32	.63
			More than 4 hours	-.258	.278	.353	-.81	.29
		More than 4 hours	Never	.297	.406	.465	-.50	1.10
			Less than 2 hours	.662*	.221	.003	.23	1.10
			Between 2-3 hours	.415	.226	.067	-.03	.86
			Between 3-4 hours	.258	.278	.353	-.29	.81

*. The mean difference is significant at the 0.05 level.

Table 4.5.3.: ANOVA for H1a

		Sum of Squares	df	Mean Square	F	Sig.
I watch food TV advertisement	Between Groups	1.755	4	.439	.433	.785
	Within Groups	352.017	347	1.014		
	Total	353.773	351			
I pay attention to food advertisement messages	Between Groups	2.494	4	.624	.704	.590
	Within Groups	307.585	347	.886		
	Total	310.080	351			
I learned about some of the food Ieat from the TV ads	Between Groups	8.701	4	2.175	2.294	.059
	Within Groups	329.015	347	.948		
	Total	337.716	351			
I trust food advertisements on TV	Between Groups	.653	4	.163	.185	.946
	Within Groups	305.753	347	.881		
	Total	306.406	351			
TV ads are enjoyable and fun to watch	Between Groups	2.963	4	.741	.440	.780
	Within Groups	584.034	347	1.683		
	Total	586.997	351			
TV ads make me remember food brands	Between Groups	7.152	4	1.788	1.189	.315
	Within Groups	521.927	347	1.504		
	Total	529.080	351			
My preference of food brands is based on TV food ads	Between Groups	5.763	4	1.441	1.562	.184
	Within Groups	320.055	347	.922		
	Total	325.818	351			
Watching food TV ads make me hungry	Between Groups	11.420	4	2.855	1.410	.230
	Within Groups	702.535	347	2.025		
	Total	713.955	351			

TV food ads provide me with info about foods	Between Groups	5.798	4	1.450	1.030	.392
	Within Groups	488.563	347	1.408		
	Total	494.361	351			
TV food ads, help me choose easily the brand food items	Between Groups	4.746	4	1.187	.937	.443
	Within Groups	439.614	347	1.267		
	Total	444.361	351			
When I like a TV ad, I tell my friends to watch also	Between Groups	11.024	4	2.756	1.499	.202
	Within Groups	637.874	347	1.838		
	Total	648.898	351			

Table 4.5.4: Multiple Comparisons for H1a

Dependent Variable		(I) Show the number of hours that you watch TV during weekends	(J) Show the number of hours that you watch TV during weekends	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I watch food TV advertisement	LSD	Never	Less than 2 hours	.087	.260	.739	-.42	.60
			Between 2-3 hours	.100	.253	.691	-.40	.60
			Between 3-4 hours	.056	.257	.828	-.45	.56
			More than 4 hours	-.079	.256	.759	-.58	.42
		Less than 2 hours	Never	-.087	.260	.739	-.60	.42
			Between 2-3 hours	.014	.157	.931	-.30	.32
			Between 3-4 hours	-.031	.164	.851	-.35	.29
			More than 4 hours	-.165	.162	.308	-.48	.15
		Between 2-3 hours	Never	-.100	.253	.691	-.60	.40
			Less than 2 hours	-.014	.157	.931	-.32	.30
			Between 3-4 hours	-.044	.152	.770	-.34	.25
			More than 4 hours	-.179	.150	.232	-.47	.12
		Between 3-4 hours	Never	-.056	.257	.828	-.56	.45
			Less than 2 hours	.031	.164	.851	-.29	.35
			Between 2-3 hours	.044	.152	.770	-.25	.34
			More than 4 hours	-.135	.157	.392	-.44	.17
		More than 4 hours	Never	.079	.256	.759	-.42	.58
			Less than 2 hours	.165	.162	.308	-.15	.48
			Between 2-3 hours	.179	.150	.232	-.12	.47
			Between 3-4 hours	.135	.157	.392	-.17	.44

I pay attention to food advertisement messages	LSD	Never	Less than 2 hours	-.274	.243	.261	-.75	.20
			Between 2-3 hours	-.048	.236	.840	-.51	.42
			Between 3-4 hours	-.103	.240	.668	-.58	.37
			More than 4 hours	-.104	.239	.664	-.57	.37
		Less than 2 hours	Never	.274	.243	.261	-.20	.75
			Between 2-3 hours	.226	.147	.126	-.06	.52
			Between 3-4 hours	.170	.154	.268	-.13	.47
			More than 4 hours	.170	.151	.264	-.13	.47
		Between 2-3 hours	Never	.048	.236	.840	-.42	.51
			Less than 2 hours	-.226	.147	.126	-.52	.06
			Between 3-4 hours	-.056	.142	.696	-.34	.22
			More than 4 hours	-.056	.140	.688	-.33	.22
		Between 3-4 hours	Never	.103	.240	.668	-.37	.58
			Less than 2 hours	-.170	.154	.268	-.47	.13
			Between 2-3 hours	.056	.142	.696	-.22	.34
			More than 4 hours	-.001	.147	.996	-.29	.29
		More than 4 hours	Never	.104	.239	.664	-.37	.57
			Less than 2 hours	-.170	.151	.264	-.47	.13
			Between 2-3 hours	.056	.140	.688	-.22	.33
			Between 3-4 hours	.001	.147	.996	-.29	.29
I learned about some of the food leat from the TV ads	LSD	Never	Less than 2 hours	-.566*	.252	.025	-1.06	-.07
			Between 2-3 hours	-.317	.244	.195	-.80	.16
			Between 3-4 hours	-.168	.249	.498	-.66	.32
			More than 4 hours	-.415	.247	.094	-.90	.07
		Less than 2 hours	Never	.566*	.252	.025	.07	1.06
			Between 2-3 hours	.249	.152	.103	-.05	.55
			Between 3-4 hours	.397*	.159	.013	.08	.71
			More than 4 hours	.150	.157	.338	-.16	.46
		Between 2-3 hours	Never	.317	.244	.195	-.16	.80
			Less than 2 hours	-.249	.152	.103	-.55	.05
			Between 3-4 hours	.148	.147	.313	-.14	.44
			More than 4 hours	-.099	.145	.496	-.38	.19
		Between 3-4 hours	Never	.168	.249	.498	-.32	.66
			Less than 2 hours	-.397*	.159	.013	-.71	-.08
			Between 2-3 hours	-.148	.147	.313	-.44	.14
			More than 4 hours	-.247	.152	.104	-.55	.05

		More than 4 hours	Never	.415	.247	.094	-.07	.90
			Less than 2 hours	-.150	.157	.338	-.46	.16
			Between 2-3 hours	.099	.145	.496	-.19	.38
			Between 3-4 hours	.247	.152	.104	-.05	.55
I trust food advertisements on TV	LSD	Never	Less than 2 hours	-.003	.242	.990	-.48	.47
			Between 2-3 hours	-.055	.235	.816	-.52	.41
			Between 3-4 hours	.067	.240	.780	-.40	.54
			More than 4 hours	-.005	.238	.983	-.47	.46
		Less than 2 hours	Never	.003	.242	.990	-.47	.48
			Between 2-3 hours	-.052	.147	.724	-.34	.24
			Between 3-4 hours	.070	.153	.647	-.23	.37
			More than 4 hours	-.002	.151	.989	-.30	.29
		Between 2-3 hours	Never	.055	.235	.816	-.41	.52
			Less than 2 hours	.052	.147	.724	-.24	.34
			Between 3-4 hours	.122	.142	.390	-.16	.40
			More than 4 hours	.050	.139	.721	-.22	.32
		Between 3-4 hours	Never	-.067	.240	.780	-.54	.40
			Less than 2 hours	-.070	.153	.647	-.37	.23
			Between 2-3 hours	-.122	.142	.390	-.40	.16
			More than 4 hours	-.072	.146	.622	-.36	.22
		More than 4 hours	Never	.005	.238	.983	-.46	.47
			Less than 2 hours	.002	.151	.989	-.29	.30
			Between 2-3 hours	-.050	.139	.721	-.32	.22
			Between 3-4 hours	.072	.146	.622	-.22	.36
TV ads are enjoyable and fun to watch	LSD	Never	Less than 2 hours	-.439	.335	.191	-1.10	.22
			Between 2-3 hours	-.379	.325	.245	-1.02	.26
			Between 3-4 hours	-.381	.331	.251	-1.03	.27
			More than 4 hours	-.380	.329	.249	-1.03	.27
		Less than 2 hours	Never	.439	.335	.191	-.22	1.10
			Between 2-3 hours	.060	.203	.767	-.34	.46
			Between 3-4 hours	.058	.212	.784	-.36	.47
			More than 4 hours	.059	.209	.779	-.35	.47
		Between 2-3 hours	Never	.379	.325	.245	-.26	1.02
			Less than 2 hours	-.060	.203	.767	-.46	.34
			Between 3-4 hours	-.002	.196	.991	-.39	.38
			More than 4 hours	-.001	.193	.994	-.38	.38

		Between 3-4 hours	Never	.381	.331	.251	-.27	1.03
			Less than 2 hours	-.058	.212	.784	-.47	.36
			Between 2-3 hours	.002	.196	.991	-.38	.39
			More than 4 hours	.001	.202	.997	-.40	.40
		More than 4 hours	Never	.380	.329	.249	-.27	1.03
			Less than 2 hours	-.059	.209	.779	-.47	.35
			Between 2-3 hours	.001	.193	.994	-.38	.38
			Between 3-4 hours	-.001	.202	.997	-.40	.40
TV ads make me remember food brands	LSD	Never	Less than 2 hours	-.491	.317	.122	-1.11	.13
			Between 2-3 hours	-.452	.308	.143	-1.06	.15
			Between 3-4 hours	-.409	.313	.193	-1.02	.21
			More than 4 hours	-.645*	.311	.039	-1.26	-.03
		Less than 2 hours	Never	.491	.317	.122	-.13	1.11
			Between 2-3 hours	.039	.192	.837	-.34	.42
			Between 3-4 hours	.083	.200	.679	-.31	.48
			More than 4 hours	-.153	.197	.438	-.54	.23
		Between 2-3 hours	Never	.452	.308	.143	-.15	1.06
			Less than 2 hours	-.039	.192	.837	-.42	.34
			Between 3-4 hours	.043	.185	.815	-.32	.41
			More than 4 hours	-.193	.182	.291	-.55	.17
		Between 3-4 hours	Never	.409	.313	.193	-.21	1.02
			Less than 2 hours	-.083	.200	.679	-.48	.31
			Between 2-3 hours	-.043	.185	.815	-.41	.32
			More than 4 hours	-.236	.191	.217	-.61	.14
		More than 4 hours	Never	.645*	.311	.039	.03	1.26
			Less than 2 hours	.153	.197	.438	-.23	.54
			Between 2-3 hours	.193	.182	.291	-.17	.55
			Between 3-4 hours	.236	.191	.217	-.14	.61
My preference of food brands is based on TV food ads	LSD	Never	Less than 2 hours	-.408	.248	.101	-.90	.08
			Between 2-3 hours	-.557*	.241	.021	-1.03	-.08
			Between 3-4 hours	-.475	.245	.053	-.96	.01
			More than 4 hours	-.553*	.244	.024	-1.03	-.07
		Less than 2 hours	Never	.408	.248	.101	-.08	.90
			Between 2-3 hours	-.148	.150	.324	-.44	.15
			Between 3-4 hours	-.067	.157	.671	-.37	.24
			More than 4 hours	-.144	.154	.350	-.45	.16

		Between 2-3 hours	Never	.557*	.241	.021	.08	1.03
			Less than 2 hours	.148	.150	.324	-.15	.44
			Between 3-4 hours	.082	.145	.574	-.20	.37
			More than 4 hours	.004	.143	.979	-.28	.28
		Between 3-4 hours	Never	.475	.245	.053	-.01	.96
			Less than 2 hours	.067	.157	.671	-.24	.37
			Between 2-3 hours	-.082	.145	.574	-.37	.20
			More than 4 hours	-.078	.150	.603	-.37	.22
		More than 4 hours	Never	.553*	.244	.024	.07	1.03
			Less than 2 hours	.144	.154	.350	-.16	.45
			Between 2-3 hours	-.004	.143	.979	-.28	.28
			Between 3-4 hours	.078	.150	.603	-.22	.37
Watching food TV ads make me hungry	LSD	Never	Less than 2 hours	.291	.368	.429	-.43	1.01
			Between 2-3 hours	.078	.357	.828	-.62	.78
			Between 3-4 hours	.013	.363	.971	-.70	.73
			More than 4 hours	-.243	.361	.502	-.95	.47
		Less than 2 hours	Never	-.291	.368	.429	-1.01	.43
			Between 2-3 hours	-.214	.222	.337	-.65	.22
			Between 3-4 hours	-.278	.232	.231	-.73	.18
			More than 4 hours	-.534*	.229	.020	-.98	-.08
		Between 2-3 hours	Never	-.078	.357	.828	-.78	.62
			Less than 2 hours	.214	.222	.337	-.22	.65
			Between 3-4 hours	-.064	.215	.764	-.49	.36
			More than 4 hours	-.320	.211	.131	-.74	.10
		Between 3-4 hours	Never	-.013	.363	.971	-.73	.70
			Less than 2 hours	.278	.232	.231	-.18	.73
			Between 2-3 hours	.064	.215	.764	-.36	.49
			More than 4 hours	-.256	.222	.249	-.69	.18
		More than 4 hours	Never	.243	.361	.502	-.47	.95
			Less than 2 hours	.534*	.229	.020	.08	.98
			Between 2-3 hours	.320	.211	.131	-.10	.74
			Between 3-4 hours	.256	.222	.249	-.18	.69
TV food ads provide me with info about foods	LSD	Never	Less than 2 hours	-.597	.306	.052	-1.20	.01
			Between 2-3 hours	-.516	.298	.084	-1.10	.07
			Between 3-4 hours	-.426	.303	.160	-1.02	.17
			More than 4 hours	-.515	.301	.088	-1.11	.08

		Less than 2 hours	Never	.597	.306	.052	-.01	1.20
			Between 2-3 hours	.081	.185	.663	-.28	.45
			Between 3-4 hours	.170	.193	.379	-.21	.55
			More than 4 hours	.082	.191	.667	-.29	.46
		Between 2-3 hours	Never	.516	.298	.084	-.07	1.10
			Less than 2 hours	-.081	.185	.663	-.45	.28
			Between 3-4 hours	.090	.179	.617	-.26	.44
			More than 4 hours	.001	.176	.993	-.35	.35
		Between 3-4 hours	Never	.426	.303	.160	-.17	1.02
			Less than 2 hours	-.170	.193	.379	-.55	.21
			Between 2-3 hours	-.090	.179	.617	-.44	.26
			More than 4 hours	-.088	.185	.633	-.45	.28
		More than 4 hours	Never	.515	.301	.088	-.08	1.11
			Less than 2 hours	-.082	.191	.667	-.46	.29
			Between 2-3 hours	-.001	.176	.993	-.35	.35
			Between 3-4 hours	.088	.185	.633	-.28	.45
TV food ads, help me choose easily the brand food items	LSD	Never	Less than 2 hours	.132	.291	.650	-.44	.70
			Between 2-3 hours	.351	.282	.215	-.20	.91
			Between 3-4 hours	.364	.287	.206	-.20	.93
			More than 4 hours	.373	.286	.192	-.19	.94
		Less than 2 hours	Never	-.132	.291	.650	-.70	.44
			Between 2-3 hours	.219	.176	.213	-.13	.56
			Between 3-4 hours	.232	.184	.207	-.13	.59
			More than 4 hours	.241	.181	.183	-.11	.60
		Between 2-3 hours	Never	-.351	.282	.215	-.91	.20
			Less than 2 hours	-.219	.176	.213	-.56	.13
			Between 3-4 hours	.013	.170	.940	-.32	.35
			More than 4 hours	.022	.167	.894	-.31	.35
		Between 3-4 hours	Never	-.364	.287	.206	-.93	.20
			Less than 2 hours	-.232	.184	.207	-.59	.13
			Between 2-3 hours	-.013	.170	.940	-.35	.32
			More than 4 hours	.010	.175	.957	-.34	.35
		More than 4 hours	Never	-.373	.286	.192	-.94	.19
			Less than 2 hours	-.241	.181	.183	-.60	.11
			Between 2-3 hours	-.022	.167	.894	-.35	.31
			Between 3-4 hours	-.010	.175	.957	-.35	.34

When I like a TV ad, I tell my friends to watch also	LSD	Never	Less than 2 hours	-.481	.350	.170	-1.17	.21
			Between 2-3 hours	-.770*	.340	.024	-1.44	-.10
			Between 3-4 hours	-.581	.346	.094	-1.26	.10
			More than 4 hours	-.663	.344	.055	-1.34	.01
		Less than 2 hours	Never	.481	.350	.170	-.21	1.17
			Between 2-3 hours	-.289	.212	.173	-.71	.13
			Between 3-4 hours	-.100	.221	.652	-.53	.33
			More than 4 hours	-.181	.218	.406	-.61	.25
		Between 2-3 hours	Never	.770*	.340	.024	.10	1.44
			Less than 2 hours	.289	.212	.173	-.13	.71
			Between 3-4 hours	.190	.205	.355	-.21	.59
			More than 4 hours	.108	.201	.592	-.29	.50
		Between 3-4 hours	Never	.581	.346	.094	-.10	1.26
			Less than 2 hours	.100	.221	.652	-.33	.53
			Between 2-3 hours	-.190	.205	.355	-.59	.21
			More than 4 hours	-.082	.211	.699	-.50	.33
		More than 4 hours	Never	.663	.344	.055	-.01	1.34
			Less than 2 hours	.181	.218	.406	-.25	.61
			Between 2-3 hours	-.108	.201	.592	-.50	.29
			Between 3-4 hours	.082	.211	.699	-.33	.50

*. The mean difference is significant at the 0.05 level.

Table 4.5.6: Coefficients[a] for H1b.1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.708	.098		27.613	.000
	Watching food TV ads make me hungry	.128	.028	.240	4.616	.000
2	(Constant)	2.473	.126		19.603	.000
	Watching food TV ads make me hungry	.111	.028	.208	3.964	.000
	TV ads make me remember food brands	.095	.033	.153	2.910	.004

a. Dependent Variable: Mean_dep.

Table 4.5.8: Multiple Comparisons for H1b.1 using LSD

Dependent Variable	(I) TV ads make me remember food brands	(J) TV ads make me remember food brands	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
I eat chips, chocolates... for snacks	Never	Seldom	.010	.209	.963	-.40	.42
		Ocassionally	.028	.202	.888	-.37	.43
		Often	-.086	.204	.676	-.49	.32
		Always	-.188	.232	.419	-.65	.27
	Seldom	Never	-.010	.209	.963	-.42	.40
		Ocassionally	.019	.170	.912	-.32	.35
		Often	-.095	.172	.581	-.43	.24
		Always	-.198	.205	.335	-.60	.21
	Ocassionally	Never	-.028	.202	.888	-.43	.37
		Seldom	-.019	.170	.912	-.35	.32
		Often	-.114	.163	.486	-.44	.21
		Always	-.217	.198	.274	-.61	.17
	Often	Never	.086	.204	.676	-.32	.49
		Seldom	.095	.172	.581	-.24	.43
		Ocassionally	.114	.163	.486	-.21	.44
		Always	-.103	.200	.608	-.50	.29
	Always	Never	.188	.232	.419	-.27	.65
		Seldom	.198	.205	.335	-.21	.60
		Ocassionally	.217	.198	.274	-.17	.61
		Often	.103	.200	.608	-.29	.50
I drink sodas, energy drinks... when thirsty during the day	Never	Seldom	-.347	.248	.163	-.84	.14
		Ocassionally	-.397	.240	.099	-.87	.07
		Often	-.768*	.242	.002	-1.24	-.29
		Always	-.706*	.276	.011	-1.25	-.16
	Seldom	Never	.347	.248	.163	-.14	.84
		Ocassionally	-.049	.202	.806	-.45	.35
		Often	-.421*	.205	.040	-.82	-.02
		Always	-.358	.243	.142	-.84	.12
	Ocassionally	Never	.397	.240	.099	-.07	.87
		Seldom	.049	.202	.806	-.35	.45
		Often	-.371	.194	.056	-.75	.01

		Always	-.309	.234	.189	-.77	.15
	Often	Never	.768*	.242	.002	.29	1.24
		Seldom	.421*	.205	.040	.02	.82
		Ocassionally	.371	.194	.056	-.01	.75
		Always	.063	.237	.791	-.40	.53
	Always	Never	.706*	.276	.011	.16	1.25
		Seldom	.358	.243	.142	-.12	.84
		Ocassionally	.309	.234	.189	-.15	.77
		Often	-.063	.237	.791	-.53	.40
When I eat out, I go to my preferred fast food restaurant	Never	Seldom	-.263	.229	.252	-.71	.19
		Ocassionally	-.271	.221	.221	-.71	.16
		Often	-.632*	.223	.005	-1.07	-.19
		Always	-.654*	.254	.010	-1.15	-.15
	Seldom	Never	.263	.229	.252	-.19	.71
		Ocassionally	-.008	.186	.965	-.37	.36
		Often	-.369	.189	.051	-.74	.00
		Always	-.391	.224	.082	-.83	.05
	Ocassionally	Never	.271	.221	.221	-.16	.71
		Seldom	.008	.186	.965	-.36	.37
		Often	-.361*	.179	.044	-.71	-.01
		Always	-.383	.216	.077	-.81	.04
	Often	Never	.632*	.223	.005	.19	1.07
		Seldom	.369	.189	.051	.00	.74
		Ocassionally	.361*	.179	.044	.01	.71
		Always	-.022	.218	.919	-.45	.41
	Always	Never	.654*	.254	.010	.15	1.15
		Seldom	.391	.224	.082	-.05	.83
		Ocassionally	.383	.216	.077	-.04	.81
		Often	.022	.218	.919	-.41	.45
I eat more than 2 snacks per day	Never	Seldom	-.451	.246	.068	-.94	.03
		Ocassionally	-.436	.238	.067	-.90	.03
		Often	-.575*	.240	.017	-1.05	-.10
		Always	-.907*	.273	.001	-1.44	-.37
	Seldom	Never	.451	.246	.068	-.03	.94
		Ocassionally	.015	.200	.939	-.38	.41
		Often	-.124	.203	.541	-.52	.27

		Always	-.455	.241	.060	-.93	.02
	Ocassionally	Never	.436	.238	.067	-.03	.90
		Seldom	-.015	.200	.939	-.41	.38
		Often	-.139	.192	.469	-.52	.24
		Always	-.471*	.232	.044	-.93	-.01
	Often	Never	.575*	.240	.017	.10	1.05
		Seldom	.124	.203	.541	-.27	.52
		Ocassionally	.139	.192	.469	-.24	.52
		Always	-.331	.235	.159	-.79	.13
	Always	Never	.907*	.273	.001	.37	1.44
		Seldom	.455	.241	.060	-.02	.93
		Ocassionally	.471*	.232	.044	.01	.93
		Often	.331	.235	.159	-.13	.79
I like to eat sugared corn flakes for breakfast	Never	Seldom	-.292	.254	.250	-.79	.21
		Ocassionally	-.123	.245	.616	-.60	.36
		Often	-.280	.247	.258	-.77	.21
		Always	-.593*	.281	.036	-1.15	-.04
	Seldom	Never	.292	.254	.250	-.21	.79
		Ocassionally	.169	.206	.411	-.24	.57
		Often	.012	.209	.955	-.40	.42
		Always	-.301	.248	.227	-.79	.19
	Ocassionally	Never	.123	.245	.616	-.36	.60
		Seldom	-.169	.206	.411	-.57	.24
		Often	-.157	.198	.427	-.55	.23
		Always	-.470	.239	.050	-.94	.00
	Often	Never	.280	.247	.258	-.21	.77
		Seldom	-.012	.209	.955	-.42	.40
		Ocassionally	.157	.198	.427	-.23	.55
		Always	-.312	.242	.197	-.79	.16
	Always	Never	.593*	.281	.036	.04	1.15
		Seldom	.301	.248	.227	-.19	.79
		Ocassionally	.470	.239	.050	.00	.94
		Often	.312	.242	.197	-.16	.79

*. The mean difference is significant at the 0.05 level.

Table 4.5.10: Multiple Comparisons using LSD

Dependent Variable	(I) Watching food TV ads make me hungry	(J) Watching food TV ads make me hungry	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
I eat chips, chocolates... for snacks	Never	Seldom	.211	.202	.295	-.18	.61
		Ocassionally	.190	.199	.340	-.20	.58
		Often	-.197	.192	.306	-.58	.18
		Always	-.122	.185	.509	-.49	.24
	Seldom	Never	-.211	.202	.295	-.61	.18
		Ocassionally	-.021	.195	.914	-.40	.36
		Often	-.409*	.188	.030	-.78	-.04
		Always	-.334	.180	.065	-.69	.02
	Ocassionally	Never	-.190	.199	.340	-.58	.20
		Seldom	.021	.195	.914	-.36	.40
		Often	-.388*	.186	.037	-.75	-.02
		Always	-.313	.178	.080	-.66	.04
	Often	Never	.197	.192	.306	-.18	.58
		Seldom	.409*	.188	.030	.04	.78
		Ocassionally	.388*	.186	.037	.02	.75
		Always	.075	.170	.660	-.26	.41
	Always	Never	.122	.185	.509	-.24	.49
		Seldom	.334	.180	.065	-.02	.69
		Ocassionally	.313	.178	.080	-.04	.66
		Often	-.075	.170	.660	-.41	.26
I drink sodas, energy drinks... when thirsty during the day	Never	Seldom	-.308	.240	.200	-.78	.16
		Ocassionally	-.483*	.237	.043	-.95	-.02
		Often	-.750*	.229	.001	-1.20	-.30
		Always	-.769*	.220	.001	-1.20	-.34
	Seldom	Never	.308	.240	.200	-.16	.78
		Ocassionally	-.174	.232	.453	-.63	.28
		Often	-.442*	.224	.049	-.88	.00
		Always	-.461*	.215	.033	-.88	-.04
	Ocassionally	Never	.483*	.237	.043	.02	.95
		Seldom	.174	.232	.453	-.28	.63
		Often	-.267	.221	.227	-.70	.17
		Always	-.286	.212	.178	-.70	.13

	Often	Never	.750*	.229	.001	.30	1.20
		Seldom	.442*	.224	.049	.00	.88
		Ocassionally	.267	.221	.227	-.17	.70
		Always	-.019	.203	.926	-.42	.38
	Always	Never	.769*	.220	.001	.34	1.20
		Seldom	.461*	.215	.033	.04	.88
		Ocassionally	.286	.212	.178	-.13	.70
		Often	.019	.203	.926	-.38	.42
When I eat out, I go to my preferred fast food restaurant	Never	Seldom	-.199	.219	.365	-.63	.23
		Ocassionally	-.140	.217	.518	-.57	.29
		Often	-.553*	.209	.009	-.96	-.14
		Always	-.807*	.201	.000	-1.20	-.41
	Seldom	Never	.199	.219	.365	-.23	.63
		Ocassionally	.059	.212	.782	-.36	.48
		Often	-.354	.204	.084	-.76	.05
		Always	-.608*	.196	.002	-.99	-.22
	Ocassionally	Never	.140	.217	.518	-.29	.57
		Seldom	-.059	.212	.782	-.48	.36
		Often	-.413*	.202	.042	-.81	-.02
		Always	-.667*	.193	.001	-1.05	-.29
	Often	Never	.553*	.209	.009	.14	.96
		Seldom	.354	.204	.084	-.05	.76
		Ocassionally	.413*	.202	.042	.02	.81
		Always	-.254	.185	.171	-.62	.11
	Always	Never	.807*	.201	.000	.41	1.20
		Seldom	.608*	.196	.002	.22	.99
		Ocassionally	.667*	.193	.001	.29	1.05
		Often	.254	.185	.171	-.11	.62
I eat more than 2 snacks per day	Never	Seldom	.192	.235	.414	-.27	.65
		Ocassionally	-.248	.232	.285	-.70	.21
		Often	-.386	.224	.086	-.83	.05
		Always	-.768*	.216	.000	-1.19	-.34
	Seldom	Never	-.192	.235	.414	-.65	.27
		Ocassionally	-.440	.227	.053	-.89	.01
		Often	-.578*	.219	.009	-1.01	-.15
		Always	-.960*	.210	.000	-1.37	-.55

	Ocassionally	Never	.248	.232	.285	-.21	.70
		Seldom	.440	.227	.053	-.01	.89
		Often	-.138	.216	.525	-.56	.29
		Always	-.519*	.207	.013	-.93	-.11
	Often	Never	.386	.224	.086	-.05	.83
		Seldom	.578*	.219	.009	.15	1.01
		Ocassionally	.138	.216	.525	-.29	.56
		Always	-.382	.198	.055	-.77	.01
	Always	Never	.768*	.216	.000	.34	1.19
		Seldom	.960*	.210	.000	.55	1.37
		Ocassionally	.519*	.207	.013	.11	.93
		Often	.382	.198	.055	-.01	.77
I like to eat sugared corn flakes for breakfast	Never	Seldom	.513*	.245	.037	.03	.99
		Ocassionally	.054	.242	.825	-.42	.53
		Often	.180	.234	.443	-.28	.64
		Always	.496*	.225	.028	.05	.94
	Seldom	Never	-.513*	.245	.037	-.99	-.03
		Ocassionally	-.459	.237	.053	-.93	.01
		Often	-.333	.229	.146	-.78	.12
		Always	-.017	.219	.939	-.45	.41
	Ocassionally	Never	-.054	.242	.825	-.53	.42
		Seldom	.459	.237	.053	-.01	.93
		Often	.126	.226	.576	-.32	.57
		Always	.442*	.216	.042	.02	.87
	Often	Never	-.180	.234	.443	-.64	.28
		Seldom	.333	.229	.146	-.12	.78
		Ocassionally	-.126	.226	.576	-.57	.32
		Always	.316	.207	.127	-.09	.72
	Always	Never	-.496*	.225	.028	-.94	-.05
		Seldom	.017	.219	.939	-.41	.45
		Ocassionally	-.442*	.216	.042	-.87	-.02
		Often	-.316	.207	.127	-.72	.09

*. The mean difference is significant at the 0.05 level.

Table 4.5.12: Multiple Comparisons for H1b.2

Dependent Variable		(I) I trust food advertisements on TV	(J) I trust food advertisements on TV	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I eat chips, chocolates... for snacks	LSD	Never	Seldom	.337	.323	.297	-.30	.97
			Ocassionally	.388	.321	.228	-.24	1.02
			Often	.380	.342	.267	-.29	1.05
			Always	.245	.391	.531	-.52	1.01
		Seldom	Never	-.337	.323	.297	-.97	.30
			Ocassionally	.051	.137	.711	-.22	.32
			Often	.043	.180	.811	-.31	.40
			Always	-.092	.261	.725	-.61	.42
		Ocassionally	Never	-.388	.321	.228	-1.02	.24
			Seldom	-.051	.137	.711	-.32	.22
			Often	-.008	.178	.966	-.36	.34
			Always	-.143	.259	.583	-.65	.37
		Often	Never	-.380	.342	.267	-1.05	.29
			Seldom	-.043	.180	.811	-.40	.31
			Ocassionally	.008	.178	.966	-.34	.36
			Always	-.135	.285	.636	-.70	.43
		Always	Never	-.245	.391	.531	-1.01	.52
			Seldom	.092	.261	.725	-.42	.61
			Ocassionally	.143	.259	.583	-.37	.65
			Often	.135	.285	.636	-.43	.70
I drink sodas, energy drinks... when thirsty during the day	LSD	Never	Seldom	.021	.387	.957	-.74	.78
			Ocassionally	-.132	.385	.733	-.89	.63
			Often	.318	.410	.440	-.49	1.13
			Always	-.209	.469	.656	-1.13	.71
		Seldom	Never	-.021	.387	.957	-.78	.74
			Ocassionally	-.153	.164	.352	-.47	.17
			Often	.297	.216	.171	-.13	.72
			Always	-.230	.313	.464	-.85	.39
		Ocassionally	Never	.132	.385	.733	-.63	.89
			Seldom	.153	.164	.352	-.17	.47

			Often	.449*	.213	.036	.03	.87
			Always	-.077	.311	.804	-.69	.53
		Often	Never	-.318	.410	.440	-1.13	.49
			Seldom	-.297	.216	.171	-.72	.13
			Ocassionally	-.449*	.213	.036	-.87	-.03
			Always	-.526	.342	.124	-1.20	.15
		Always	Never	.209	.469	.656	-.71	1.13
			Seldom	.230	.313	.464	-.39	.85
			Ocassionally	.077	.311	.804	-.53	.69
			Often	.526	.342	.124	-.15	1.20
When I eat out, I go to my preferred fast food restaurant	LSD	Never	Seldom	-.375	.355	.292	-1.07	.32
			Ocassionally	-.303	.353	.392	-1.00	.39
			Often	-.286	.376	.447	-1.03	.45
			Always	-1.040*	.430	.016	-1.89	-.19
		Seldom	Never	.375	.355	.292	-.32	1.07
			Ocassionally	.072	.150	.632	-.22	.37
			Often	.088	.198	.656	-.30	.48
			Always	-.666*	.287	.021	-1.23	-.10
		Ocassionally	Never	.303	.353	.392	-.39	1.00
			Seldom	-.072	.150	.632	-.37	.22
			Often	.016	.195	.933	-.37	.40
			Always	-.738*	.285	.010	-1.30	-.18
		Often	Never	.286	.376	.447	-.45	1.03
			Seldom	-.088	.198	.656	-.48	.30
			Ocassionally	-.016	.195	.933	-.40	.37
			Always	-.754*	.313	.017	-1.37	-.14
		Always	Never	1.040*	.430	.016	.19	1.89
			Seldom	.666*	.287	.021	.10	1.23
			Ocassionally	.738*	.285	.010	.18	1.30
			Often	.754*	.313	.017	.14	1.37
I eat more than 2 snacks per day	LSD	Never	Seldom	-.237	.380	.534	-.98	.51
			Ocassionally	-.465	.378	.219	-1.21	.28
			Often	-.151	.403	.708	-.94	.64
			Always	-1.077*	.460	.020	-1.98	-.17
		Seldom	Never	.237	.380	.534	-.51	.98
			Ocassionally	-.228	.161	.156	-.54	.09

			Often	.086	.212	.686	-.33	.50
			Always	-.840*	.308	.007	-1.45	-.23
		Ocassionally	Never	.465	.378	.219	-.28	1.21
			Seldom	.228	.161	.156	-.09	.54
			Often	.314	.209	.134	-.10	.73
			Always	-.612*	.305	.046	-1.21	-.01
		Often	Never	.151	.403	.708	-.64	.94
			Seldom	-.086	.212	.686	-.50	.33
			Ocassionally	-.314	.209	.134	-.73	.10
			Always	-.926*	.335	.006	-1.59	-.27
		Always	Never	1.077*	.460	.020	.17	1.98
			Seldom	.840*	.308	.007	.23	1.45
			Ocassionally	.612*	.305	.046	.01	1.21
			Often	.926*	.335	.006	.27	1.59
I like to eat sugared corn flakes for breakfast	LSD	Never	Seldom	.238	.393	.546	-.54	1.01
			Ocassionally	.145	.392	.711	-.63	.92
			Often	.202	.417	.628	-.62	1.02
			Always	-.062	.477	.896	-1.00	.87
		Seldom	Never	-.238	.393	.546	-1.01	.54
			Ocassionally	-.093	.166	.579	-.42	.23
			Often	-.035	.220	.873	-.47	.40
			Always	-.300	.318	.347	-.93	.33
		Ocassionally	Never	-.145	.392	.711	-.92	.63
			Seldom	.093	.166	.579	-.23	.42
			Often	.057	.217	.791	-.37	.48
			Always	-.207	.316	.512	-.83	.41
		Often	Never	-.202	.417	.628	-1.02	.62
			Seldom	.035	.220	.873	-.40	.47
			Ocassionally	-.057	.217	.791	-.48	.37
			Always	-.265	.347	.447	-.95	.42
		Always	Never	.062	.477	.896	-.87	1.00
			Seldom	.300	.318	.347	-.33	.93
			Ocassionally	.207	.316	.512	-.41	.83
			Often	.265	.347	.447	-.42	.95

*. The mean difference is significant at the 0.05 level.

Table 4.5.14: Multiple Comparisons for H1b.3

Dependent Variable		(I) What I mostly see on the TV food advertisements are about	(J) What I mostly see on the TV food advertisements are about	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I eat chips, chocolates... for snacks	LSD	Chocolates	Milk	.511*	.250	.041	.02	1.00
			Cereals	.011	.250	.965	-.48	.50
			Fast food restaurants	-.044	.128	.733	-.29	.21
			Fresh juices	1.400*	.262	.000	.88	1.91
		Milk	Chocolates	-.511*	.250	.041	-1.00	-.02
			Cereals	-.500	.335	.137	-1.16	.16
			Fast food restaurants	-.555*	.258	.032	-1.06	-.05
			Fresh juices	.889*	.344	.010	.21	1.57
		Cereals	Chocolates	-.011	.250	.965	-.50	.48
			Milk	.500	.335	.137	-.16	1.16
			Fast food restaurants	-.055	.258	.832	-.56	.45
			Fresh juices	1.389*	.344	.000	.71	2.07
		Fast food restaurants	Chocolates	.044	.128	.733	-.21	.29
			Milk	.555*	.258	.032	.05	1.06
			Cereals	.055	.258	.832	-.45	.56
			Fresh juices	1.443*	.270	.000	.91	1.97
		Fresh juices	Chocolates	-1.400*	.262	.000	-1.91	-.88
			Milk	-.889*	.344	.010	-1.57	-.21
			Cereals	-1.389*	.344	.000	-2.07	-.71
			Fast food restaurants	-1.443*	.270	.000	-1.97	-.91
I drink sodas, energy drinks... when thirsty during the day	LSD	Chocolates	Milk	.186	.312	.552	-.43	.80
			Cereals	-.314	.312	.315	-.93	.30
			Fast food restaurants	.072	.160	.652	-.24	.39
			Fresh juices	.691*	.328	.036	.05	1.34
		Milk	Chocolates	-.186	.312	.552	-.80	.43
			Cereals	-.500	.419	.234	-1.32	.32
			Fast food restaurants	-.114	.322	.725	-.75	.52
			Fresh juices	.506	.431	.242	-.34	1.35
		Cereals	Chocolates	.314	.312	.315	-.30	.93
			Milk	.500	.419	.234	-.32	1.32
			Fast food restaurants	.386	.322	.232	-.25	1.02

			Fresh juices	1.006*	.431	.020	.16	1.85
		Fast food restaurants	Chocolates	-.072	.160	.652	-.39	.24
			Milk	.114	.322	.725	-.52	.75
			Cereals	-.386	.322	.232	-1.02	.25
			Fresh juices	.619	.337	.067	-.04	1.28
		Fresh juices	Chocolates	-.691*	.328	.036	-1.34	-.05
			Milk	-.506	.431	.242	-1.35	.34
			Cereals	-1.006*	.431	.020	-1.85	-.16
			Fast food restaurants	-.619	.337	.067	-1.28	.04
When I eat out, I go to my preferred fast food restaurant	LSD	Chocolates	Milk	-.085	.288	.769	-.65	.48
			Cereals	-.185	.288	.522	-.75	.38
			Fast food restaurants	-.217	.148	.143	-.51	.07
			Fresh juices	.399	.302	.188	-.20	.99
		Milk	Chocolates	.085	.288	.769	-.48	.65
			Cereals	-.100	.387	.796	-.86	.66
			Fast food restaurants	-.132	.298	.658	-.72	.45
			Fresh juices	.483	.398	.225	-.30	1.27
		Cereals	Chocolates	.185	.288	.522	-.38	.75
			Milk	.100	.387	.796	-.66	.86
			Fast food restaurants	-.032	.298	.915	-.62	.55
			Fresh juices	.583	.398	.143	-.20	1.37
		Fast food restaurants	Chocolates	.217	.148	.143	-.07	.51
			Milk	.132	.298	.658	-.45	.72
			Cereals	.032	.298	.915	-.55	.62
			Fresh juices	.615*	.311	.049	.00	1.23
		Fresh juices	Chocolates	-.399	.302	.188	-.99	.20
			Milk	-.483	.398	.225	-1.27	.30
			Cereals	-.583	.398	.143	-1.37	.20
			Fast food restaurants	-.615*	.311	.049	-1.23	.00
I eat more than 2 snacks per day	LSD	Chocolates	Milk	.599	.309	.053	-.01	1.21
			Cereals	.249	.309	.421	-.36	.86
			Fast food restaurants	-.137	.158	.385	-.45	.17
			Fresh juices	.299	.324	.357	-.34	.94
		Milk	Chocolates	-.599	.309	.053	-1.21	.01
			Cereals	-.350	.415	.399	-1.17	.47
			Fast food restaurants	-.736*	.319	.021	-1.36	-.11

			Fresh juices	-.300	.426	.482	-1.14	.54
		Cereals	Chocolates	-.249	.309	.421	-.86	.36
			Milk	.350	.415	.399	-.47	1.17
			Fast food restaurants	-.386	.319	.226	-1.01	.24
			Fresh juices	.050	.426	.907	-.79	.89
		Fast food restaurants	Chocolates	.137	.158	.385	-.17	.45
			Milk	.736*	.319	.021	.11	1.36
			Cereals	.386	.319	.226	-.24	1.01
			Fresh juices	.436	.333	.192	-.22	1.09
		Fresh juices	Chocolates	-.299	.324	.357	-.94	.34
			Milk	.300	.426	.482	-.54	1.14
			Cereals	-.050	.426	.907	-.89	.79
			Fast food restaurants	-.436	.333	.192	-1.09	.22
I like to eat sugared corn flakes for breakfast	LSD	Chocolates	Milk	-.357	.316	.259	-.98	.26
			Cereals	-.307	.316	.332	-.93	.31
			Fast food restaurants	.021	.162	.898	-.30	.34
			Fresh juices	.627	.331	.059	-.02	1.28
		Milk	Chocolates	.357	.316	.259	-.26	.98
			Cereals	.050	.424	.906	-.78	.88
			Fast food restaurants	.377	.326	.248	-.26	1.02
			Fresh juices	.983*	.435	.025	.13	1.84
		Cereals	Chocolates	.307	.316	.332	-.31	.93
			Milk	-.050	.424	.906	-.88	.78
			Fast food restaurants	.327	.326	.316	-.31	.97
			Fresh juices	.933*	.435	.033	.08	1.79
		Fast food restaurants	Chocolates	-.021	.162	.898	-.34	.30
			Milk	-.377	.326	.248	-1.02	.26
			Cereals	-.327	.326	.316	-.97	.31
			Fresh juices	.606	.341	.076	-.06	1.28
		Fresh juices	Chocolates	-.627	.331	.059	-1.28	.02
			Milk	-.983*	.435	.025	-1.84	-.13
			Cereals	-.933*	.435	.033	-1.79	-.08
			Fast food restaurants	-.606	.341	.076	-1.28	.06

*. The mean difference is significant at the 0.05 level.

Table 4.5.15: I eat chips, chocolates... for snacks * What I mostly see on the TV food advertisements are about Crosstabulation

		What I mostly see on the TV food advertisements are about					Total
		Chocolates	Milk	Cereals	Fast food restaurants	Fresh juices	
I eat chips, chocolates... for snacks	Never	2	3	1	3	3	12
	Seldom	30	2	3	23	10	68
	Ocassionally	57	9	6	21	5	98
	Often	62	4	5	36	0	107
	Always	33	2	5	27	0	67
Total		184	20	20	110	18	352

Table 4.5.16: Chi-Square Tests for H1b.3

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	54.291[a]	16	.000
Likelihood Ratio	52.290	16	.000
Linear-by-Linear Association	3.401	1	.065
N of Valid Cases	352		

a. 10 cells (40.0%) have expected count less than 5. The minimum expected count is .61.

Table 4.5.17: Model Summary for H2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.164[a]	.027	.024	.75250

a. Predictors: (Constant), Tuition fees

Table 4.5.19: Coefficients[a] for H2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.433	.108		31.887	.000
	Tuition fees	-.153	.049	-.164	-3.109	.002

a. Dependent Variable: Mean_dep

Table 4.5.21: Multiple Comparisons for H2

Dependent Variable		(I) Tuition fees	(J) Tuition fees	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
I eat chips, chocolates... for snacks	LSD	low tuition fee	middle tuition fee	.187	.145	.197	-.10	.47
			high tuition fee	.351*	.144	.015	.07	.63
		middle tuition fee	low tuition fee	-.187	.145	.197	-.47	.10
			high tuition fee	.164	.142	.248	-.11	.44
		high tuition fee	low tuition fee	-.351*	.144	.015	-.63	-.07
			middle tuition fee	-.164	.142	.248	-.44	.11
I drink sodas, energy drinks... when thirsty during the day	LSD	low tuition fee	middle tuition fee	.421*	.167	.012	.09	.75
			high tuition fee	1.027*	.166	.000	.70	1.35
		middle tuition fee	low tuition fee	-.421*	.167	.012	-.75	-.09
			high tuition fee	.606*	.163	.000	.28	.93
		high tuition fee	low tuition fee	-1.027*	.166	.000	-1.35	-.70
			middle tuition fee	-.606*	.163	.000	-.93	-.28
When I eat out, I go to my preferred fast food restaurant	LSD	low tuition fee	middle tuition fee	.128	.162	.428	-.19	.45
			high tuition fee	.022	.161	.894	-.30	.34
		middle tuition fee	low tuition fee	-.128	.162	.428	-.45	.19
			high tuition fee	-.107	.159	.502	-.42	.21
		high tuition fee	low tuition fee	-.022	.161	.894	-.34	.30
			middle tuition fee	.107	.159	.502	-.21	.42
I eat more than 2 snacks per day	LSD	low tuition fee	middle tuition fee	.060	.172	.725	-.28	.40
			high tuition fee	.455*	.171	.008	.12	.79
		middle tuition fee	low tuition fee	-.060	.172	.725	-.40	.28
			high tuition fee	.395*	.168	.020	.06	.73
		high tuition fee	low tuition fee	-.455*	.171	.008	-.79	-.12

			middle tuition fee	-.395*	.168	.020	-.73	-.06
I like to eat sugared corn flakes for breakfast	LSD	low tuition fee	middle tuition fee	.045	.178	.802	-.30	.39
			high tuition fee	.066	.177	.710	-.28	.41
		middle tuition fee	low tuition fee	-.045	.178	.802	-.39	.30
			high tuition fee	.021	.174	.903	-.32	.36
		high tuition fee	low tuition fee	-.066	.177	.710	-.41	.28
			middle tuition fee	-.021	.174	.903	-.36	.32

*. The mean difference is significant at the 0.05 level.

Table 4.5. 23: Multiple Comparisons for H3

Dependent Variable		(I) Tuition fees	(J) Tuition fees	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Show the number of hours that you watch TV during weekdays	LSD	low tuition fee	middle tuition fee	.551*	.143	.000	.27	.83
			high tuition fee	.614*	.142	.000	.33	.89
		middle tuition fee	low tuition fee	-.551*	.143	.000	-.83	-.27
			high tuition fee	.063	.140	.653	-.21	.34
		high tuition fee	low tuition fee	-.614*	.142	.000	-.89	-.33
			middle tuition fee	-.063	.140	.653	-.34	.21
Show the number of hours that you watch TV during weekends	LSD	low tuition fee	middle tuition fee	-.388*	.157	.014	-.70	-.08
			high tuition fee	-.420*	.157	.008	-.73	-.11
		middle tuition fee	low tuition fee	.388*	.157	.014	.08	.70
			high tuition fee	-.033	.154	.831	-.34	.27
		high tuition fee	low tuition fee	.420*	.157	.008	.11	.73
			middle tuition fee	.033	.154	.831	-.27	.34

*. The mean difference is significant at the 0.05 level.

Appendix D: Hypotheses Figures

Figure 4.5.1: Histogram of the first hypothesis

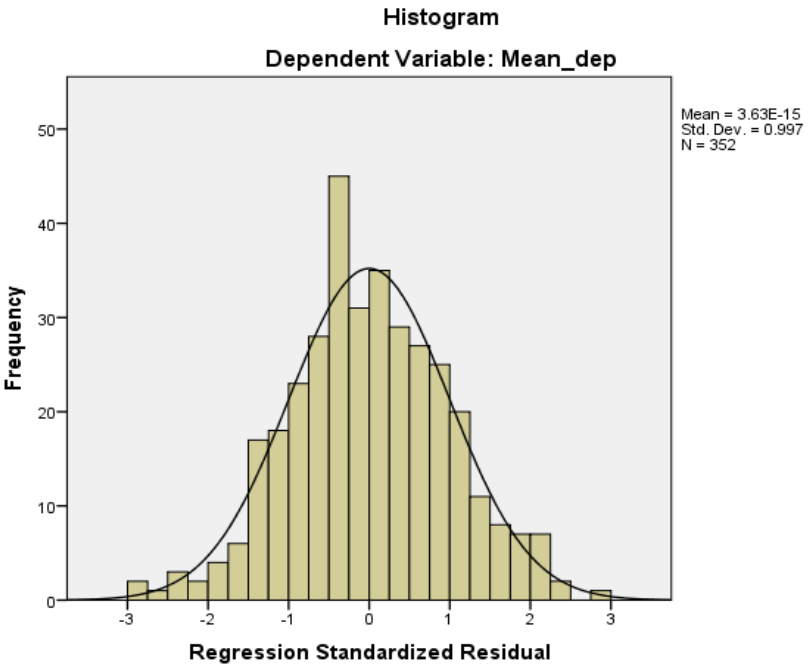
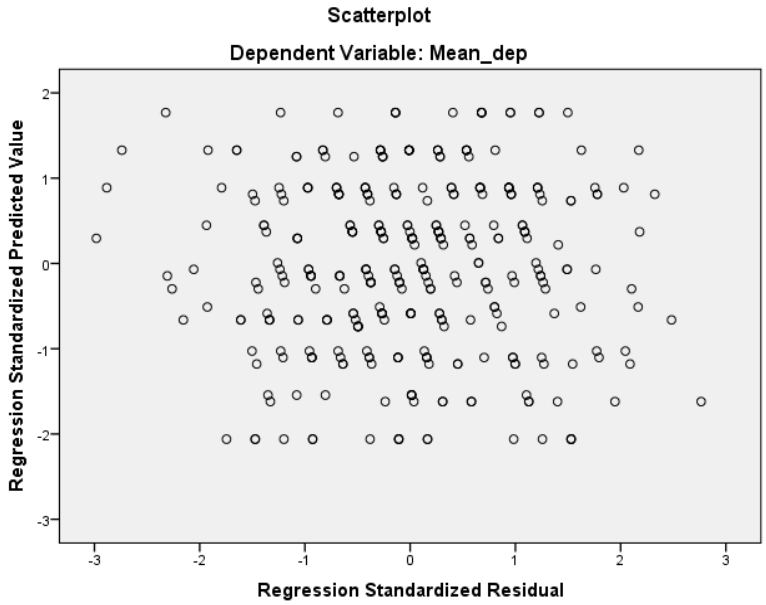


Figure 4.5.2: Scatterplot for the first hypothesis



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