ISCTE ◉ Business School
Instituto Universitário de Lisboa

THE EFFECTS OF CELEBRITY ENDORSEMENT
ON CONSUMERS PURCHASING INTENTIONS

António Filipe Esteves Miguel de Carvalho

Dissertation

Master in Marketing

Supervisor:

Prof. Doutora Hélia Pereira, Departamento de Marketing, Operações e Gestão Geral
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Co-supervisor:

Prof. Doutora Sofia Portela, Prof.ª Auxiliar, Departamento de Métodos Quantitativos
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Abstract

The present thesis is a research about a marketing strategy: celebrity endorsement. Despite the fact that celebrity endorsement brings up some risks, it has been used quite extensively in the present era and it is a method to reach competitive advantage by companies.

This dissertation focuses on examining the relationship between a set of variables: (1) gender, (2) credibility, (3) attractiveness, (4) type, (5) multiple endorsements and (6) multiple product endorsement that were identified during the literature review and consumers purchasing intentions. This relationship will spotlight Portuguese consumers and will use the Portuguese advertising industry as a contextualization, due to the fact that it was identified a lack of information about celebrity endorsement overall strategy in Portugal.

The study in hand begins with a literature review which provides an insight into the research done by previous authors followed by an overview of last year's Portuguese advertising campaigns. A quantitative approach has been adopted to investigate the relationship between the dependent and independent variables and 285 respondents have participated in the survey. Respondents answered two sets of questions after viewing an advertisement of a specific product featuring one or more endorsers.

Results revealed that all the independent variables had a positive relation with consumers purchasing intentions, however some of them were quite low. Other findings of derived from analyzing the collected data resulted in some very interesting facts, which have been summarized in the conclusion, and also managerial implication relating to it has been discussed.

Keywords: celebrity endorsement, purchase intentions.

JEL: M31 – Marketing

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Resumo

O presente estudo, aqui apresentado sob a forma de dissertação, analisa uma estratégia de comunicação que tem vindo a ser usada cada vez com mais frequência: o endosso de produtos/marcas por celebridades.

Apesar desta técnica acarretar consigo alguns riscos, é vista como um método para alcançar vantagem competitiva sobre os concorrentes.

Esta dissertação centra-se num conjunto de variáveis independentes, previamente identificadas na revisão de literatura: (1) sexo, (2) credibilidade, (3) atractividade, (4), tipo (5) endossos múltiplos e (6) endossos múltiplos do produto. Com base nas variáveis anteriores, é feita uma análise de correlação entre essas e as intenções de compra dos consumidores, representadas como a variável dependente. Esta análise é feita tendo por base os consumidores portugueses e usa a indústria publicitária portuguesa, pois foi identificada uma falta de informação sobre este tema aplicada à realidade do nosso país.

Na primeira parte do estudo é feita uma revisão da literatura, que proporciona um conhecimento aprofundado sobre a pesquisa feita por autores anteriores. De seguida é feita uma revisão às campanhas publicitárias portuguesas, na qual é feita uma síntese sobre o uso de celebridades na indústria.

De forma a investigar a relação entre as variáveis independentes e dependentes, foi adoptada uma abordagem quantitativa. No estudo participaram 285 pessoas, as quais depois de observarem diversos anúncios impressos, responderam a um conjunto de questões sobre os temas acima citados.

Os resultados revelaram que todas as variáveis independentes tinha uma relação positiva com as intenções de compra do consumidor, porém alguns dos valores obtidos demonstram a baixa correlação existente. Outras conclusões derivadas da análise dos dados recolhidos resultaram em alguns factos interessantes, que estão resumidos na conclusão final.

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Chapter 1: Introduction

1.1 Introduction to the topic

Welcome to the world of celebrity endorsement, a world where marketeers are seeking any way to gain an edge, solidify points of differentiation towards the competitors and maybe, when it works, build a brand and a business at the same time.

Due to the competitive environment in which companies are working on, doing an effective communication is definitely one of the key issues to catch the attention of the consumers and there are a variety of communication strategies, which allow the advertisers to reach their target. The use of celebrities as spokespersons is becoming an increasingly common strategy in the advertising industry. For example, in the United States, approximately 25% of all television ads feature one or more celebrities (Erdogan, Baker and Tagg, 2001) and almost 10% of all dollars spent on advertising go to celebrities in different advertisements (Agrawal and Kamakura, 1995). Millions of dollars are spent on celebrity endorsement contracts to make the communication process more effective and convincing (Tripp *et. al.,* 1994) and recent reports suggest as an example that each year David Beckham earns over US$ 40M and Tiger Woods (before public scandals) was earning over US$ 100M in endorsement incomes (Scott 2007).

According to Friedman and Friedman (1979) three types of endorsers are widely used in advertising today:

1. The celebrity

2. The professional expert

3. The typical consumer

The literature review will mainly focus on the first type of endorsement – the celebrity – however some references and comparisons are made with the other two types. Before moving on it is important to give a definition about celebrity endorsement and two major authors who reviewed the topic in hand set the next two definitions:

- The study from Friedman and Friedman (1979: 63) defined that "a celebrity endorser is an individual who is known to the public (actor, sports figure, entertainer, etc) for his or her achievements in areas other than that of the product class endorsed".

- McCracken (1989: 310) describes the celebrity as "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement". Celebrity endorser includes movie and television stars, models and individuals from sports, politics, business, art and the military worlds.

There is a daily access to hundreds of television stars, movies, sport athletes and other well known celebrities through the five major mass advertising media: television, radio, magazines, newspapers and internet (Azab, 2011). This, made celebrity advertising an appealing choice by advertising makers, who invest huge amounts of money in contracts with celebrity endorsers each year, since it was found that celebrities are able to increase: brand visibility (Friedman and Friedman, 1979; Tom, Clark, Elmer, Grech, Masetti and Sandhar, 1992, *et.al.,),* levels of attention (Friedman and Friedman, 1979; Atkin and Block, 1983, *et.al*.,), positive attitudes towards the product (Friedman and Friedman, 1979; Atkin and Block, 1983; Freiden, 1984; Kamins, 1989; Tripp, Jensen and Carlson, 1994, *et.al*.,) and greater purchase intentions (Friedman, Termini and Washington, 1976, *et.al*.,). Marketeers also use celebrity endorsement in order to help better storage of information in consumers mind, which they can easily remember in purchasing situations (Schultz and Brens, 1995).

Many people see the lifestyle of a celebrity as a key formula for success and for this reason, try to copy their behavior in order to increase their self-esteem, feeling more safety using the same product as the celebrity does. This behavior can be linked to the fact that the celebrity is a person with innumerable attributes, such as intelligence, beauty, charisma or sophistication, and the idea is that advertisers are trying to create a relation between their advertised brands and a pleasant image or lifestyle of a celebrity (Suegker, 2003). As a consequence, their presence can be considered to influence the buying behavior of the consumers.

Understanding the effectiveness of endorsers is a very important issue for both academics and practitioners. A number of studies have examined whether, and under what conditions, celebrities become suitable product endorsers and some of them generally support the effectiveness of celebrity endorsement. Nevertheless, recent studies are bringing new information about the profitability and applicability of celebrity endorsement. Zoubi and Bataineh (2003), Ranjbarian and Shekarchizade (2009) conducted a study and concluded that attitude toward celebrity endorser has directly or indirectly influence on attitude toward a brand but on the other hand, attitude toward celebrity endorser hadn't significant influence on purchasing intention. Thus, some companies have switched to non-celebrity endorsement

advertising campaigns, achieving positive results with lower investments, such as the Dove real beauty campaign. Contrary to its competitors, Dove stopped using top models for their advertisements and used non - celebrity endorsers (Dove.us, 2009).

In addition and according to the study of Ace Metrix "Exposing a Myth of Advertising Effectiveness" made in the United States in 2010, ads with celebrities were not more effective than those who did not use famous. The collected data showed that the majority of the ads using celebrities do have lack of information about the product and do not have relevance to the consumer. The results provided by this study were also supported by Zoubi and Bataineh (2003) who concluded that using celebrities has no greater effect than using non-celebrity on consumer buying decision. Consumers nowadays, are more likely to be influenced by its network of contacts than by distinguished famous. According to Peter Daboll, CEO of Ace Metrix, "is emerging a new kind of consumer that is not so easily influenced by a well known person within a TV ad. Today's consumer is very different than it was five years ago." Nowadays, the majority of business firms depend on advertising to publicize their products to the target markets. In reality, the central target of advertising strategies is the persuasion of consumers, who are becoming more and more selective, educated and sophisticated.

In summary, Erdogan (1999) defines celebrity endorsement as a two-edged sword and a lot of research has already been done on the impact of celebrities in advertising and many of those studies revealed different results.

1.2 Purpose of the study

As previously stated, the celebrity endorsement theme is quite well documented in academic literature, however many of those studies revealed opposing results, namely in what is referent to the influence of celebrity endorsement on consumer purchasing intentions. Thus, the main purpose of this study is to investigate the relationship of the endorser's gender, credibility, attractiveness, type (celebrity vs. non-celebrity) as well as multiple endorsements and multiple product endorsement on consumers purchasing intentions.

Additionally, in an era where a wide range of brands is increasing the use of celebrity endorsement, there is not much work done to the Portuguese market and to be more specific, there is no data related with the purchasing intentions of Portuguese consumers. In fact, the

performing behavior on the Portuguese advertising market is not homogeneous among all the players, existing some brands that use celebrities and others who simply use non-famous to promote their products.

This research focuses on various dimensions of celebrity endorsement, trying to clarify and to add new information on the topic.

1.3 Structure of the thesis

Seven chapters compose this research and a short synopsis of each is given below:

Chapter 1: This chapter provides a background to the topic, consisting of an explanation concerning the relevance of using celebrity endorsement in the advertising industry but also the recent concerns about it. The purpose of this study is also explained and the structure of the thesis is presented.

Chapter 2: The literature review is divided in two parts: the first one is related with the celebrity endorsement theme, addressing several dimensions such as gender relations, credibility and attractiveness models, type of celebrity or even multiple uses of celebrities and its effects. The second part of this chapter makes a review on consumers purchasing decisions, explaining the decision-making process and its steps.

Chapter 3: In the third chapter a review about the Portuguese advertising market is done. This review relies on the last two years (2010 and 2011) advertising campaigns and addresses several product categories.

Chapter 4: The methodology chapter includes the research questions and conceptual framework, but also presents a description of the data sources, data collection methods and techniques, as well as questionnaire design and measurement scales.

Chapter 5: In the analysis and results chapter, the main findings will be presented followed by an objective report in which the results will be discussed.

Chapter 6: Finally, it is presented the major conclusion of the study but also the existing limitations and recommendations for further research will also be posted.

Chapter 2: Literature Review

2.1 Celebrity endorsement according to:

2.1.1 Type of product

Friedman and Friedman (1978) and Atkin and Block (1983) consistently found that the type of endorser used in an advertising campaign, might interact with the type of product being endorsed. They also found out that the use of celebrity endorsers is appropriate when product purchasing involves high social and psychological risk.

Consistently, Packard (1957) suggested that celebrity endorsement is an effective strategy when companies are selling products considered to be status symbols, since celebrities are individuals of high status and when endorsing, such individuals invites consumers to unite them enjoying products.

However, Callcoat and Phillips (1996) reported that consumers are mostly influenced by spokespersons when products are inexpensive, low involving and few differences are perceived among the available players. Saleem (2007) also supports the idea that celebrities have a positive impact on consumer's perception, when they appear in low involvement advertising campaigns. Furthermore, as the number of celebrities appearing in those ads increases, consumers perception also becomes more positive due to the fact that these ads attract different target markets at the same time (Hsu and McDonald, 2002). However, this last idea will be deeply analyzed in a later topic.

The question that may frequently be asked is: are companies operating under the previous theory models? A study presented in table 1 conducted in India, which is the second greatest country using celebrities in ads, supports the theoretical research. Among all the industries that have employed this marketing tool, the two top categories are composed by shampoos and toilet soaps which, when compared with the last ranked, are considered to be low involving, inexpensive products and where the communication message does not need to be to complex, thus highlighting the endorser.

Table 1: Top 10 celebrity endorsements categories on TV during Jan-Dec 2010

Rank	Product Category
1	Shampoo
2	Toilet Soap
3	Cellular Phone Sevice
4	Soft Drink Aerated
5	Fairness Cream
6	Cellular Phones
7	Branded Jewellery
8	DTH Service Providers
9	Washing Powders/Liquids
10	Televisions

Source: AdEx India (A Division of TAM Media Research)

2.1.2 Audience involvement

Additionally, a theory used as a backbone in persuasion research - Elaboration Likelihood Model - created by Richard Petty and John Cacioppo (1981), attempts to explain how a persuasive message works to change the attitude of the receiver (Moore, 2001). According to the model, persuasion under high and low involvement conditions varies and there are two routes through which persuasive messages are processed: the central and the peripheral route.

The central route consists of thoughtful evaluations of the argument in the message (Benoit *et al*., 2001). Consumers carefully evaluate the message and based on their in-depth evaluations, either accept or reject the message. Consumers use the central route of persuasion when the topic is important to them, when they are not distracted while being exposed to the topic, when they understand the message, and/or when they are knowledgeable about the topic (Petty and Cacioppo, 1983). Otherwise, consumers use the peripheral route of persuasion, which is successful for messages with low receiver involvement, low receiver motivation, and weak messages (Petty and Cacioppo, 1983). Unlike the central route, messages sent via the peripheral route are not processed cognitively. Rather, the peripheral route states if a person is not motivated to evaluate the true merits of a product, does not understand the content in the message and does not have time to process the information, then she may be persuaded by factors that have nothing to do with the actual content of the message itself (Petty and Cacioppo, 1983). People will focus on practically everything besides the message and this is

where marketing and advertising comes in. Catchy tunes, bright colors, and celebrity endorsements are a set of ways of peripheral persuasion. (Moore, 2001)

That's why, when adopting an endorsement strategy, it is extremely important to analyze the underlying characteristics of the target audience (Tellis, 1998). It is important for companies to develop their campaigns depending on the motivation of the consumer when it comes to process the content of the advertising and the ability to do so.

Table 2: Use of endorsers by audience characteristics

		Motivation to process information	
		High	Low
Ability to process information	**High**	Reason	Lay Endorsers
	Low	Experts	Celebrity

Source: Tellis, 1998

The findings of Petty and Cacioppo (1983) indicate that the persuasive message itself has a greater impact under high involvement conditions, whereas the endorser has a greater impact under low involvement conditions. Therefore, the central route is a more cognitive dimension, while the peripheral route is a more affective dimension.

Another model, which advocates the same theory of low versus high involvement situations, is the Social Adaptation theory (Kahle and Timmer, 1983; Kahle and Homer, 1985). It implies that the level of importance of the information will determine its impact on consumers attitudes. Kahle and Homer argue with an example: if we take a print media advertisement as a stimulus and it is for a low involvement product: the viewer will glance at the ad for a second or two before moving to the next source of information. If this hypothesis is true, the information obtained in that lapse of time will be the only to have an impact and the name of the product or the visual impression of the celebrity may be the only information stored.

In high involvement ads, on the other hand, the consumer may spend a considerable quantity of time reading the copy and the content of the message, whether it is strong or weak, it will exert more influence than the visual impression (Kahle and Homer, 1985).

2.2 Celebrity endorser and consumer gender

Some previous studies that have explored the relationship between endorser's gender and consumer's gender resulted in two opposite ideas: endorser's gender does not significantly influence consumer attitudes toward products (Freiden, 1984) and endorser's gender significantly influences consumer attitudes toward products (Lafferty *et al*., 2002).

Freiden (1984) studied if there was any influence of endorser's gender on consumers attitude to television advertisements, using a durable and a neutral product. The result was that the gender of the endorser did not significantly influence consumer (226 adults and students) attitudes.

Carsky and Zuckerman (1991) also examined the relationship of three neutral products: Tylenol, which is a painkiller pill, Bailey's Irish Cream drink and Club Med vacations, and male and female endorsers. They found that there was no interaction between the gender of the endorser and the gender of the respondent regarding the likelihood of purchasing and attitude toward the ads.

On the other hand, Debevec and KerTian (1984) found that there was a relationship between the endorser and the consumer. Attractive female models generated superior attitudes than attractive male models across both genders but particularity among males. Klaus and Bailey (2008) also pointed out that consumers respond differently to female celebrity endorsers than to male celebrity endorsers and ads featuring female celebrities were evaluated more favorably than an ad featuring male celebrities. Female endorsers have also been shown to be more credible than male endorsers (Goldman, 1995; St. James and Swartz, 2004).

Caballero and Pride (1984) investigated whether the gender of the endorser used in a direct mail advertisement influences the receivers purchasing responses of the advertised product. They found that receivers purchasing intentions increased when a highly attractive female was included on a photograph instead of showing an unattractive male, female or even an attractive male.

On the other hand, Tom *et al.*, (1992), asked TV viewers to identify the brands of products, such as dishwashing products, beer and toilet tissue, associated with the spokesperson broadcasting television ads. The result was that female spokespersons were more effective for female audiences and male spokespersons for the males. One possible reason may be the fact that female spokespersons have more referent power next to female consumers while male spokespersons have more power next to male consumers. This cooperates with the idea defended by Boyd and Shank (2004) arguing that regardless of product type, consumers rate endorsers of the same gender as more trustworthy. Peetz *et al.*, (nd) also provided a study, which found that although female respondents did not demonstrated a preference for female endorsers or male endorsers, male respondents would be affected by male endorsers by 2.51 times more than by female endorsers in purchasing intention.

However, Baker and Churchill (1977) concluded that consumers rate an advertisement showing a model of the opposite sex as higher than they rate an advertisement showing a model of their own sex.

Jain and Patel (nd) have come up with a different output. They argue that gender of celebrity has influence on the type of product they are best suited for and that male celebrities were found to be more suitable for banking, financial services and clothing, while female celebrities were more requested for cosmetics, soaps and food products.

It is apparent that academic findings regarding gender or cross gender interactions between endorsers and target audiences are mixed and unable to provide any direction to practitioners.

2.3 Models on Celebrity Endorsement Strategy

Selecting the perfect celebrity to endorse a product or brand is not an easy task. Many researches have been done in order to help on the construction of a guideline model to select the endorser. Carl Hovland and his associates presented one of the earliest models in 1953, called the Source Credibility Model. Following this, three additional models were improved: the Source Attractiveness Model (McGuire 1985), the Product Match-Up Hypothesis (Forkan 1980, Kamins 1989) and the Meaning Transfer Model (McCracken 1989). To date, the models cited above, have been the basis and the backbone for explaining the effectiveness of celebrity endorsement, playing a pivotal role in developing our understanding about the topic.

2.3.1 Source Credibility Model

One of the most important reasons for using a celebrity as a spokesperson is to make the message more credible, an important benefit due to the fact that some advertising research suggests that about 70 percent of consumers think that advertising is often untruthful (Calfee and Ringold 1994).

Source credibility is defined as a "communicator's positive characteristics that subsequently influence the receiver's evaluation of the message" (Hovland and Weiss 1951; Ohanian 1991). An endorser, who has the key credibility source factors, is able to increase considerably the purchase intentions of the consumer (Liu *et al*., 2007) and can also influence their beliefs, opinions, attitudes and behaviors through a process called internalization. This occurs when receivers accept a source influence in terms of their personal attitudes and values structures (Erdogan 1999), that is to say, the receiver learns and accepts the idea of the credible spokesperson, since he supposes that the information provided represents an accurate position on the issue.

Using credible endorsers and their personal sources may be a way to bring higher levels of believability into an advertising message (Beltramini and Sirsi 1992), once it has been shown that they are able to increase and influence consumers purchase intentions (Gotlieb and Sarel 1991) and even more persuasive when the consumer has not yet learned much about a product or formed an attitude about it.

Source credibility model contends that the effectiveness of a message depends on two factors: the perceived expertise and trustworthiness of the endorser (Dholakia and Stemthai 1977; Hovland, *et al*. 1953; Hovland and Weiss 1951; Ohanian 1991; Solomon 1996).

Expertise refers to "the perceived level of knowledge, experience, or skills possessed by an endorser" (Hovland *et al*. 1953), being this way perceived to be a source of valid assertion (Roozen, 2008). Ohanian (1991) contends that the perceived expertise of a celebrity in the eyes of the consumers is more important in explaining purchase intentions and carries more persuasiveness rather than their attractiveness and trustworthiness.

Trustworthiness, according to Ohanian (1990) is "the degree of confidence consumers place in a communicator's intent to convey the assertions s/he considers most valid." Erdogan *et al*. (2001) also define trustworthiness as "the honesty, integrity, and believability of an endorser

as perceived by the target audience." Advertisers invest on the trustworthiness endorser characteristic, selecting persons who are widely regarded as honest, believable and dependable (Shimp 1997). In terms of the effect of trustworthiness on attitude change, Miller and Baseheart (1969) conducted an experiment and found that when the perceived communicator's trustworthiness was high, attitude change was more likely to occur. Friedman and Friedman (1976); Friedman, Santeramo and Traina (1978) found that trustworthiness had high correlation with the level of source's expertise, source's attractiveness and respondent's perceived similarity to the source. Desphande and Stayman (1994) have also confirmed this last point, arguing that endorser's ethnic status affect endorser trustworthiness and these interactions occur because people trust individuals who are similar to them. One managerial implication of their findings is that when targeting particular ethnic groups (e.g. Africans, Europeans, and Asians), ethnic background must be carefully evaluated.

In addition to trustworthiness and expertise, the attractiveness of the communication source can enhance the effect of the message conveyed (Canning and West, n.d). Attractiveness is understood to depend upon whether the source is: classy, beautiful, elegant, sexy and attractive, (Ohanian 1990). Thus, expertise, trustworthiness, and attractiveness are considered to be the components of source credibility. However, what is not as clear is which components are more important and how do they impact a consumers' attitude, opinion change, and purchase intention? Ohanian (1990) developed a tri-component measure of credibility to assess a celebrity endorser's perceived expertise, trustworthiness, and attractiveness. According to Pornpitakpan (2004), trustworthiness and expertise might have differential importance in affecting attitude formation and change and the three sources of credibility may independently contribute to source effectiveness.

Although being an important characteristic, source credibility is not the only factor that should be considered when selecting the celebrity endorser (Erdogan, 1999). Credibility alone cannot explain all the effects provided by the endorser, and the richness of their iconic qualities has not been adequately captured in this approach (McCracken, 1989). Having said this, it is reasonable to raise the question if being a celebrity increases credibility and for that question, the answer is no. The fact is that credibility, amongst other variables, increases willingness to buy, but the celebrity factor by itself does not. On the other hand, it does not mean that a celebrity cannot bring credibility to the product and if the celebrity is seen as

trustworthy, similar, and credible, then that effect may be transferred to the willingness to buy (Zahaf and Anderson, 2008).

Figure 1: Source Credibility Model
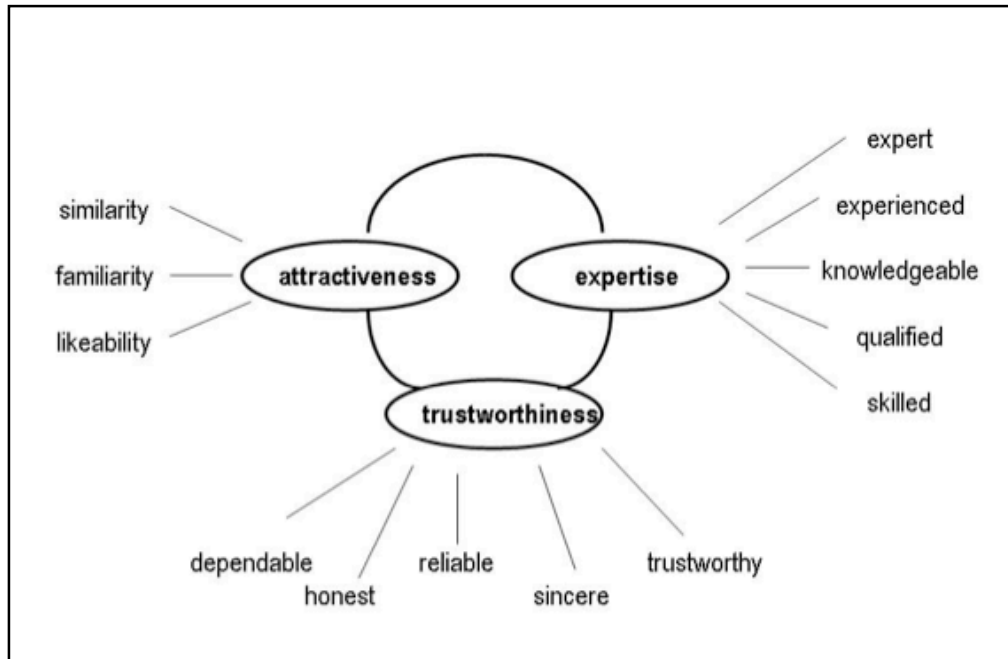
Source: Adapted from Ohanian (1990)

2.3.2 Source Attractiveness Model

It is for no coincidence that most advertisements use attractive people (Erdogan 1999), once consumers tend to form positive stereotypes about such people. In addition, research has proven that physically attractive communicators are more successful at changing beliefs (Baker and Churchill 1977; Chaiken 1979; Debevec and Keman 1984) and generating purchase intentions (Friedman *et al*. 1976; Petroshius and Crocker 1989; Petty and Cacioppo 1980) than their unattractive counterparts.

Source attractiveness and its effectiveness are more related to physical attributes, such as similarity, familiarity and likeability, which are important factors in an initial judgment of another person (Ohanian, 1990; McGuire 1985). Belch and Belch (2001) define similarity as

"a supposed resemblance between the source and the receiver of the message", mentioning that consumers are more easily influenced by a message coming from someone with whom they feel a sense of similarity. Familiarity is considered to be "the level of knowledge a celebrity possesses of a brand" (Belch and Belch, 2001) and likeability as "affection for the source as a result of the source's physical appearance and behaviors" (Erdogan 1999). In sum, if consumers perceive a celebrity endorser being similar to them, familiar and they even also like that celebrity, consumers will tend to find the celebrity more attractive (Amos, Holmes and Strutton, 2008).

According to Cohen and Golden (1972) a communicator's physical attractiveness affects the effectiveness of persuasive communication through a process called identification, which occurs when a message coming from an attractive source is accepted as a result of desire to identify with such endorsers. This process is also related to the influence that celebrities exert over today's consumers, which can be explained by their role as referents. Celebrities have been elevated to that status because they possess distinctive qualities and their popularity and recognition motivates the public's acceptance or desire to pursue these celebrities' personalities, lifestyles, appearances, and behaviors. In this way, celebrities are deemed to be referents by consumers, which refer to actual or imaginary individuals conceived of having significant relevance upon an individual's evaluations, aspirations, or behavior (Choi and Rifon, 2007).

However, attractiveness is not merely based on physical attributes - although that can be a very important feature - but includes other virtuous characteristics that receivers may perceive in endorser intellectual skills, personality properties or lifestyle characteristics (Erdogan 1999).

Kahle and Homer (1985) on their research manipulated two factors: celebrity physical attractiveness and likeability and then measured attitude and purchase intentions on a single product - Edge razors. Findings showed that participants exposed to an attractive celebrity liked the product more than participants exposed to an unattractive celebrity. In terms of recall for the brand, it was greater both in attractive and likeable celebrity conditions. Findings also indicated that an attractive celebrity created more purchase intentions than an unattractive celebrity, but controversially an unlikeable celebrity produced more intentions to buy the product than a likeable celebrity.

Baker and Churchill (1977), however, found that while attractiveness was effective in increasing positive advertisement evaluations, it was not effective in producing stronger purchase intentions. Caballero, *et al*. (1989) and Till and Busler (1998) studies keep the idea presented by Baker and Churchill, that positive feelings towards advertising and products is not necessarily transferred into a behavior or purchase intention. A possible reason for the lack of celebrity endorsers' effect on intentions to purchase is that celebrity endorsement seems to work on the cognitive and affective components of attitudes rather than in the behavioral components (Baker and Churchill, 1977; Fireworker and Friedman, 1977).

Summarizing the effect of source attractiveness, one can say that it is used to create effective messages, where the attribute attractiveness refers to the endorser's physical appearance, personality, likeability and similarity (Ohanian, 1990). It is demonstrated that attractive celebrity endorsers enhance attitudes towards advertising and brands, but what is not proved yet is whether they are or not able to create purchase intentions. Within the broader context of celebrity endorsement, endorser attractiveness is certainly a relevant construct. However, the nature and scope of the attractiveness construct remains uncertain, and therefore appears worthy of additional attention.

2.3.3 The Match-up Hypothesis

Previous research already found that the effectiveness of endorsement might vary from one product to other (Friedman, 1979; Atkin and Block 1983), existing some endorsers who fit better with a specific product than do others. This idea of a fit between an endorser and the product became formalized as the match-up hypothesis (Forkan 1980, Kamins 1989).

The match-up hypothesis suggests that messages conveyed by celebrity image and the product message should match for effective communication (Erdogan 1999). In other words, a message to be effective depends on the existence of a link and a fit between the endorsing celebrity and the endorsed brand (Till and Busler 1998). Furthermore, advertisers must match three elements: the product/brand image, the personality of the celebrity and also the target audience, so it can be established that effective message. Friedman and Friedman (1979) concluded that the better the fit between the celebrity and the endorsed brand, as perceived by consumers, the higher is the level of endorsement effectiveness.

Attractiveness has been used as the main factor to explain the match-up theory (Kahle and Homer, 1985; Kamins, 1990). When a celebrity's physical attractiveness is congruent with the advertised product, the match-up hypothesis would be partially confirmed and should translate a positive impact upon the product and advertisement evaluations (Kahle and Homer, 1985). This is the reason why attractive celebrities endorse many personal care products (Garcia, 2009).

However, the match-up factors are not congruent over all the researches. Till and Busler (1998, 2000) have examined attractiveness versus expertise as a relevant match-up factor and found a general attractiveness effect on brand attitude and purchasing intentions but no match-up effect was found based on attractiveness, suggesting that expertise is more appropriate for matching products with celebrity endorsers.

If there is no congruency between the brand and the celebrity, then the audience remembers the celebrity and not the product (Byrne *et al.,* 2003), occurring the so called "vampire effect", where the celebrity sucks the life-blood of the product, drying it (Evans, 1988). In addition, if the audience perceives that absence of connection, consumers may believe that the celebrity has been handsomely paid to endorse the product or service (Erdogan, 1999) and the meaning of the message that is transferred to the consumer may not be effective (Huston, Ouville and Willis 2002). Till and Busler, (1998) explained that even though Michael Jordan is an attractive endorser, his effectiveness as a celebrity endorser is higher when endorsing products related to his athletic field such as Gatorade or Nike, rather than products that are unrelated to his athletic performance such as WorldCom Communications. Other example is the golf player Tiger Woods, although being recognized as an attractive source, even if he endorsed basketball shoes, his attractiveness would not be expected to enhance the value of the shoes and generate purchasing intentions (Sawatari, 2005).

Although the Match-up Hypothesis recovers some of the pitfalls of source effectiveness model, where it was argued that any celebrity who is attractive, credible and/or likeable could sell any product, it still disregards impacts of a celebrity endorser's cultural meanings in endorsements (Erdogan, 1999).

2.3.4 Meaning Transfer Model

McCracken (1989) suggests that a matchup of attractiveness or expertise alone is not enough to achieve successful endorsements. Erdogan (1999) also argues that either the source credibility or attractiveness, not even the match-up theory is adequate in providing appraisal technique for selecting the appropriate endorser. Furthermore, the author takes the view that "for the source model's purpose, as long as the credibility and attractiveness conditions are satisfied, any celebrity should serve as a persuasive source for any advertising message." Moreover, McCracken (1989) indicates that the models make assertions only about the credibility and attractiveness of the message sender and do not study the endorser's role as a message medium.

Thus, a new model is purposed - meaning transfer model – and it addresses the endorsement process from a cultural perspective, proposing that celebrity endorsers are special cases of meaning transfer: The effectiveness of the endorser depends, in part, upon the meanings that he or she brings to the endorsement process (McCracken, 1989). He explains that numerous cultural meanings exist in the world and that celebrities due to the roles they assume in their careers are constantly developing their own images, which are accumulations of meanings, making them unique and allowing them to transfer those images to the products they endorse. Consumers might view some of the meanings the celebrities represent to be relevant to their ideal self-image, emulate their styles/behaviors, purchasing those brands endorsed by the celebrities, hoping that they become similar to them. As Atkin and Block (1983) have shown, consumers have a preconceived image of a celebrity, and this image can be transferred to the brand. From this point of view, celebrity's images play a pivotal role in the endorsement process.

Figure 2 explains McCraken's model, showing that there is a conventional path for the movement of cultural meaning in consumer societies. This process involves three stages:

1. The formation of celebrity's image

2. Transfer of meaning from celebrity to product

3. Transfer of meaning from product to consumers

In stage 1, practitioners have access to a special category of individuals – celebrities - charged with detailed and powerful meanings drowned from their public persona. As stated before,

celebrities have particular configurations of meanings that are drawn from the roles they assume in their careers.

Figure 2 - Meaning Transfer Model of McCracken
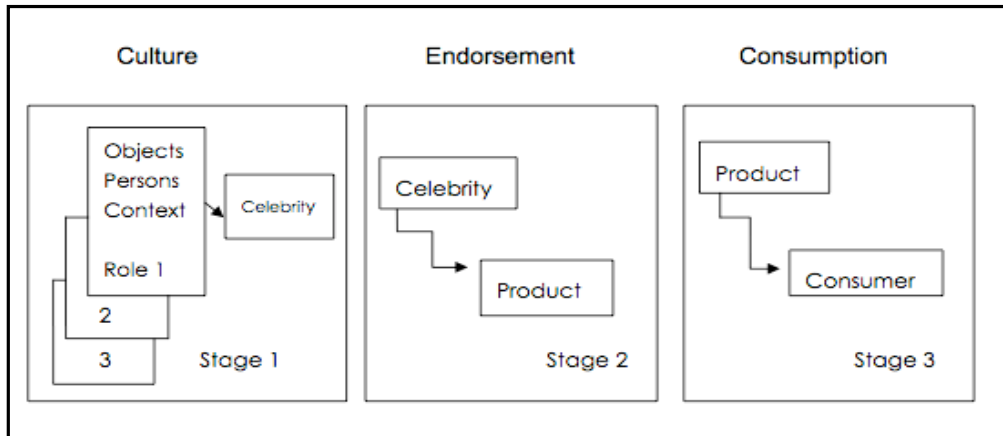
Source: McCracken 1989

In stage 2, the first step is to identify the symbolic properties sought for the product and then choose a celebrity who matches the proper symbolic properties and suggest essential similarity between the celebrity and the product. Once a celebrity is chosen, an advertising campaign must identify and deliver these meanings to the product. It is the moment where the product gains a personality during the transfer of celebrity's meanings.

In stage 3, the meanings are transferred from the product to the consumer where the properties of the product become the properties of the consumer, thereby rendering the process of transfer of the meaning from the celebrity to the consumer complete (McCraken, 1989).

This model suggests that companies must deeply investigate the real meanings that are desirable for their product and later on search for the right celebrity, so they can not only guarantee the fit between product and celebrity, but also assure the effectiveness of the advertisement (Garcia, 2009).

LangMeyer and Walker (1991) tested this model and their results showed that the symbolic meanings possessed by celebrities such as Cher and Madonna were transferred to the

endorsed products, Scandinavian Health Spa and bath towels, respectively (Erdogan, Baker, and Tagg 2001).

An overview is presented in a table to sum up all the models and theories as well as their characteristics:

Table 3: Celebrity Endorsement theories and models sum-up

Model / Theory	Characteristics	Source
Source Credibility Model	The effectiveness of the endorser's message depends on his perceived level of expertise and trustworthiness. Both attributes lead to the internalization process.	Hovland, Irving Kelly and Harold (1953)
Source Attractiveness Model	The effectiveness of the endorser's message depends on his/her similarity, familiarity and liking. The identification process determines attractiveness.	McGuire (1985)
Match-up Hypothesis	The effectiveness of the strategy is determined by the harmony of the match between the celebrity endorser and the product being endorsed.	Forkan (1980) Kamins (1989)
The Meaning Transfer Model	The effectiveness of celebrity endorsement strategy relies on the meaning that the celebrity conveys through the endorsement process.	McCracken (1989)

These models all united with all understandings and evidences can form a strong basis for the creation of the celebrity endorsement concept.

2.4 Celebrity *versus* Non-celebrity Endorsement

Companies can build and develop characters, which are congruent with their brand values, target audiences and so, have a great controlling power over them, ensuring that these characters are endorsing only one particular product. However, not being always possible to develop these created spokespersons, companies use well-known celebrities, which personality control is limited due to the fact that they have created their public persona over the years (Tom, *et al*. 1992).

A consumer that observes messages from two different brands, one containing a celebrity endorsing a product and the other not, believes the celebrity-endorsed product will have more purchases (Clark and Horstman, 2003). In side-by-side comparisons, celebrity endorsers were found to be more trustworthy, competent and slightly more attractive than non-celebrity endorsers (Atkin and Block 1983). The study of Perception of Advertising and Celebrity Endorsement (Rashid, and Nallamuthu 2002) shows that using a well-known celebrity as an endorser could help to improve the subjects rating of the commercial. McCraken (1989) argued that the difference between celebrities and anonymous person is that celebrities have the capability to deliver meanings of extra depth, power, subtlety and also offers a range of lifestyle and personality that cannot be matched by anonymous people.

In addition, Silvera and Austad (2004) stated that using celebrities to endorse a product enhances positive advertising ratings and product evaluations. According to the authors, a possible explanation for the success of celebrity-endorsed advertisements could be attributed to consumers, who believe that celebrities accept to endorse products as a result of their true emotions towards the product and not because of the payment that they receive. Therefore, it is advisable for companies to consider using a well-known celebrity as an endorser rather than nameless spokesperson so they can have a competitive advantage in differentiating a firm's products from competitors.

However, the advertising practitioner should also have in mind that the use of a well-known celebrity, who can create initial interest and attention for an advertisement, does not necessarily result in attitude change towards the product. As previously mentioned, the study from Till and Busler (1998) presents evidence that positive feelings towards advertising and products do not necessarily translate into actual behavior or purchasing intentions. A possible reason mentioned from the study (Baker and Churchill 1977) is that celebrity endorsement

seems to work on the cognitive and affective components of attitudes rather than the behavioral components.

Contradicting all the previous findings, Horowitz (1993) discovered that celebrity endorsements were becoming less important in influencing purchasing decisions. Mehta (1994) found no significant differences between celebrity and non-celebrity endorsers on persuasion variables such as brand attitudes, advertisement attitudes and intentions to buy. Raphel (1997) offered further support in finding that testimonials given by customers were more effective than celebrity endorsements. Additionally, Zoubi and Bataineh (2011), concluded that using celebrities has no greater effect than non-celebrity on consumer buying decision and

In addition, Roozen (2008: 16) suggests "the use of attractive non-celebrity endorsers could be as effective in influencing attitudes and purchase intentions as the use of celebrity endorsers across very different products." A recent campaign from Unilever's Dove, which features real women rather than models, captured widespread attention (Steinberg, 2005).

Although not being consensual, in the light of company reports and academic writing it is safe to argue that celebrity endorsers are more effective than non-celebrity endorsers in generating desirable income (Erdogan 1999).

2.5 Single versus Multiple Product and Multiple Celebrity Endorsements

Celebrity endorsement can be classified according to the number of products endorsed (single product vs. multiple products) or number of celebrities doing the endorsement (single celebrity vs. multiple celebrities). Single product endorsement happens when a celebrity does an endorsement only for one product or one brand. Since over time celebrities are likely to endorse more than one product, single product/celebrity endorsement is rare (Nam-Hyun Um 2008).

In advertising practices it is common to observe that certain brands uses the same celebrity for a long period of time while sometimes marketers prefer to use multiple celebrities in an advertising campaign (Hsu and McDonald, 2002). This last technique is called multiple celebrity endorsement and refers to the use of two or more celebrities in an advertising campaign (Hsu and McDonald, 2002). There are two sub-types of multiple celebrity

endorsement based on how a celebrity or celebrities are featured in ads: The first one refers to an endorsement in which two or more celebrities come together and endorse a product or brand in the same ad (e.g. Jorge Gabriel, Bárbara Guimarães and Ricardo Pereira in Millenium Bcp campaign). The second type of multiple celebrity endorsement refers to an endorsement in which different celebrities endorse the same product or brand in a series of ad campaigns overtime (Nam-Hyun Um, 2008) (e.g. Jay-Z, 50 Cent, Daddy Yankee among others in Reebok campaign). Furthermore, several famous people featuring in an advertisement complement one another in the process of meaning transfer to a product or brand (Sliburyte.L, 2009). In their study, Hsu and McDonald (2002) suggest that despite the fact that the celebrities involved in the advertisement have certain features in common, they posses different characteristics, thus the symbolic meanings they transfer to the product become complementary. The product or brand promoted is expected to acquire a wider spectrum of transferred meanings. Conversely, when celebrity endorsers are perceived to possess manifest similarities, that is to say, when they duplicate rather than complement one another, their meaning transfers to the product or brand are likely to be stronger.

In February 2005, Reebok launched its largest global integrated marketing and advertising campaign called "I Am What I Am" and as stated before, it was a multifaceted campaign. It encouraged young people to embrace their own individuality by celebrating their contemporary heroes such as the singers Jay-Z, Daddy Yankee and 50 Cent, top athletes Allen Iverson, Donovan McNabb, Curt Schilling, Kelly Holmes and Iker Casillas, screen stars Lucy Liu, John Leguizamo and Christina Ricci, among others. When using more than one celebrity in a campaign, the consumer has a positive impact on attitude toward the advertisement, attitude toward brand and purchase intentions (Saleem, 2007). Hence the use of multiple celebrities for a product can have some benefits for a company, such as attract and cover all the different target audiences (Hsu and McDonald, 2002) and help the advertisers to reduce the boredom of the ad.

On the other hand, some managers believe that a celebrity is the representative for a brand in communicating messages to target audiences rather more effectively than any other voice. Celebrities have very strong personalities and they can quickly change perceptions of a brand. If a campaign has two or three celebrities then whose personality is the brand trying to take (Erdogan and Baker, 2000). One should however be careful in this strategy to take care of the core brand values because there is a great chance of confusing consumers about the brand

identity. In order to avoid this sort of mix-up, managers who have genuine reasons to use more than one celebrity for a particular campaign should make sure that each and every celebrity possesses compatible meaning that are sought for brands (Erdogan and Baker, 2000). Fireworker and Friedman (1977) argued that consumers' attitude and perception were enhanced when a celebrity endorses a product. Do consumers have less favorable attitudes toward ads if more celebrities are involved? Schiffman *et al*. (1997) speculated that when one celebrity endorses one product, consumers were likely to perceive the product in a highly favorable light and indicate a greater intention to purchase it. In the same way, if more celebrities endorse one product (multiple celebrity endorsements), will it have any effect on consumers' purchase intentions?

The golf player Tiger Woods is considered to be one of the greatest athletes of all time but he is also a product-endorsement gold mine. He has endorsed brands such as Nike, Gatorade sports drinks, Gillete razors, American Express cards and Tag Heuer watches. This is called multiple product endorsement, where the same celebrity endorses different types of brands and products. Past research on multiple product endorsements (Mowen and Brwon 1981; Mowen, Brown and Schulman 1979) suggest that it does negatively affect consumers' assessment of the endorser's trustworthiness, brand image and ad evaluations. The main reason may be found in the lack of distinctiveness, with one famous person enduring several products instead of concentrating on and representing one specific brand (Tripp, 1994). In addition, multiple product endorsements weaken the effects of celebrity to the product (Tripp and Jensen 1994) and the number of products a celebrity endorses, apart from the number of exposures to the celebrity endorser, negatively influences consumer perceptions of the endorser and advertising itself. McCracken (1989) states that the celebrity endorser carries on meanings from an advertisement to other, and endorsing multiple product affect those assigned meanings such that the consumer perceive the celebrity to be less credible and less likable. With respect to the meaning transfer, the matchup congruence and the credibility model, it is very essential that the celebrity believes in his product and has affinity with it. When a celebrity endorses for multiple products, the endorsement effect loses its strength because the attitude of the consumer will decrease (McCracken, 1989).

In the Portuguese advertising scenario, we have some examples of multiple product endorsements, such as the TV presenter Sónia Araujo who has already endorsed Garnier,

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Nobre and Pro Alimentar brands or even the actress Diana Chaves who performed in Chupa Chups, Orbit and Multiópticas brands.

2.6 Celebrity Endorsement Risk Theories

Despite the many benefits of using celebrity endorsement, there are also some high possible risks and the most relevant will be now explained.

2.6.1 Negative Information

One risk associated with the use of celebrity endorsers is the possibility of negative information regarding the celebrity. Since repeated pairings of a brand and celebrity reinforce the link that consumers establish between brand and celebrity, negative information about the celebrity may negatively impact the endorsed brand (Erdogan and Baker 2000; White, Goddard and Wilbur, 2009). However, Till and Shimp (1998) argue that a strong associative link between celebrity and product must be verified before that kind of information about the celebrity lowers brand evaluations. In addition, Amos, Holmes and Strutton (2008) conducted a study and found that negative information about the celebrity exercised the largest impact on celebrity endorsement effectiveness in advertising. This result underlined the high risk associated with using celebrity endorsers as well as the huge impact negative information about that celebrity can have on consumer perceptions. The necessity, whenever possible, to pre-empt the arrival of negative information about celebrity endorsers is crucial.

Many companies have been badly affected by negative publicity from celebrity misdeeds, such as having celebrity endorsers involved in drug scandals, rape and murder. The harm brought to the reputations of these companies may decrease the trustworthiness and credibility of the consumer about those brands (Johansson and Sparredal 2002). A known example is the scandal involving NBA star Kobe Bryant, that clearly demonstrates how this can become a major problem for advertisers. In 2003, it became public that the sports player was charged of sexually assaulting a 19-year-old woman, causing a huge dilemma for marketers. Several major companies, including McDonald's, Nike, Sprite, and Spalding, had millions of dollars invested in endorsement contracts with Bryant and were faced with the decision to either continue or discontinue the endorsements. While breaking them would have

been extremely costly for these companies, continuing them could have caused some damages to their image (Duncan, 2004). Some companies kept him under contract but chose not to run his advertisement for a period of time, while other firms passively dropped him by letting his contract expire in a normal fashion.

2.6.2 Overshadowing

When a celebrity endorser is used, the risk of consumers focusing on the celebrity and fail to note the brand being promoted exists (Sandin and Widmark, 2005; Erdogan, Baker and Tagg 2001). Surana (2008) also conducted a research and claims that "the ad then becomes more about the celebrity and his/her looks and appearance rather than in the product it's being promoted."

Till (1998) stated that overshadowing occurs when the celebrity endorser acts in the presence of multiple other stimuli which all compete to form a link with the celebrity endorser. While the advertiser intends to develop an associative link between the celebrity and the endorsed brand, overshadowing suggests that the celebrity endorser is most likely to build a link with the most dominating stimulus, which might not be the featured brand in the advertisement execution. Khatri (2006) published a research study, which reveals that 80% of the respondents approached for research remembered the celebrity but could not recall the brand being endorsed.

To solve this, advertisers should use a celebrity endorser who will attract attention and enhance the sales message, yet not overshadow the brand (Belch and Belch, 2001). According to Till (1998) a way to decrease the chances of overshadowing effects is making the celebrity and the product the two strongest elements in the ad.

2.6.3 Overexposure

This problem occurs when a celebrity endorses too many companies, simultaneously or not, becoming overexposed (Belch and Belch, 2001) and this negatively influences consumer's perception of endorser credibility, likeability and also the attitude towards the ad. Overexposure is a common occurrence between highly recognized endorsers and highly

competing brands, making the consumer confused and unable to recall correctly which brand the celebrity stands for. (Tripp *et al.*, 1994). Thus, the consumer starts to question if the celebrity really likes the brand or if it is only doing it because of the money (Tripp *et al.*, 1994; Johansson and Sparredal 2002).

A review by King (1989) found that especially among young audiences, the perceived credibility of celebrity endorsers has fallen drastically, with 64% believing that celebrities appeared in the ads only for money.

2.6.4 Financial risk

According to Walker *et al.* (1992), it is a big financial risk for companies to invest in celebrity endorsement. Till (1998) and Shimp (1997) argue that this makes it a huge financial risk since it is a two-sides coin. On one side companies must admit that do not have control over the actions of the celebrity (it can just as easily mean a disaster for the company) but on the other side a good celebrity choice can pay off handsomely.

The cost of hiring celebrities as endorsers may cost in some cases several millions of Euros/Dollars to endorse a single product. More recent reports suggest, for instance, that each year David Beckham earns over $40 million and Tiger Woods (before public scandals) was earning over $110 million in endorsement incomes (Scott 2007). At some point in the decision to use celebrity endorsers, advertisers have to consider the cost effectiveness of their choice. Rather than pursuing a popular endorser, advertisers can do well by looking for a less known, less expensive endorser who nicely matches the message of the brand and appeals to the target segment (Johansson and Sparredal, 2002).

2.7 Purchasing Intentions

Purchasing intentions refers to the predisposition to buy a certain brand or product (Belch *et al.*, 2004). Purchasing intentions also indicates how likely it is that the individual would buy a product (Phelps and Hoy, 1996). Many previous studies have used it as a dependent variable (Goldsmith *et al.*, 2000; Yi, 1990; Saliagas, and William, 1987; Machleit and Wilson, 1988).

According to Kotler (2000), consumer behavior occurs when consumers are stimulated by external factors and come to a purchasing decision based on their personal characteristics and also on decision-making process. These factors included choosing a product, brand, a retailer, timing, and quantity. Consumers purchasing intentions always arise after consumer perceived value and perceived benefit, that is to say, comes from consumers perception on benefits and values acquisition, and it is an important key to predict consumers purchasing behavior. Monroe and Krishnan (1985) submitted that perceived value and perceived quality will influence purchasing intentions, and the more perceived value and perceived quality, the higher purchasing intention is.

A consumer's attitude and assessment of external factors builds up the consumer purchasing intention, and it is a critical factor to predict consumer behavior (Fishbein and Ajzen, 1975). Purchasing intentions can measure the possibility of a consumer to buy a product, and the higher it is, the higher a consumer's willingness to buy a product is (Dodds, *et al*., 1991; Schiffman and Kanuk, 2000). Purchasing intentions indicates that consumers will follow their experience, preference and external environment to collect information, evaluate alternatives, and make decisions (Zeithaml, 1988; Dodds *et al*., 1991; Schiffman and Kanuk, 2000; Yang, 2009).

People comparatively purchase those products which are familiar with and also those products with good brand image, because a good brand image can make you feel at ease and reliable. Laroche *et al*. (1996) concluded that the higher consumers' familiarity degree with the product is, the better is the confidence and attitude to the products and thus the purchasing intention will be higher. Wang (2006) used brand image as independent variable, product category as moderator, and purchase intention as dependent variable and found that the higher the brand image is, the higher the purchase intention is. Fournier (1998) discovered that if a brand provides product functions that meet consumers' need, consumers will produce psychological associations and an irreplaceable relation with the brand, which they will subjectively, maintain interaction with the brand and raise their purchase intention accordingly.

2.8 Consumer decision-making process

Engel, Blackwell and Miniard (1995) suggest that the most recognized consumer purchase decision-making model can be divided into five stages: (1) problem recognition, (2) information search, (3) alternative evaluation, (4) purchase decision, and (5) post-purchase behavior.

Figure 3 - Steps in the consumer decision-making process
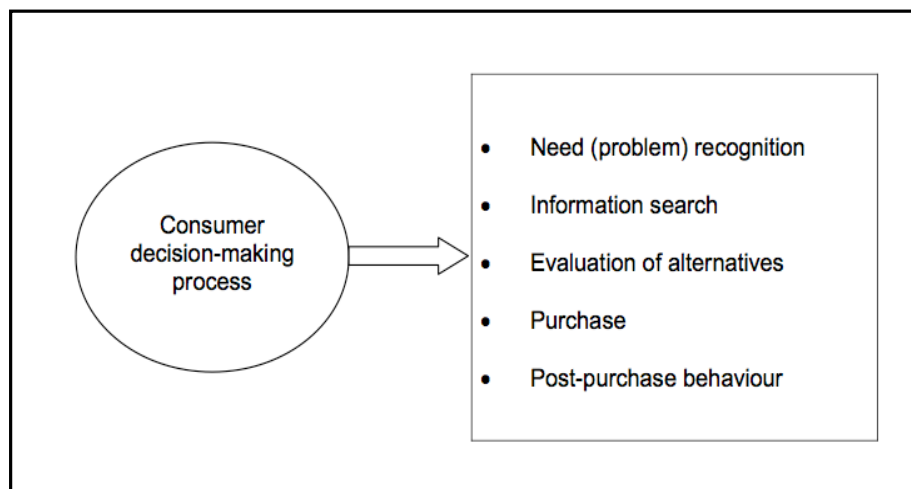
Source: Adapted from Lamb *et al.,* 2004

The five steps shown in the previous figure represent a general process that moves the consumer from recognition of a product/service need to the evaluation of a purchase. However, it does not assume that all consumers' decisions will proceed in order through all of the steps (Lamb *et al.,* 2004). Each of these steps is now discussed in more detail.

a. Need (Problem) Recognition

The buying process starts when the consumer recognizes a problem or a need. The need can be triggered by internal or external stimuli. Marketers need to identify the circumstances that trigger a particular need. By gathering information from a number of consumers, marketers can identify the most frequent stimuli that spark an interest in a product category and then can develop marketing strategies that trigger consumer interest.

b. Information Search

After the need is identified, the consumer goes through a process to search for solutions that will fulfill that need. This search may be done internally, scanning one's memory to recall previous experiences with products or externally, when past experience is insufficient and also when the risk of making a wrong purchase decision is high. The main external sources are personal sources such as friends and family and then public sources, such as specialists.

c. Evaluation of Alternatives

Once consumers have all the necessary information about the possible alternatives, they have to evaluate them in order to make a purchase (Boyd and Walker 1990; Kotler 2000; Lamb *et al.,* 2004 and Murray and O'Driscoll 1996). Information will lead to an evoked set (familiar brands) of alternative products from which a choice will then have to be made (Li, 2004). Boyd and Walker (1990) point out that consumers have three ways to evaluate potential alternatives, namely by:

1. Focusing on a list of familiar brands (evoked set) rather than all possible brands;

2. Evaluating each brand in the evoked set on a narrow number of product dimensions or attributes; and

3. Combining evaluation of each brand across attributes and comparing those attributes.

Lamb *et al.,* (2004) suggest consumers may select a product attribute to exclude all products that do not have the desired specific attribute in order to narrow down the number of brands in the evoked set. An important determinant of the extent of evaluation is whether the customer feels involved with the product. Involvement means the degree of perceived relevance and personal importance that accompanies the choice. When a purchase is highly involving, the customer is likely to carry out extensive evaluation.

d. Purchase

Kotler (2000) and Du Plessis *et al.,* (1994) point out that consumer would select the most significant information, whether it is internal, external, weigh the benefits of each item and

make a decision to either purchase the particular product or not buy the specific product, postpone the purchase or even not purchase at all.

Many factors influence the purchase decision. These include the cost of the product compared to how much money the consumer can afford to spend, the opinions of family or friends, and the sales and services policies of the marketer. Some customers may wish to try a product before making a major purchase.

e. Post-Purchase Behavior

In this final stage and after customers make buying decisions, they often continue to evaluate the purchase, comparing it with his initial expectations and there are three possible outcomes of these evaluations (Li, 2004):

1. Perceived performance meeting expectations, leading to a neutral feeling;

2. Perceived performance exceeding expectations, causing what is known as positive disconfirmation of expectations and satisfaction (this experience may lead to consumer repeat purchase); and

3. Perceived performance being lower than expectations, causing negative disconfirmation of expectations and disappointment.

Consumers tend to judge their feelings against their expectations when performing a post-purchase evaluation (Kotler 2000; Sheth and Mittal 2004). A satisfactory experience may lead to a repeat purchase while a disappointment may cause a purchase postponement.

Chapter 3: Contextualization

3.1 Celebrity endorsement in Portuguese advertising industry

Although we see many international campaigns performing foreign celebrities, national celebrities, the ones who speak the same language and are recognized by the Portuguese audience, are the ones who more easily capture the attention of the TV viewer.

As stated before, nowadays this advertising technique is widely used by some companies and we can see celebrities not only in TV but also in print and digital ads or even listen to them in the radio. According to Marktest, in 2010 the participation of celebrities in advertising campaigns represented 18.4% of all the investment made on TV ads.

In the past, companies were selecting celebrities who were famous by achievements in their careers, normally sports achievements, but today marketing practitioners have another resource to use – TV presenters. The image is credible and their daily happiness made them a self-confident bet for companies. Celebrities from TV soap operas or TV shows/contests were the most required celebrities during 2011 in Portugal.

In addition, Frize, Meo, Vobis, Montepio Geral, Licor Beirão, among others, are examples of brands that a few years ago decided to invest in young Portuguese comedians, in order to best communicate their campaigns, adopting a new communication "philosophy" designated as "advertainment". It consists in a mix of advertising with entertainment, centered on humor. According to some reports, this technique centered on the humor is a distinctive asset, appealing to the memory of the message, which is suported by irreverent texts and images, allowing high levels of brand recall. However, this last technique is risky by the fact that it might happen that the desired effect does not happens and what was supposed to be fun, is not.

During 2011, in the fast moving consumer goods, we saw the Portuguese actress Fernanda Serrano endorsing Danone's Activia yogurts (Figure 4). This was the only brand with which Fernanda Serrano was associated in terms of advertising. This campaign led her to one of the first places in the ranking of celebrities with longer exposure time on TV advertising, more specifically she was the fifth celebrity most exposed in television advertising and the fourth whose ads had higher TV audience. If we consider the ranking of the twenty celebrities with more exposure time on television advertising, we found that Fernanda Serrano was the fifth

most efficient[1], leaving the first four places for celebrities with smaller exposure time but higer recall levels, such as Cristiano Ronaldo and Jose Mourinho.

Figure 4 - Fernanda Serrano endorsing Actvia yogurts
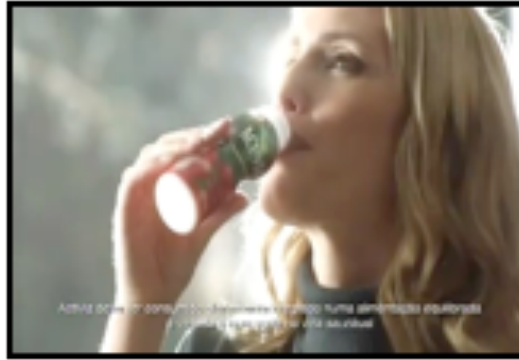
Source: www.activia.pt

Fernanda Serrano is thus one of the best celebrities to use because she brings balance, as being one of the celebrities with longer exposure time and audience in TV, but she gets at the same time higher brand recall levels.

On Personal Care category, specifically on shampoos, during 2011 the Portuguese actor Diogo Morgado endorsed Heads & Shoulders (H&S) shampoo, stating, "With H&S, everything is in the head ... less dandruff". More recently we saw the endorsement made by the famous TV presenter Catarina Furtado to Pantene's shampoo as also Bárbara Guimarães with the shampoo Elvive from L´Oreal while Unilever's Linic shampoo used the football player Cristiano Ronaldo.

On the banking sector, the usage of celebrities in a great scale dates back to 2010. In that year we saw Catarina Furtado endorsing the national bank Caixa Geral de Depósitos as well as a multiple endorsing with Bárbara Guimarães, Jorge Gabriel and Ricardo Pereira in the Millennium BCP campaign or even Cristiano Ronaldo endorsing Banco Espirito Santo, representing the institution, which, in turn took advantage of Ronaldo's qualities to make comparisons with the products being endorsed. The Spanish Banco Santander also used the

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[1] Efficiency ratio = time of exposure on TV versus recall

famous couple Cláudia Vieira and Pedro Teixeira. During 2011 that strategy has been continued by Santander, however using different celebrities, this time has chosen a fresh new celebrity – Sandra Pereira – who won a musical TV contest. However, Sandra Pereira could be called as an "instant celebrity" a term that characterize someone who, by any chance or opportunity, very quickly become celebrity as also are very quickly is forgotten by the audience (Santos, 2008). Millennium BCP also changed the characters and started to perform with José Mourinho, an iconic symbol among all the Portuguese (Figure 5).

Figure 5 - José Mourinho endorsing Millennium BCP
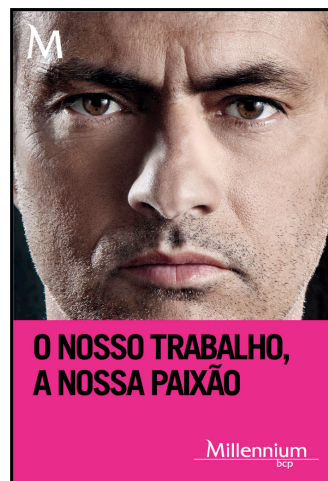
Source: www.millenniumbcp.com

Being a bank is not an easy task and being a Portuguese bank is even harder. These days, the brand essence of banks must be somehow related to trust, reliability and consistence. Portugal is one of the countries struggling within the Euro Zone and consumers do associate the economic crisis of the country with the performance of it banks, so they must have to put an extra effort to communicate values such as trust and reliability. Millennium BCP had a pretty good approach to go around that issue using a strategy based on national pride, willingness to fight and as stated before using celebrity endorsement at its best. José Mourinho is probably the best endorser to communicate Portuguese pride, exceptional

performance and consistence. Even though being easily considered as cocky, his success speaks for itself and therefore communicates a good level of trustworthiness.

Among the major communication brands performing in Portugal, all of them have somehow used celebrities in their promotional campaigns. Vodafone, one of the major players has used an attractive female actress - Soraia Chaves - and nowadays still uses her to endorse their products. Still on the communication area but competing for another market, there was Meo and Zon, both using celebrities. The first brand has signed a contract with the original and funny Gato Fedorento (Figure 6) while Zon has used multiple endorsers, such as the singers Lucia Moniz and Boss Ac or national actors such as Nicolau Breyner or Sara Prata to promote their Zon Fibra product. This brand has also used the same strategy to promote the mobile product, using a Portuguese actress called Madalena Brandão who was the fourth most exposed celebrity during the first semester of 2011 (Figure 7).

Figure 6 - Gato Fedorento endorsing MEO

Figure 7 - Madalena Brandão endorsing Zon Mobile
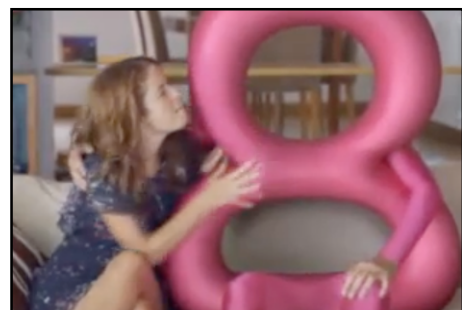
Source: www.marketeer.pt

According to a study conducted by Publivaga – Marktest, Meo was the brand, which had higher levels of recall during the greatest part of 2011(first place during 7 months in a row and 4 months on the third place).

Figure 8 - Top 5 recalled brands (April, 2010)
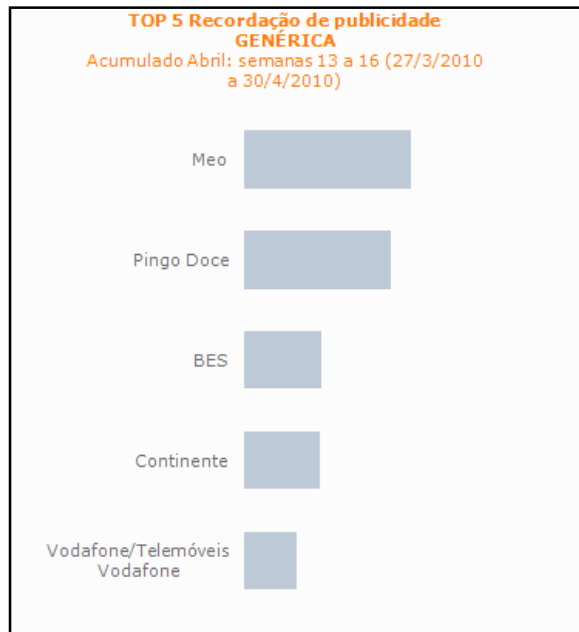
Source: www.marktest.com

Figure 9 - Top 5 recalled brands (December, 2010)
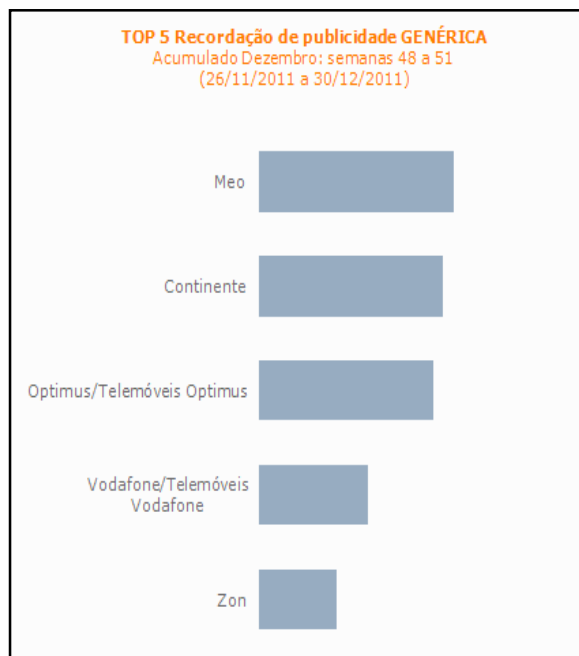
Source: www.marktest.com

One another big player in the communication sector is Optimus, which opted to enhance its communication, therefore using a well-known TV presenter called João Manzarra. However, this TV presenter has also endorsed other brands such as McDonalds (Figure 10). The North American fast food chain during last years has also used the actress Soraia Chaves, the humorist Rui Unas and in 2010 by the opportunity of the World Cup has used the football player Simão Saborosa. According to the endorsement involving João Manzarra, António Filipe, marketing manager of McDonalds says: "we did a market study in order to discover which names would people like to see associated with our brand. Not taking in consideration names like Cristiano Ronaldo, who in fact is at the moment the most famous Portuguese celebrity, the name of João Manzarra came soon after. We think that he has the greatest profile for this campaign: he is fun, uncompromising, and intelligent. We ended up exploring a lot of his personality and improvisation, making it all very natural".

Figure 10 - João Manzarra endorsing McDonalds

Source: www.meiosepublicidade.pt

According to the report Endorsement Tracking from Marktest, in the first semester of 2011, João Manzarra was the celebrity who has been exposed more time on television advertising campaigns (Figure 11), leading him to third position in the audience of TV commercials with celebrities. The association with brands such Optimus, Sagres and McDonalds, gave him this level of visibility, which however was not homogeneous over the six months. According to that study, Manzarra reached the eighth place in the recall ranking of celebrities associated with advertising campaigns (Figure 12).

Figure 11 – Exposure time in TV ads
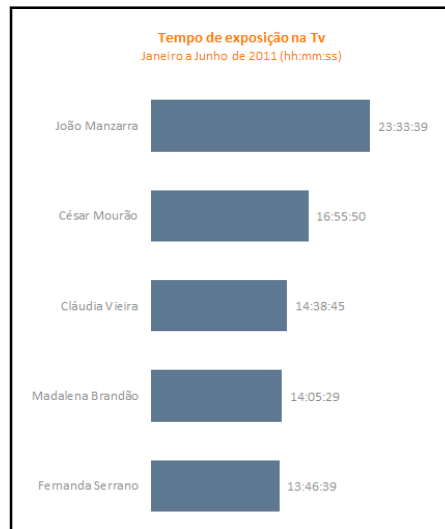
Source: www.marktest.com

Figure 12 – Recall / Affinity of João Manzarra
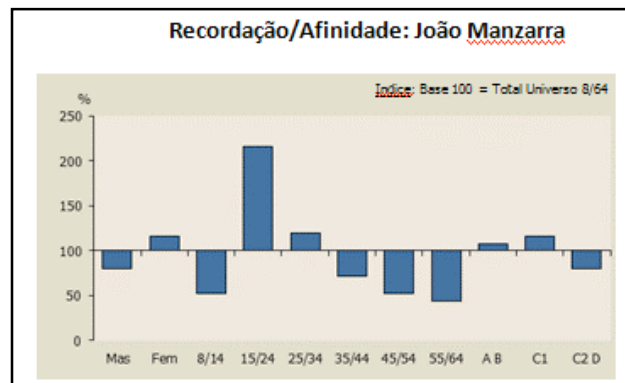
Source: www.marktest.com

As presented in figure 12, that recall is mainly next to a young and feminine target, between 15 and 24 years old.

On the other hand, the maximum recall value was reached in April, two months after being the leader of the exposure time of celebrities in TV advertising (March and April). In March was mainly associated with Optimus, in April also shared his exposure with Sagres and in a smaller number, with McDonalds. June was the month in which he got his best efficiency ratio. If we consider the twenty celebrities with more exposure time on television advertising

in the first semester of 2011, we conclude that João Manzarra was the tenth most efficient, leaving the upper places to other persons, such as Fernanda Serrano already presented.

Therefore the question arises: Do celebrities with higher advertising exposure time on TV always get higher advertising recall levels? According to the report Endorsement Tracking from Marktest, the answer is no and João Mazarra is a living example of that.

Chapter 4: Methodology

Every research has its own purpose and its research objectives. In this chapter it is presented the research hypothesis, its framework, the pretest purpose and results, an explanation about the methods that were adopted to carry out the research, including a review and reasons for the choice of the research sample, data collection, measurement scales adopted and also the type of variables used in the study.

4.1 Research hypothesis

During the literature review chapter, the key dimensions about celebrity endorsement were identified. The impact of those relevant dimensions on purchasing intentions was not homogeneous among all the previous studies and the outputs were sometimes contradictories.

Table 4 makes an overview on the research hypothesis of this study, which main purpose is to support and complement the existing theoretical view on the topic in hand and also allow practical recommendations.

Following these reaserch questions, it is presented a conceptual framework that articulate the different variables (independent and depedent) of this study where all of the independent dimensions flow to the consumer purchasing intentions, in order to study the relationship between them.

Table 4 – Research hypothesis

H1	Endorser's gender has a relation with consumers purchase intentions.
H2	Endorser's credibility has a relation with consumers purchase intentions.
H3	Endorser's attractiveness has a relation with consumers purchase intentions.
H4	Advertising campaigns that contain celebrity endorsements have a higher relation with consumers purchase intentions than ad campaigns that do not perform with any celebrity.
H5	Advertising campaigns featuring more than one celebrity endorsing the product, have a relation with consumers purchase intentions.
H6	Celebrities who endorse more than one product/brand at the same time have a relation with consumers purchase intentions

Figure 13 – Conceptual Framework
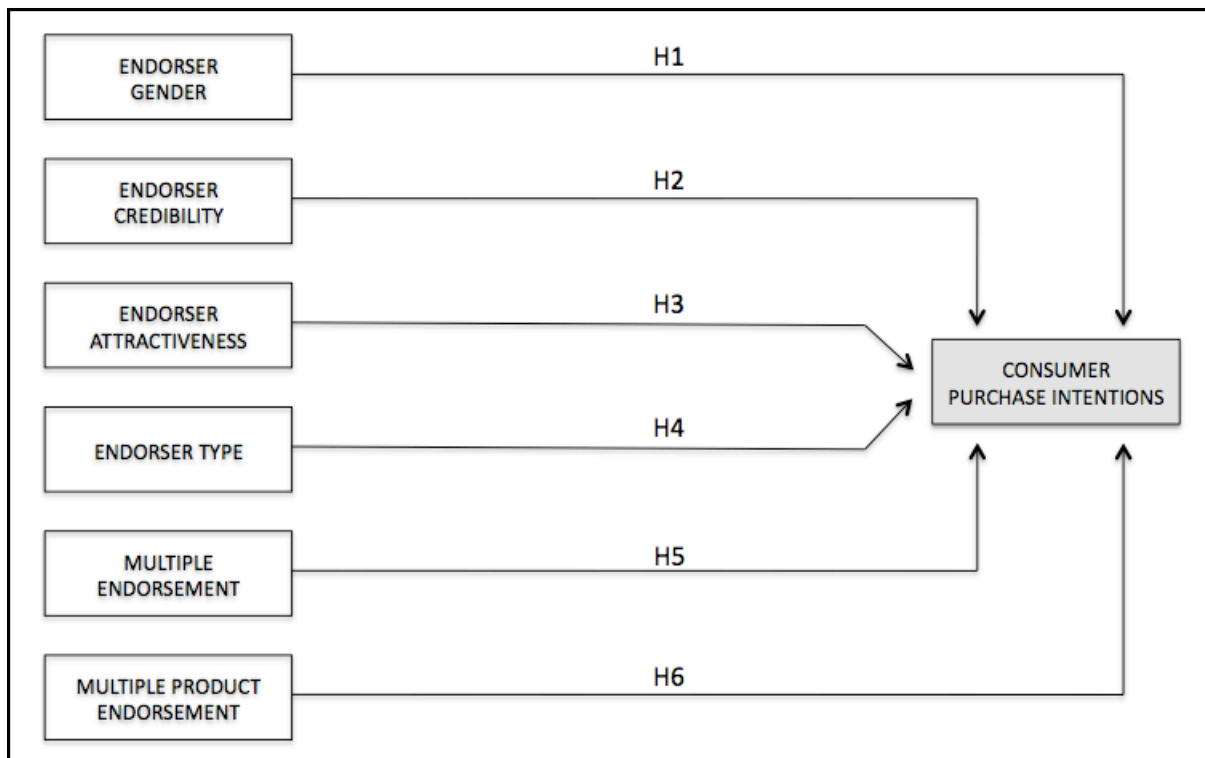
4.2 Pre-test

According to the definition of McCracken (1989: 310) a celebrity is "any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement". Thus, the main purpose of the pretest was to confirm if the respondents were in a first phase, familiar with all the endorsers that were being shown in the questionnaire, so that it would exist accuracy in the final questionnaire.

During the pretest, participants saw a picture of the celebrity and than for each of them answered the question: Do you know this person? (Yes/no). For those who answered negatively, an indication to move forward to the next picture was given and for those who in fact knew the endorser, a second question was made. Using a scale from 1 to 7 (not like vs. like) this last question was created to evaluate how much they like the celebrity. As previously stated, likeability is the affection for the source, not only as a result of the source's physical appearance but also from behaviors. A celebrity should be liked, in order to enhance positive feelings rather than negative ones (Strunck, 2010). If a substantial number of people rate a person in the same level of familiarity and likeability, then the person (image of the

person) can be used to represent that level of familiarity/likeability. Two of the six pictures have been also presented in order to measure the level of attractiveness of the endorser. For the attractiveness scale, it was used Ohanian's (1990) measures and the endpoints of the five items were "unattractive – attractive, not classy – classy, ugly – beautiful, plain – elegant, and not sexy – sexy".

The last two questions of the pretest were related with credibility. In order to find out which celebrities to use in the questionnaire as having high and low levels of credibility, participants were asked to indicate up to three names of celebrities which they considered as having those levels. However, those persons had to be Portuguese and should have been participating in any type of advertising campaigns.

4.3 Pre-test results

The pretest was done online, in an individual approach, via Facebook to sixty participants (29 males and 31 females) from a representative sample of the future participants in the survey.

Once the convening sample of this research were mainly people aged above 20, the pretest questions were also done to age groups that fit into that target, particularly to those aged between 22 and 23 years old.

One of the last two questions of the pretest was an open question, so that respondents could give their true and sincere opinion about who they consider to be a credible source. In table 5 are presented the five names that had highest scores.

Table 5 – TOP 5 credible endorsers

Endorser's name	Score
José Mourinho	15
Ricardo Araújo Pereira	9
Cristiano Ronaldo	7
Catarina Furtado	7
Luís Figo	5

On the other hand, table 6 shows the five most mentioned names to the question: Please indicate at least one name of a person that in your opinion presents low levels of credibility.

Table 6 – TOP 5 not credible endorsers

Endorser's name	Score
Paulo Futre	13
Bárbara Guimarães	3
Júlia Pinheiro	3
Ângelo Rodrigues	2
Pedro Granger	2

4.4 Data collection

Secondary Data

A vital step is the review of previous research on the topic chosen. In fact, an important part of nearly all research is a review of the literature (Bell 1999; Clark *et al*. 1998; Finn *et al*. 2000; Greenfield 1996; Pender 1999; Veal 1997). The literature review allowed the researcher to see clearly what were the key issues for this topic and to identify possible gaps.

Secondary data consist of information that has already been gathered and might be relevant to the problem at hand (McDaniel and Gates 2008). It is highly unlikely that any marketing research problem is entirely unique or has never occurred before. Therefore, secondary data can be a cost-effective and an efficient mean of obtaining information for marketing research. Secondary data are often classified according to their source as internal and external secondary data. In this research it has been used external sources such as academic journals from advertising, marketing and management areas, books and other topic related dissertations. According to Bell (1999), journals are a more rich and up- to-date source of information than books due to the frequency of publication.

4.5 Description of the instrument – questionnaire

After having identified throughout the pretest all the celebrities that would appear on the final questionnaire, it was accomplished and applied to a sample of 15 individuals in order to pretest it. Inputs given by those respondents were applied in the questionnaire, namely in terms of some technical words that were not clear and also the relationship between the questions and the shown figures, so that no misunderstanding could happen.

An online questionnaire (appendix 1) was used, in order to gather the required data for this analysis. This questionnaire was available online from March 22 until March 29. The reason to use this tool is that students can be reached easier via an online questionnaire and respondents have less time pressure to answer the questions.

When doing research of this type there are merits to use a fictitious celebrity in order to minimize prior exposure to and perceptions about real celebrities and their endorsement relations (Till and Shimp, 1998). On the other hand, using actual celebrities in a study allows a sense of realism and celebrities in the marketplace often evoke a much richer set of feelings, representing the life of their own (Pringle and Binet, 2005) and this is what makes them interesting in the first place. All the advertisements that were used in the questionnaire performed national celebrities, who were (1) previously tested in the pretest and (2) an output of the pretest.

Past researches have concluded that involvement with a product category has a considerable impact on how an advertising message affects formation or change of attitude (Petty and Cacioppo, 1983; Kahle and Homer, 1985). Furthermore, research shows that endorsement is more effective under a low, rather than a high, product involvement condition (Chaiken, 1980; Petty and Cacioppo, 1985). Therefore, an effort was made to choose a context for which a low-involvement situation existed and in order to present unbiased products, all the advertisements perform neutral products that are recognized and used either by males and females.

The questionnaire was divided into seven parts, being each of them related to different variables.

1. In the first part, the respondent had three demographic questions: gender, age and educational background.

2. In the second part, an advertisement performing the celebrity Rita Pereira and the ice cream brand *Olá* was shown and participants were asked to rate a list of 5 items related to gender, using a 7-point likert scale.

3. The third section of the questionnaire was related to the endorser's credibility level. Participants first viewed an advertisement with José Mourinho and than a second advertisement with Paulo Futre and rated a list of 10 items on a 7-point bi-polar adjective scale.

4. In the fourth section, two advertisements for the same product/brand were presented: the first one performed the actress Ana bola and the second one performed Diana Chaves. Participants were asked to rate the endorser's level of attractiveness on a 7-point bi-polar adjective scale.

5. In this section, one advertisement with a non-celebrity was shown and other with a celebrity. The avoid bias, product category and brand choices were exactly the same and participants viewed the two pictures simultaneously and asked a list of 5 items using a 7-point likert scale.

6. Section number six, presented a multiple endorsement advertisement for Millennium BCP. In this campaign, more than one celebrity is used to endorse the brand and participants were asked a list of 4 items using a 7-point likert scale.

7. This last section was related with multiple product endorsement. Three advertisements for three different brands – Chupa Chups, Clearasil and Orbit - were shown with the same celebrity – Diana Chaves. Participants were asked to answer a list of 4 items using a 7-point likert scale.

At the end of each section a question was asked in order to measure consumers purchasing intentions using a seven-point semantic differential scale ranging from 1 to 7 (unlikely – likely, definitely would not purchase – definitely would purchase, improbable – probable).

4.6 Sample Design

Target Population

The target population is the population of individuals, which we are interested in describing and making statistical inferences about (Henlal and Jentoft, 2011). The target population for this study is comprised of all male and female individuals over the age of 18 years, living in Portugal.

Sample

McDaniel and Gates (2008) explain sampling as being the process from which the researcher obtains information from a subset of a larger group. The researcher then takes the results from the sample and makes estimates of the characteristics of the larger group. The motivation for sampling is to be able to make these estimates more quickly and at a lower cost than would be possible by any other means.

The sample that was used for this research fell mainly in a Portuguese young audience, specifically on those who with high school, undergraduate and master degrees. In this research, 285 people participated in the survey, but respondents who did not finish the questionnaire as well as outliers have been removed, leaving a total sample size of 251 (69%). Sekaran (2003) stated that sample size larger than 30 and less then 500 are appropriate for most researches, so the sample used in this study can be considered as appropriate. Once gender was one of the analyzed variables, it was important to have an equal amount of male (49,5%) and female (50,5%) participants.

According to Tustin, Ligthelm and Martins (2005), the alternative sampling methods can be grouped under two headings, namely probability and non-probability sampling methods. Probability sampling is an objective procedure in which the probability of selection is known in advance for each population unit. Non-probability sampling is a subjective procedure in which the probability of selection of each population unit is unknown (Parasuraman, Grewal and Krishnan 2004). However, non-probability sampling presents a clear disadvantage: it can be, or not, representative of the population. The sampling method relevant to this study was consisting of non-probability sampling, specifically by means of a convenience sample.

4.7 Measurement scales

According to Ohanian (1991) the higher the perceived credibility of an endorser, the more effective the advertising tends to be. Ohanian (1990) developed a list of 139 adjectives related to source credibility, which was believed to measure celebrity endorsers' perceived credibility. Later on, those adjectives are reduced to a more manageable list of 15 manifest variables, five for each construct: Expertise, Trustworthiness and Attractiveness. The resulting scales were submitted to a confirmatory factor analysis as well as several validity tests, from which was obtained a valid and reliable instrument. Each of these constructs has descriptive pairs to measure these variables on a 7-point bi-polar adjective scale. The descriptive pairs that measure Trustworthiness are: dependable/undependable, dishonest/honest, unreliable/reliable, insincere/sincere, and trustworthy/untrustworthy. The descriptive pairs for measuring expertise include: expert/not-expert, inexperienced / experienced, unknowledgeable/knowledgeable, qualified/unqualified and unskilled/skilled. The following descriptive pairs measure attractiveness: unattractive/attractive, classy/not classy, ugly/beautiful, sexy/not sexy and plain/elegant. However, in this research it was adapted Ohanian's credibility measure scale and it has only comprised the five-item endorser trustworthiness and endorser expertise scale. This decision was based on the fact that the attractiveness level of the endorser is one of the independent variables of the study, so it was reasonable to create an independent variable of endorser credibility that did not include attractiveness as an underlying construct.

An exhaustive literature review uncovered no existing scales specifically designed to measure the other independent variables, so each of the items developed for this study were either modifications of existing scale items or items created specifically for this study. Each of those variables is described bellow as well as each of scaling items.

Variable:

1. Endorser gender (5 items)

- The use of a female celebrity endorser plays an important role in this advertisement.

- The gender of the celebrity endorser creates interest on the product.

- If a male celebrity endorser were used, my motivation for this advertisement would be different.

- The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.

- The use of a female celebrity endorser matches the advertised product.

2. Endorser type (5 items)

- My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.

- The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.

- Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.

- Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.

- I believe products that are advertised by celebrities are of good quality.

3. Multiple endorsements (4 items):

- The presence of more than one celebrity in an advertisement makes it persuasive.

- The presence of more than one celebrity in an advertisement makes it convincing.

- More than one celebrity in a single advertisement makes it appealing.

- More than one celebrity in a single advertisement makes it dynamic.

4. Multiple product endorsements (4 items):

- My opinion about the celebrity changes because she endorsers many different products.

- When a single celebrity endorses more than one brand, I can't remember all the endorsed brands.

- My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.

- My opinion about an advertisement changes when I see the same celebrity endorsing many different products.

To measure the dependent variable – purchasing intentions - the statement "If you were in the market today for this product/brand, how likely do you feel it is when you would purchase/use this product/brand?" was provided to the participants. It was applied the scale used by Till and Busler (2000), using a seven-point semantic differential scale ranging from 1 to 7 (unlikely – likely, definitely would not purchase – definitely would purchase, improbable – probable).

Chapter 5: Results

The purpose of this study was to investigate how different dimensions of celebrity endorsement would be related with consumers purchasing intentions for a variety of products.

In this chapter the data analysis made to the survey is presented, particulary the socio-demographic characterization, the descriptive analysis of the survey and the application of statistical techniques to test the research hypotheses.

5.1 Sample characterization

The data was collected through an online questionnaire and the final sample included 285 responses. However, throughout the questionnaire the number of obtained responses decreased and the major difference was noticed in question number 6. The explanation to this issue (stated by the respondents) relies in a technical problem occurred in the webserver in which the questionnaire was placed.

Of the 285 respondents, 50.5% were male and 49.5% female (Figure 14). The similarity between the number of respondents of both genders was intentional, so it could be possible to have an equal number of responses of males and females in each question.

Figure 14 – Gender of the respondents
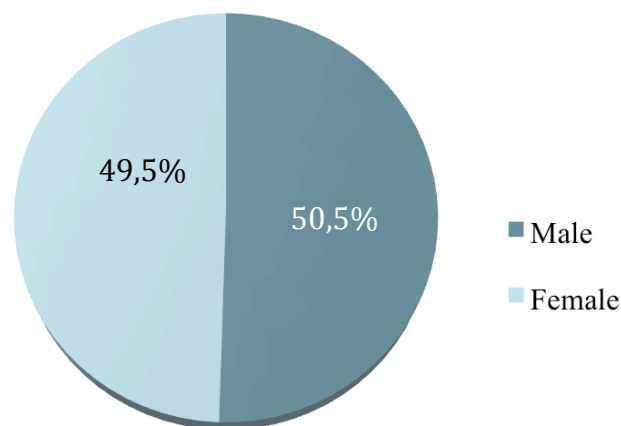
In terms of sample distribution by age criteria, respondents have at least 18 years and there is not a predefined maximum value for age, refered in the questionnaire as "25 +" (Figure 15). However, the majority of the responses were recorded between ages of 22 and 23, representing rates of 22.8 and 26% respectively.

Figure 15 – Age of the respondents
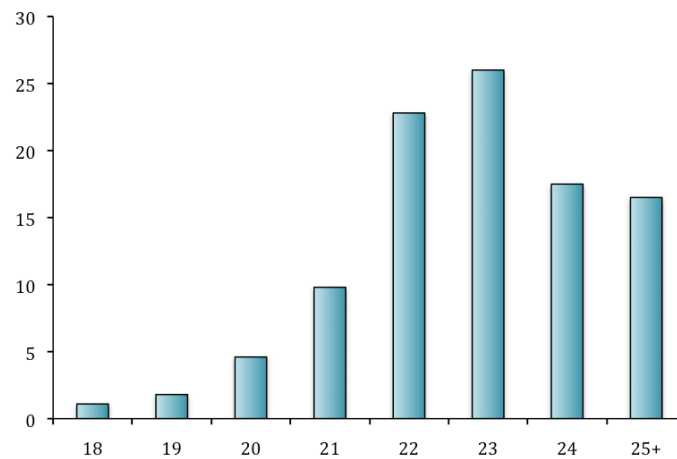
Finally, the level of educational background ranged from: (1) High school, (2) undergraduate and (3) master. Almost half of respondents (49.47%) claim to have a master degree and 43.16% reported having an undergraduation degree. The remaining 7.37% are related to individuals who only own a high school educational level (Figure 16).

Figure 16 – Educational background of the respondents
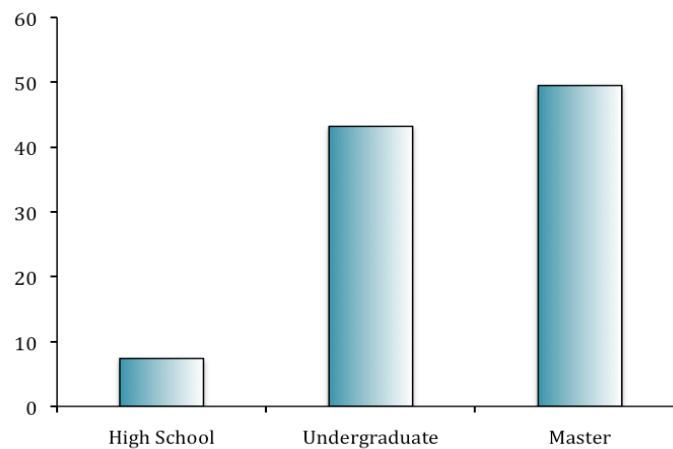
5.2 Reliability of summed items – Cronbach's Alpha

Reliability is important when variables developed from summated scales are used as predictor components in objective models. Once summated scales are an assembly of interrelated items that are designed to measure underlying constructs, it is very important to know whether the same set of items would bring up the same responses if the same questions are recast and re-administered to the same respondents. Alpha coefficient varies from 0 to 1 and is used to describe the reliability of factors extracted from dichotomous and/or multi-point formatted questionnaires or scales (Santos, 1999).

Table 7 - Acceptable and unacceptable levels of the Cronbach's Alpha coefficient

Alpha coefficient	Implied reliability
Below .60	Unacceptable
Between .60 and .65	Undesirable
Between .65 and .70	Minimally acceptable
Between .70 and .80	Respectable
Between .80 and .90	Very good
Much above .90	Consider shortening the scale

Source: DeVellis (1991)

Table 8 – Cronbach's Alpha of the scales used in the study

Variable	# Items	Cronbach's Alpha
Endorser Gender	5	0.846
Endorser Credibility	10	0.902 / 0.930
Endorser Attractiveness	5	0.906 / 0.898
Endorser Type	5	0.760
Multiple Endorsement	4	0.894
Multiple Product Endorsement	4	0.818

Generally, values between 0.65 to 0.7 are considered to be the lower limit for a reliable scale, that is to say, to afirm that all the internal dimensions do have consistency and can be used for statistical analysis. According to table 8, all the dimensions presented values above those.

Ohanian's (1990) adapted credibility scale was used to measure the credibility of two different celebrities in two different advertisements, so it has reproduced two values (Cronbach's Alpha = 0.902 and Cronbach's Alpha = 0.930). The same procedure was applied to measure attractiveness, consisting on an evaluation of two advertisements with different reliability values (Cronbach's Alpha = 0.906 and Cronbach's Alpha = 0.898), respectively. Endorser type items showed the lowest reliability value (Cronbach's Alpha = 0.760) but it is still an acceptable value.

Purchase intentions scale followed each advertisement question that was shown (total of 8 advertisements) and have reliability values of Cronbach's Alpha from 0.949 to 0.982, as shown in table 9.

As such, all the scales that were used in this thesis are reliable.

Table 9 - Cronbach's Alpha for purchasing Intentions variables

Advertisement 1	0.949
Advertisement 2	0.970
Advertisement 3	0.969
Advertisement 4	0.967
Advertisement 5	0.981
Advertisement 6	0.980
Advertisement 7	0.978
Advertisement 8	0.982

5.3 Testing the research hypothesis

5.3.1 Endorser's gender

To analyze this first question, it was developed a set of five items that supported the assessment to be made about the impact of endorsers gender in the shown advertisement. Answers were given based on a 7-point likert scale, where 1 = strongly disagree and 7 = strongly agree.

Figure 17 - Endorsers gender evaluation items
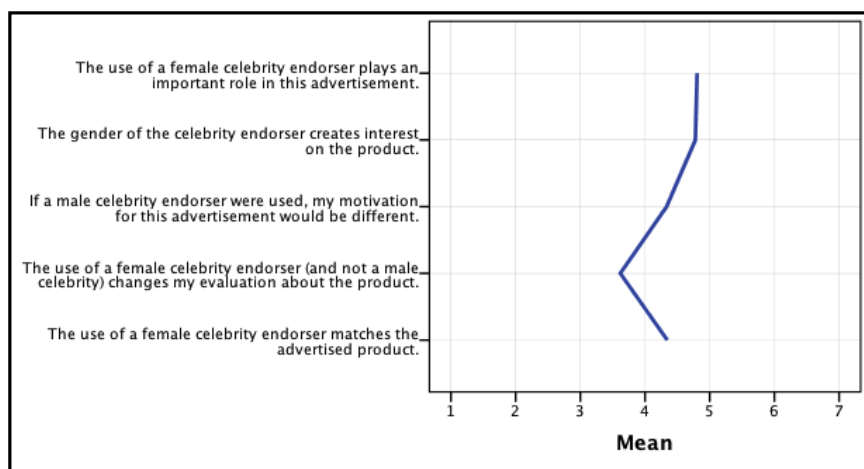
As it is presented in Figure 17, the results are quite stucked in the middle, that is to say, on average respondents do not have a strong responding trend in any of the items. However, when questioned if the use of a female endorser played an important role in the advertisement and if that gender created interest on the product, respondents are more inclined to agree with it.

On the opposite side, respondents slightly disagree with the idea that the use of a female celebrity endorser and not a male, change the evaluation that is done about the product, implying that if in that advertisement a male endorser appeared, their evaluation about the product would not be different. However, and still according to the use of a male endorser rather than a female, respondents are neutral on the item related to their motivation for that advertisement if a male celebrity was used.

Finally, on the item that evaluated if there was a match between the gender of the endorser (female) and the product being promoted (ice cream), respondents also do not have a strong responding trend, so they do not agree or disagree.

However and in order to make a deeper analysis about the evaluation on the gender variable, a cross analysis was made between the answers and: (1) gender, (2) age groups and (3) educational background of the respondents.

As can be seen in Figure 18, it seems that there are differences between gender responses. In our sample, on average males agree more than females in all the items and statistical differences were found on the distribution of following items ($\alpha= 0.05$) (appendix 2):

- The use of a female celebrity endorser plays an important role in this advertisement;

- The gender of the celebrity endorser creates interest on the product;

- If a male celebrity endorser was used, my motivation for this advertisement would be different;

- The use of a female celebrity endorser matches the advertised product.

Perhaps this difference can be supported by the fact that a female endorser, Rita Pereira, promotes the shown product.

However and as it is shown in appendix 2, no statistical differences were found on the distribution of the remaining item between the population groups of males and females: "The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product" (*p-value* = 0.060).

Figure 18 - Endorsers gender according to respondents gender
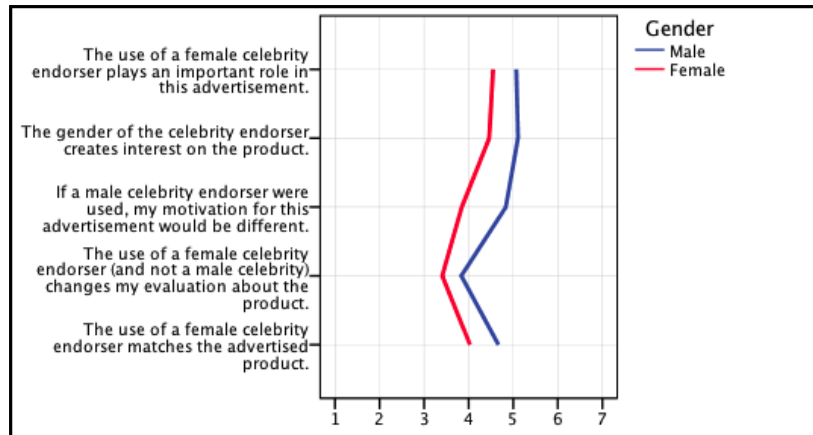
Figures 19 and 20 present a comparison of the average score of all the items, about the variable gender and between the groups of respondents with different age and educational background, respectively.

Figure 19 - Endorsers gender according to respondents age
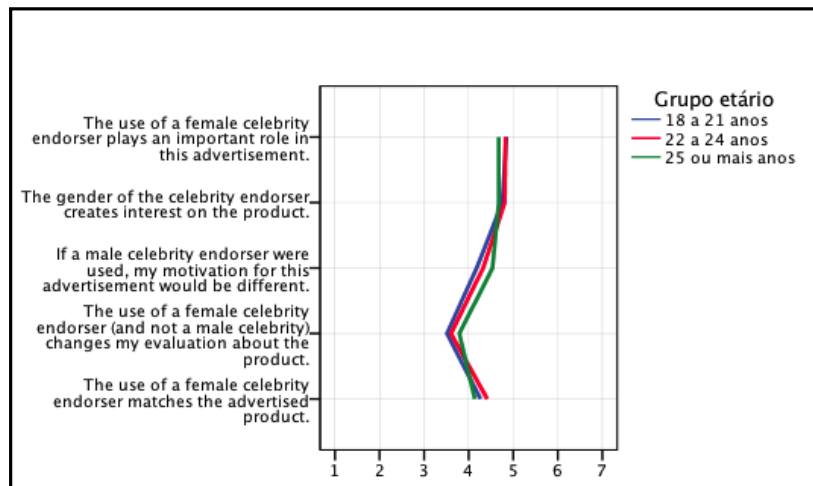
As it can be seen in both pictures, there are only small differences in all of the gender items between the different groups, either in terms of age or educational background. An analysis of statistical differences between the population groups stated by these two socio-demographic variables also shows empirical evidence that they are similar as regards to all the items related to endorser gender. Appendices 3 and 4 present evidence based on the *p-value* obtained using the Kruskal-Wallis test.

Figure 20 - Endorsers gender according to respondents educational background
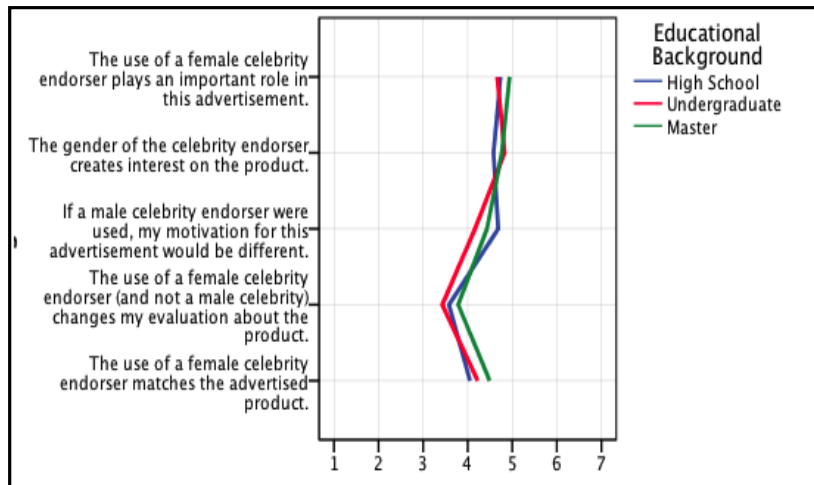
As previously stated in the methodology chapter, the main purpose of this study is to analyze the correlation between a set of independent variables and consumers purchase intentions.

The coefficient of Pearson gives us the level of correlation between those variables. This value may vary between -1 and +1 and the closer to an extreme value, the higher is the association. In the case of having a negative correlation, it means that an increase of one of the variables corresponds to a decrease of the other. In the case of positive correlations, the variations occur both in the same direction. According to Lira (2004), the intensity of Pearson correlation coefficient can be summarized as in the next table:

Table 10 - Level of intensity of Pearson´s correlation coefficient

If $0.00 \leq \mid \rho \mid < 0.30$	Weak correlation
If $0.30 \leq \mid \rho \mid < 0.60$	Moderate correlation
If $0.60 \leq \mid \rho \mid < 0.90$	Strong correlation
If $0.90 \leq \mid \rho \mid < 1.00$	Very strong correlation

Source: Lira (2004)

The first hypothesis (H1) aims to evaluate the relationship between the gender of the endorser and purchase intentions. In this way, to make that analysis, two correlations were used:

1. Pearson's correlation (table 11) shows that endorser's gender (mean of 5 items) and purchase intentions (mean of 3 items) are positively correlated, however it is a weak correlation ($\rho= 0.382$). Thus, it could be concluded that the gender of the endorser does have a relationship with consumers purchase intentions, which means that H1 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each gender item and purchase intentions (mean of 3 items). Results presented in appendix 5 show that there is a positive (but weak) correlation between all the items and purchase intentions, so reinforcing the positive correlation presented in Pearson's value.

Table 11 - Pearson's correlation between endorser's gender and consumers purchasing intention

	Purchase Intentions
Gender	,382**
**, Correlation is significant at the 0.01 level (2-tailed)	

5.3.2 Endorser's credibility

For this second research hypothesis, two advertisements were shown. The first one (most credible) presented José Mourinho endorsing Millennium BCP and the second one (less credible), also performing a sports related person - Paulo Futre - endorsed Licor Beirão. An adapted credibility scale was used with a set of 10 items that supported the assessment to be made about the impact of endorsers credibility in the shown advertisement. Answers were given based on 7-point bi-polar adjective scale.

Figure 21 presents evidence about the perception of the respondents about the credibility of José Mourinho. All the items follow a positive trend, which means that respondents on average do agree with the fact that the endorser in that advertisement is:

1. Honest	6. Skilled
2. Reliable	7. Experienced
3. Sincere	8. Knowledgeable
4. Trustworthy	9. Qualified
5. Expert	

The only item that have a lower level of agreement is undependable versus dependable, but as stated before, it still follows a positive trend.

Figure 21 – Endorsers credibility evaluation items (José Mourinho)
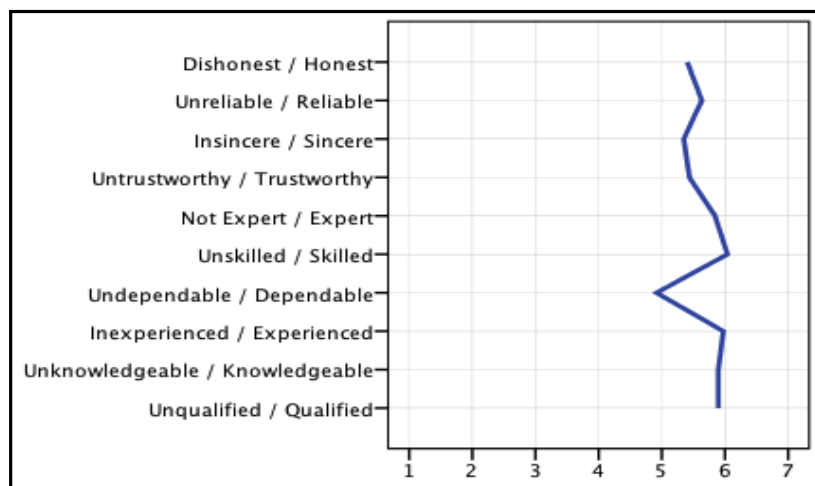
To analyze if there was any statistical difference in the distribution of these items between the population groups of males and females, Mann-Whitney tests were computed. This test indicates that there are statistical differences between these groups in three of the ten items (α= 0.05) (appendix 6). As it can be seen in Figure 22, unreliable/reliable, insincere/sincere and unknowledgeable/knowledgeable present a few differences and males consider that José Mourinho is more reliable, sincere and knowledgeable than the female group.

Figure 22 - José Mourinho credibility according to respondents gender
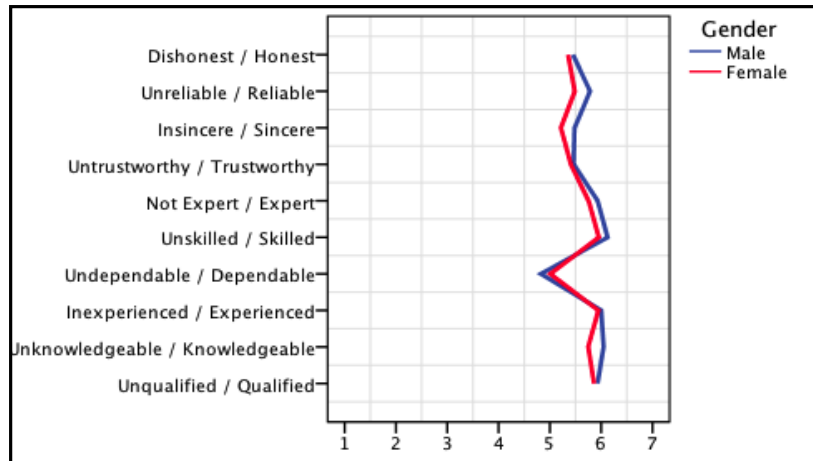
Figure 23 – José Mourinho credibility according to respondents age
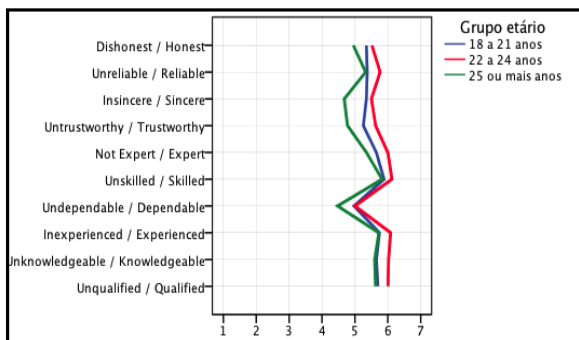
Figure 24 - José Mourinho credibility according to respondents educational background
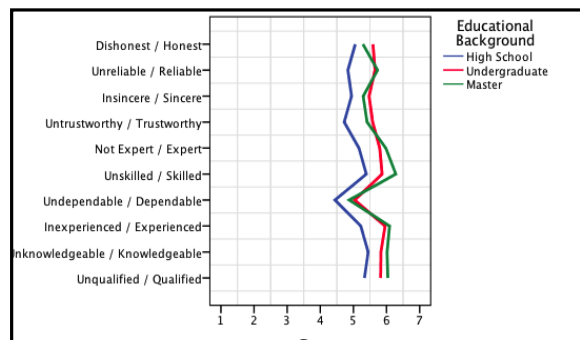
Figure 23 presents a comparison about the average of the ten credibility items and the three age groups. Once in the presence of more than two groups, a Kruskal-Wallis test was performed and for a $\alpha = 0.05$ it presented two items with statistical differences between the groups: insincere/sincere and untrustworthy/trustworthy (appendix 7). However, to know between which groups those differences occurred, a LSD multiple comparison test was computed, which allows to conclude that, people aged between 22 and 24 agree more than those aged above 25 in both items (*p-value* = 0.002 and *p-value* ≈ 0.000 respectively) (appendix 7). (i.e. that José Mourinho is more sincere and trustworthy).

The same procedure was done as regards to the groups with different educational background On average, high school respondents considered Mourinho to have lower levels on all the items than the other two groups (Figure 24). On the other hand, undergraduate and master

respondents seem to have similar opinions (on average) about all the items. Unreliable/reliable and unskilled/skilled items presented differences among the population groups. According to the Kruskal-Wallis test statistical evidence was found (*p-value* = 0.047 and *p-value* = 0.007 respectively), and the LSD test made multiple comparisons and it allows to conclude that undergraduate and master groups state that José Mourinho is more reliable than the high school group (appendix 8). In terms of skills, people with master degrees think that the endorser is more skilled than those with high school or undergraduate degrees.

To analyze the correlation between this second endorser variable and consumers purchase intentions, the same two-independency tests (Pearson and Spearman) were done. H2 aims to evaluate the relationship between endorser's credibility and purchase intentions. As previously stated, two different credibility sources were shown and its results are presented in separated analysis. So, for the first advertisement, which the endorser is José Mourinho:

1. Pearson's correlation (table 12) shows that endorser's credibility (mean of 10 items) and purchase intentions (mean of 3 items) are positively correlated, however it is a weak correlation (ρ= 0.394). Thus, it could be concluded that the credibility of the endorser does have a relationship with consumers purchase intentions, which means that H2 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each credibility item and purchase intentions (mean of 3 items). Results presented in appendix 9 show that there is a positive (but weak) correlation between all the items and purchase intentions, so reinforcing the positive correlation presented in Pearson's value.

Table 12 - Pearson's Correlation between José Mourinho credibility and consumers purchasing intention

	Purchase Intentions
Credibility (+)	,394**
**, Correlation is significant at the 0.01 level (2-tailed)	

A second advertisement with Paulo Futre endorsing other product was shown. According to the pretest, when compared to José Mourinho, Paulo Futre was considered to be a less credible person. Comparing Figures 21 and 25, an immediately conclusion can be done: in fact, Paulo Futre presents lower average levels in all the credibility items.

Figure 25 – Endorsers credibility evaluation items (Paulo Futre)
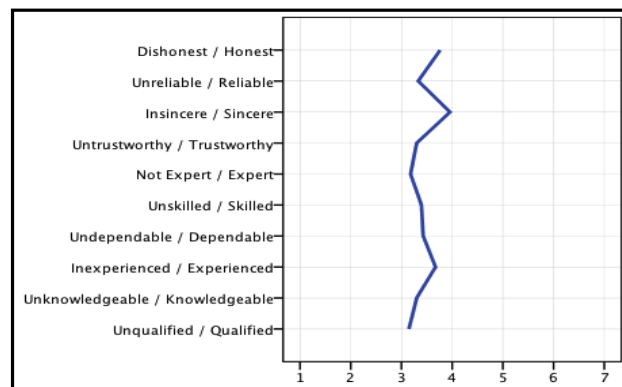
A comparison between groups established by gender, age and educational background is made, as regards to the credibility of the endorser Paulo Futre. Thus, the analysis of mean scores of the several credibility items and also the statistical tests (Mann-Whitney and Kruskal-Wallis) ($\alpha = 0.05$) were used (appendices 10, 11 and 12).

In terms of gender, as it can be seen in Figure 26, on average, female respondents point out slightly lower mean scores than males in most of the credibility items. However, Mann-Whitney test provides evidence that only the distribution of the items Dishonest/honest (*p-value* = 0.038), Insincere/sincere (*p-value* = 0.031) and Inexperienced/experienced (*p-value* = 0.021) do present statistical differences between the two population groups. Females consider that the endorser Paulo Futre is less honest, sincere and experienced, than males do.

Figure 26 – Paulo Futre credibility according to respondents gender
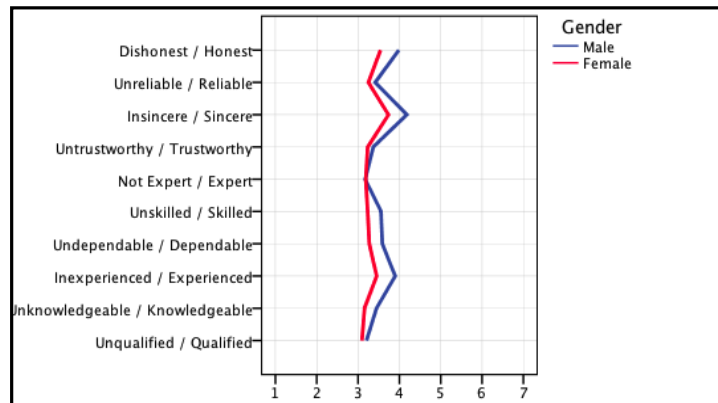
A comparison of the mean scores of the credibility items among the age groups is presented in Figure 27. It shows that people aged between 18-21 and 22-24 years old have, on average, quite similar opinions and the group of 25+ years old seems to consider this endorser quite more credible than the other two groups. However, Kruskal-Wallis test provides evidence that these three groups only do present significant differences on the item Unknowledgeable/knowledgeable (*p-value* = 0.025). LSD test concludes that it is the age group of those above 25 that agree more than the other two groups on that item, concluding that Paulo Futre is more knowledgeable to them (appendix 11).

Figure 28 presents the differences between the three educational background population groups and are significant only in two items: Insincere/sincere (*p-value* = 0.040) and inexperienced/experienced (*p-value* = 0.006). The LSD test concluded that those with master degree think that Paulo Futre is more sincere than those with an undergraduate degree. Regarding the second item, high school and master groups think that the endorser is more experienced than the group of undergraduates (appendix 12).

Figure 27 – Paulo Futre credibility according to respondents age
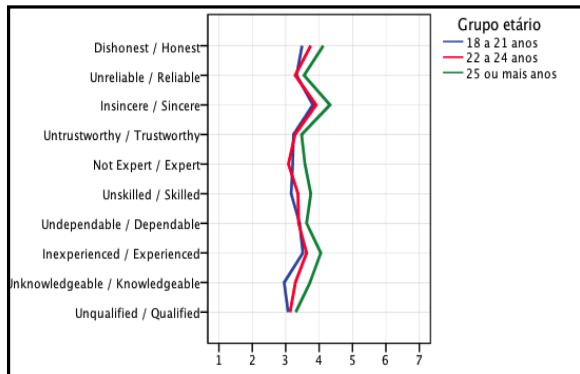
Figure 28 - Paulo Futre credibility according to respondents educational background
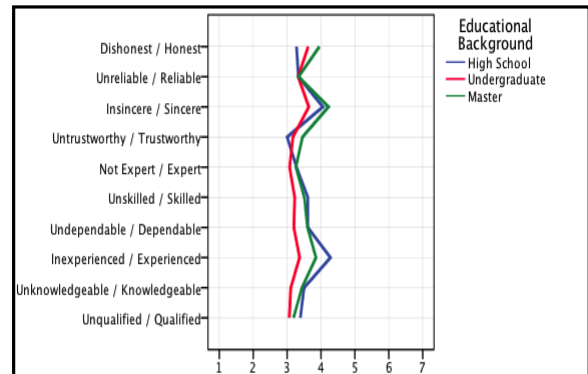
Based on Pearson correlation, H2 is once again not rejected (Table 13). The obtained $\rho=$ 0.437 means that despite being a less credible endorser, the credibility still has a positive correlation with consumers purchase intentions.

Spearman results correlate each of the ten credibility items with purchase intentions and also provides evidence that a positive relation between all the items and purchase intentions is present (appendix 13).

Table 13 - Pearson's Correlation between Paulo Futre credibility and consumers purchasing intention

	Purchase Intentions
Credibility (-)	,437**
**, Correlation is significant at the 0.01 level (2-tailed)	

When comparing values presented in tables 13 and 14 of Pearson's correlation about credibility and purchase intentions, we find out that despite being considered to be a higher credible endorser, José Mourinho presents a lower correlation level with purchase intentions. One of the possible reasons is that the product endorsed by José Mourinho is a bank and Paulo Futre endorses a drink and if we take in consideration the age of the sample used in the

study, we may conclude that people would prefer to buy a drink rather than a bank service product.

5.3.3 Endorser's attractiveness

To measure the impact of endorsers attractiveness, two advertisements were shown. The first one (less attractive) presented the actress Ana Bola endorsing MultiOpticas and the second one, also related with the same product/brand, presented the actress Diana Chaves (most attractive). A set of 5 items were used to support the assessment to be made about the impact of endorsers attractiveness in each advertisement. Answers were given based on 7-point bi-polar adjective scale.

Figure 29 illustrates the results of the evaluation (mean scores) done about the actress Ana Bola. The perception that respondents have about her is that she is more (1) unattractive than attractive, (2) ugly than beautiful, (3) not sexy than sexy, (4) not classy than classy and (5) plain instead of elegant.

Figure 29 – Endorser's attractiveness evaluation items (Ana bola)

A gender analysis was made in order to conclude if people from different gender think in the same way. Figure 30 presents evidence that, on average, the female group of respondents evaluates the actress in a slighty more favourable way than the male group, that is to say, on

balance, that females think she is little more (1) atrractive, (2) beautiful, (3) sexy, (4) classy and (5) elegant than their males counterparts. However, Mann-Whitney test presents statistical evidence that the distribuiton of the attractiveness items, only presents significant differences between the population groups of females and males, as regards to the unattractive/attractive item (*p-value* ≈ 0.000) and also ugly/beautiful item (*p-value* = 0.001) (α = 0.05) (appendix 14).

Figure 30 – Ana Bola attractiveness according to respondents gender
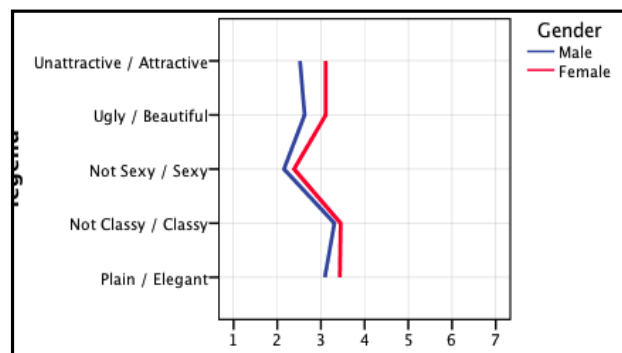
In terms of age groups (Figure 31), answers were given following the same pattern in all the three different groups, as it is also concluded by the Kruskal-Wallis test, that shows that there are no significant differences in the distribution of all the attractiveness items among these population groups (α = 0.05) (appendix 15).

Figure 31 – Ana Bola attractiveness according to respondents age
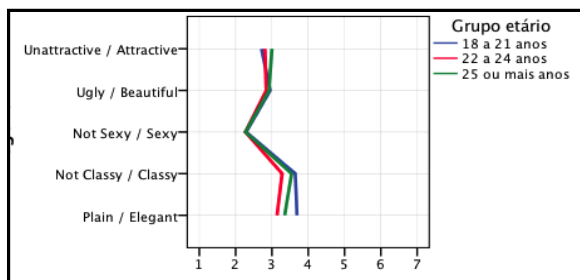
Figure 32 – Ana Bola attractiveness according to respondents educational background
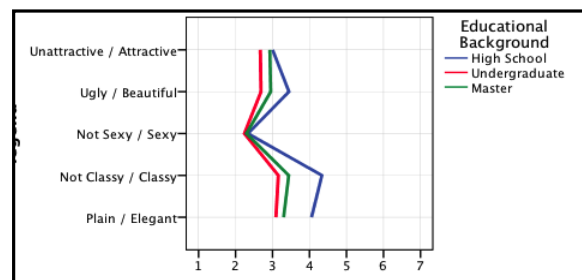
Figure 32 compares the mean values of the attractiveness items among the groups established by educational background. It can be concluded that respondents, have, on average, quite similar opinions, except for the items plain/elegant and not classy/classy, where respondents with high school degree evaluates better than the other two groups. Nevertheless, Kruskal-Wallis test (appendix 16) shows evidence that there are significant differences among the three population groups on the items ugly/beautiful (*p-value* = 0.050) and not classy/classy (*p-value* = 0.033). LSD multiple comparisons test give us support that high school people considers the endorser more beautiful and classier than the undergraduate people (α= 0.05) (appendix 16).

When analyzing the second advertisement (Diana Chaves) about endorser attractiveness, interesting results were observed.

First and as stated before, the endorser is perceived as being more attractive and a comparison of Figure 29 and 33 presents evidence on that. When compared to the previous advertisement, we may conclude that Diana Chaves has received higher ratings on all the items.

Figure 33 – Endorser's attractiveness evaluation items (Diana Chaves)
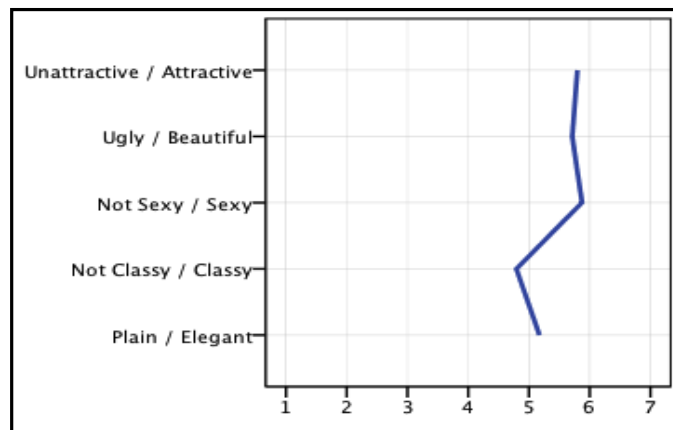
One of the interesting results is related with the opinion of respondents by gender. The fact that Diana Chaves is perceived as being physically attractive results in higher average agreement patterns given by males than females (Figure 34). As it is observed, when compared to their females counterpart, males do think that the actress is more (1) attractive, (2) beautiful, (3) sexy, (4) classy and (5) elegant. Mann-Whitney test provides evidence about

these significant differences in all the distributions of the previous items between the population groups of males and females (α= 0.05) (appendix 17).

Figure 34 – Diana Chaves attractiveness according to respondents gender
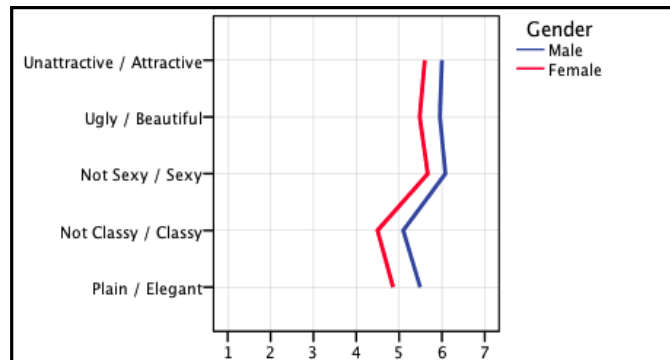
When comparing the items of attractiveness about this endorser between the age groups, Figure 35 shows that respondents aged between 18-21 and 22-24 years old, have on average quite similar opinions. Respondents of 25 or more years old, have, on average, lower perception levels of attractiveness than the other two groups. Kruskal-Wallis test (appendix 18) only detected significant differences among these three groups in the distribution of the item "not classy/classy" (*p-value* = 0.030). When multiple comparisons were done between the three population groups, it has been proved that groups between 18/21 and 22/24 years old think that Diana Chaves is classier than those aged above 25 (appendix 18).

Figure 35 – Diana Chaves attractiveness according to respondents age
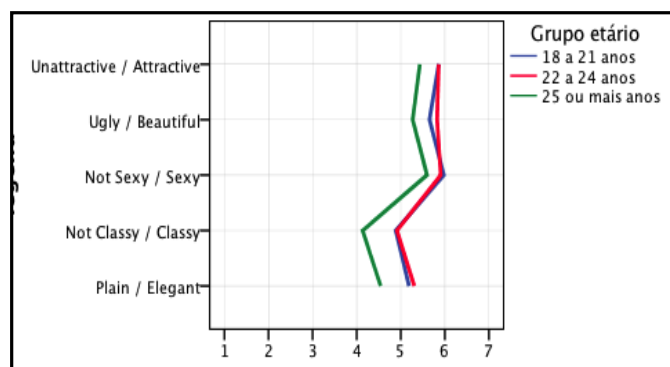
Figure 36 – Diana Chaves attractiveness according to respondents educational background
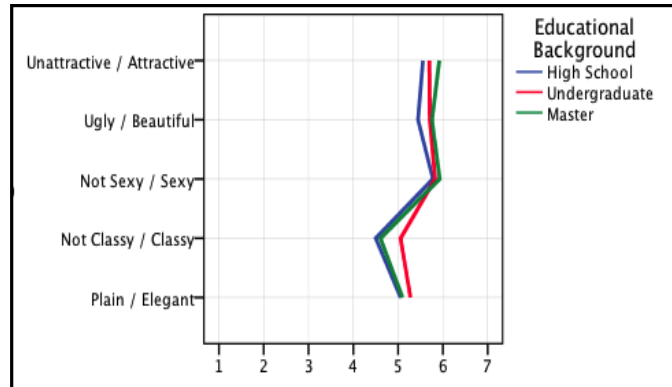
The respondents of the three educational groups have, on average, similar opinions about all the items of attractiveness (Figure 36). Kruskal-Wallis test did not find any statistical differences in the distribution of the items between the population groups established by educational background (α= 0.05) (appendix 19).

H3 aims to evaluate the relationship of endorser's attractiveness and purchase intentions. To analyze this hypothesis, two stimuli were shown. As regards to the first advertisement (Ana Bola endorsing MultiOpticas):

1. Pearson's correlation (table 14) shows that Ana Bola attractiveness (mean of 5 items) and purchase intentions (mean of 3 items) are positively correlated. It is a medium correlation (ρ= 0.557) and it could be concluded that the attractiveness of the endorser does have a relationship with consumers purchase intentions, which means that H3 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each attractiveness item and purchase intentions (mean of 3 items). Results presented in appendix 20 shows that there is a positive correlation between all the items, whether it is in terms of (1) unattractive/attractive, (2) ugly/beautiful, (3) not sexy/sexy, (4) not classy/classy or (5) plain/elegant and purchase intentions, so reinforcing the positive correlation presented by Pearson's value.

Table 14 - Pearson's Correlation between Ana Bola attractiveness and consumers purchasing intention

	Purchase Intentions
Attractiveness (-)	,557**
**, Correlation is significant at the 0.01 level (2-tailed)	

Regarding the second advertisement where Diana Chaves appeared endorsing MultiOpticas, the same two analyses were done.

1. Pearson's correlation (table 15) shows that Diana Chaves attractiveness (mean of 5 items) and purchase intentions (mean of 3 items) are positively correlated. It is a medium correlation ($\rho= 0.517$) and it could be concluded that the attractiveness of the endorser does have a relationship with consumers purchase intentions, which means once again that H3 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each attractiveness item and purchase intentions (mean of 3 items). Results presented in appendix 21 shows that there is a positive correlation between all the items, whether it is in terms of (1) unattractive/attractive, (2) ugly/beautiful, (3) not sexy/sexy, (4) not classy/classy or (5) plain/elegant and purchase intentions, so reinforcing the positive correlation presented by Pearson's value.

Table 15 - Pearson's Correlation between Diana Chaves attractiveness and consumers purchasing intention

	Purchase Intentions
Attractiveness (+)	,517**
**, Correlation is significant at the 0.01 level (2-tailed)	

5.3.4 Endorser's Type

To analyze what type of evalution do people make about the type of endorser, that is to say, celebrity versus non-celebrity, it has been developed a set of five items that supported the assessment to be made about it. Answers were given based on a 7-point likert scale, where 1 = strongly disagree and 7 = strongly agree.

Figure 37 – Endorsers type evaluation items
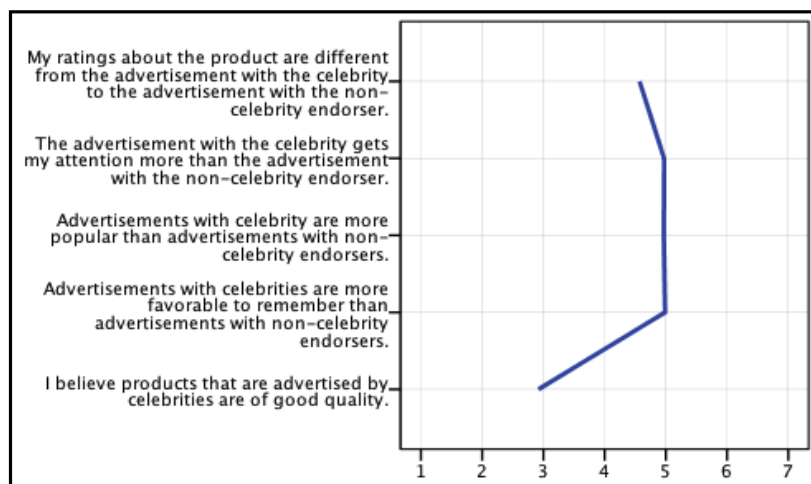
Observing Figure 37, it is clear that four out of five items have, on average, an agreement trend and respondents disagree with the remaining one. On balance respondents agree with the idea that:

1. Ratings about the product are different from advertisements that show a celebrity endorsing a product, than those advertisements that do not.

2. Levels of attention are higher in advertisements that show a celebrity endorsing a product, than those advertisements that do not show a celebrity endorsing a product.

3. Advertisements that show a celebrity endorsing a product are more popular than advertisements that show an anonymous person.

4. Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.

The last item, which linked quality and products endorsed by celebrities, did not have on average, an agreement among respondents, thus concluding that products which are endorsed by celebrities may not be of good quality and also that celebrity will not increase product's quality.

Comparing the opinions of these items by gender of the respondents (Figure 38), it can be concluded that both groups, have on average, the same opinion except for the item "levels of attention" due to the fact that a celebrity appears endorsing the product (*p-value* = 0.001) where males present higher levels of agreement than females. Mann-Whitney test concluded that this behavior also happens in the distribution of this item between the two population groups (α= 0.05) (appendix 22).

Figure 38 – Endorser's type according to respondents gender
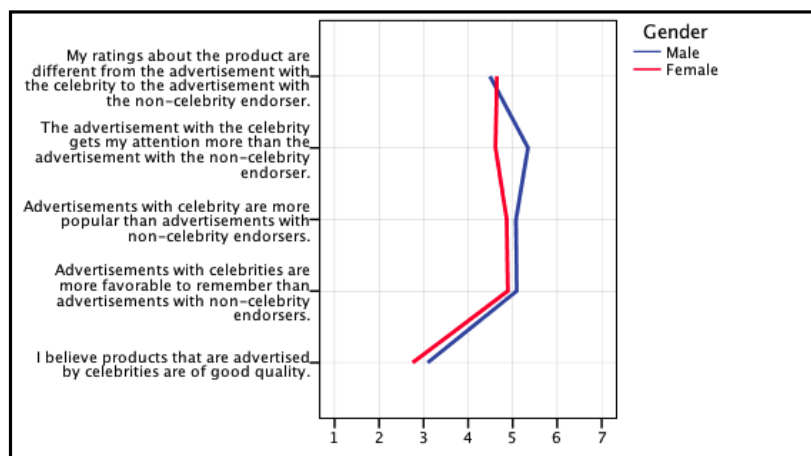
Comparing the opinions of the respondents of the different age groups, on average, they seem very similar, except that respondents of 25 or more years old consider that advertisements with celebrity are more popular and favorable to remember than advertisements with non-celebrity endorsers (Figure 39).

Nevertheless, statistical tests reveal that the distribution of all the items are not statistically different among the groups, except that advertisements with celebrities are more popular than those with non-celebrities, where the population group of 25+ agree more than both younger groups (α= 0.05) (appendix 23).

Figure 39 – Endorser's type according to respondents age
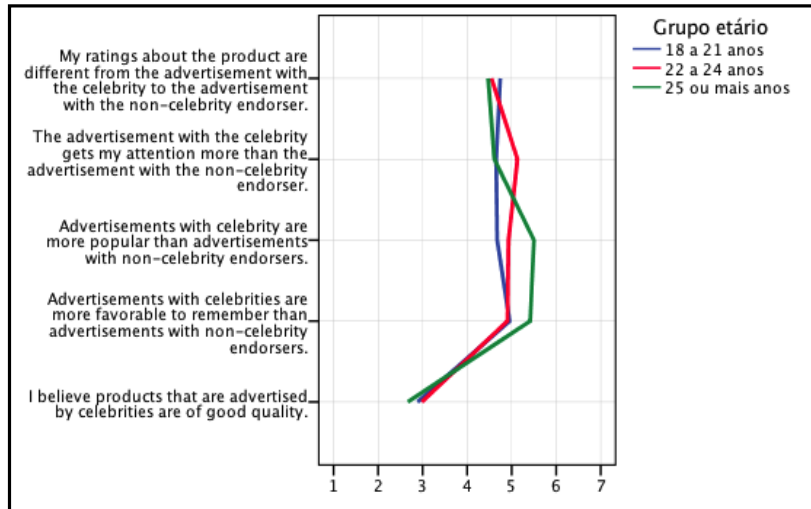
Finally, in terms of educational background the different groups of respondents seem to have, on average, similar opinions except on the item: the advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser. In this item, high school respondents do not agree so much as the other two groups do. Undergraduate respondents also do not agree so much as the other two groups do, with the fact that advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers (Figure 40). Kruskal-Wallis test and also LSD multiple comparisons test present evidence about significant differences in the distribution of the item "advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers" among these three population groups. (α= 0.05) (appendix 24)

Figure 40 – Endorser's type according to respondents educational background
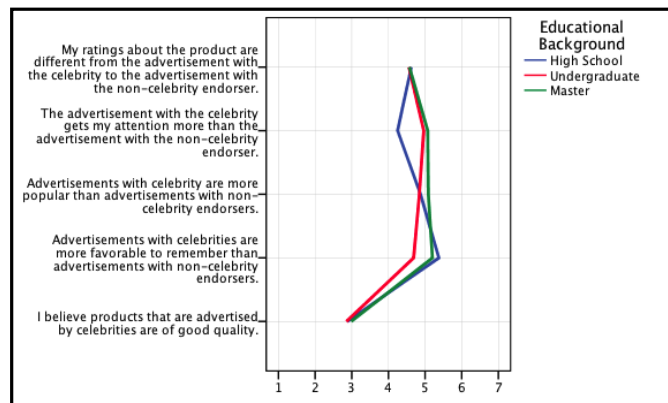
H4 aims to evaluate the relationship between the type of endorser and purchase intentions. In terms of correlation between the two variables, the results are presented bellow:

1. Pearson's correlation (table 16) shows that there is a positive and medium relationship between the variable endorser type (mean of 5 items) and purchase intentions (mean of 3 items) (ρ= 0.409), thus allowing to conclude that H4 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each endorser type item and purchase intentions (mean of 3 items). Results presented in appendix 25 shows that there is a positive correlation between all the items, so reinforcing the positive correlation presented by Pearson's value.

Table 16 - Pearson's Correlation between endorser's type and consumers purchasing intentions

	Purchase Intentions
Type	,409**
**, Correlation is significant at the 0.01 level (2-tailed)	

5.3.5 Multiple endorsements

To analyze the multiple endorsement question, it has been developed a set of four items that supported the assessment to be made about the impact of more than one celebrity in an advertisement. Answers were given based on a 7-point likert scale, where 1 = strongly disagree and 7 = strongly agree.

Two opposite ideas can be observed in Figure 41. When analyzing the first two items: if the presence of more than one celebrity in the advertisement makes it (1) persuasive and (2) convincing, it seems that, on average, respondents do not agree. On the other hand, when they were asked if the presence of more than one celebrity in the advertisement makes it (3) appealing and (4) dynamic, on average, respondents do agree.

Figure 41 – Multiple endorsement evaluation items
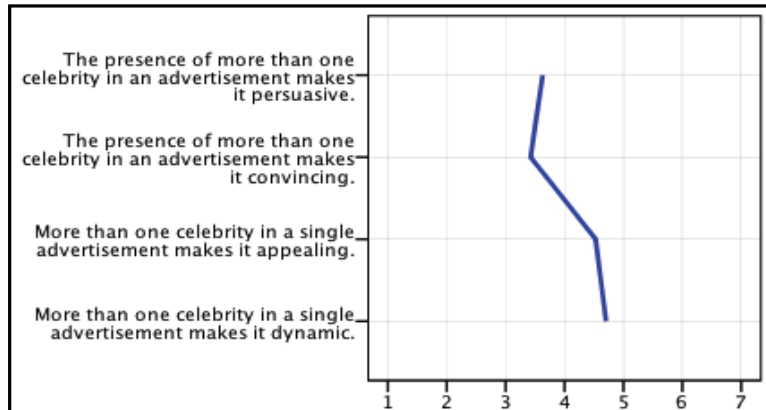
Figure 42, 43 and 44 present a comparison of the mean scores of agreement about the four items between the groups of respondents established by gender, age and educational background. The analysis of these Figures shows that all the groups have quite similar opinions. It is also interesting to note that respondents with high school education have, on average, slightly lower levels of agreement in all the items than respondents of the other educational groups.

In order to find out if there were any statistical differences in the distribution of these items among the different population groups, two tests were done: Mann-Whitney test ($\alpha= 0.05$) (appendix 26) to compare gender groups and Kruskal-Wallis test ($\alpha= 0.05$) (appendices 27 and 28) to compare age and educational background population groups. However, any significant differences were found in the distribution of these items, which allow us to conclude that all the groups followed the same opinion pattern.

Figure 42 – Multiple endorsements according to respondents gender
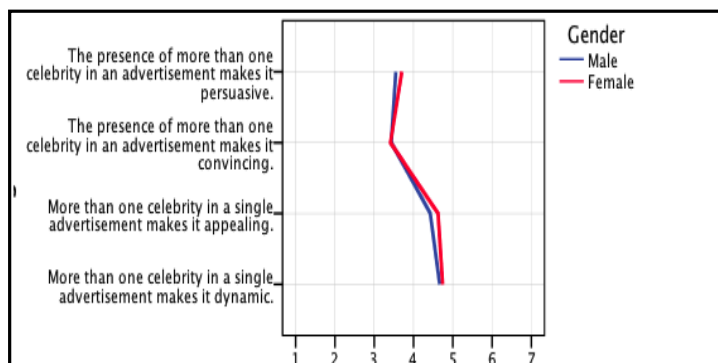
Figure 43 – Multiple endorsements according to respondents age
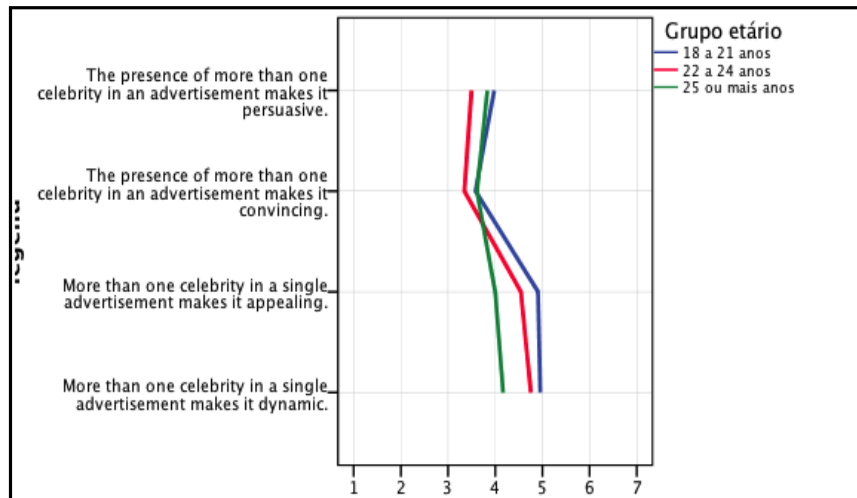
Figure 44 – Multiple endorsements according to respondents educational background
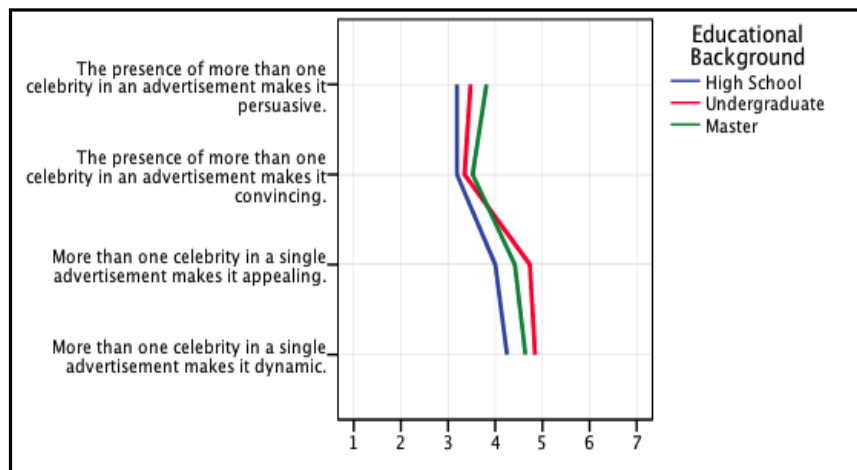
H5, which aims to find out if there was any relationship between multiple endorsements and purchasing intentions.

1. According to Pearson's correlation presented in table 17, there is a positive and medium relationship between the two variables (ρ= 0.555) and makes the hypothesis H5 not rejected. It seems that when an advertisement shows more than one celebrity endorsing the product, it has a positive relation with consumers purchase intentions.

2. Spearman's correlation aims to go deeper and present results between each item of multiple endorsements and purchase intentions (mean of 3 items). Results presented in appendix 29 shows that there is a positive correlation between the items: (1)

persuasiveness, (2) convincement, (3) appeal and (4) dynamism and purchasing intentions, so reinforcing the positive correlation presented by Pearson's value

Table 17 - Pearson's Correlation between multiple endorsements and consumers purchasing intentions

	Purchase Intentions
Multiple Endorsement	,555**
**, Correlation is significant at the 0.01 level (2-tailed)	

5.3.6 Multiple product endorsement

In this last question, it has been developed a set of four items that supported the assessment to be made about the impact of a celebrity who promotes several products/brands. Answers were given based on a 7-point likert scale, where 1 = strongly disagree and 7 = strongly agree.

Figure 45 shows the mean scores of agreement with the four items about multiple product endorsement. On average, the answers to all the four items are either neutral or slighty positive. The fact that a celebrity endorser appears promoting many different products does not change the respondents opinion, on average, about (1) the advertisement and (2) celebrity itself. In terms of trust about the celebrity when she endorses more than on brand in a short period of time, on average, it also follows a neutral pattern, concluding that there is no great effect. However, on balance, respondents do agree with the fact that when a single celebrity endorses more than one brand, it is not easy to remember all those endorsed brands.

Figure 45 – Multiple Product endorsement evaluation items
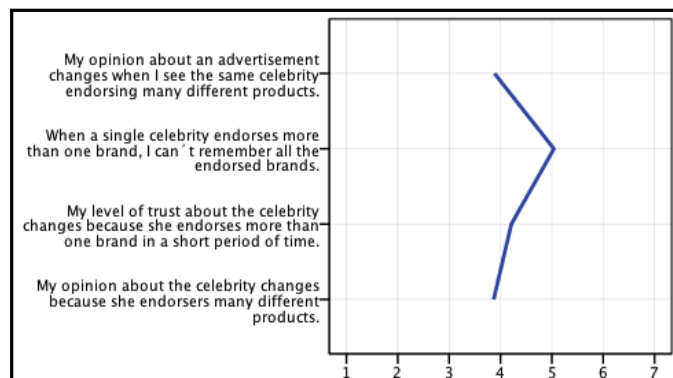
Figures 46, 47 and 48 present a comparison of the mean score of agreement about the four items between the groups of respondents established by gender, age and educational background. As can be seen, all the groups seem quite similar. Mann-Whitney and Kruskal-Wallis tests were computed to compare the distribution of those items between the population groups established by gender, age and educational background and no statistical differences were found (α= 0.05) (appendices 30, 31 and 32).

Figure 46 – Multiple product endorsement according to respondents gender
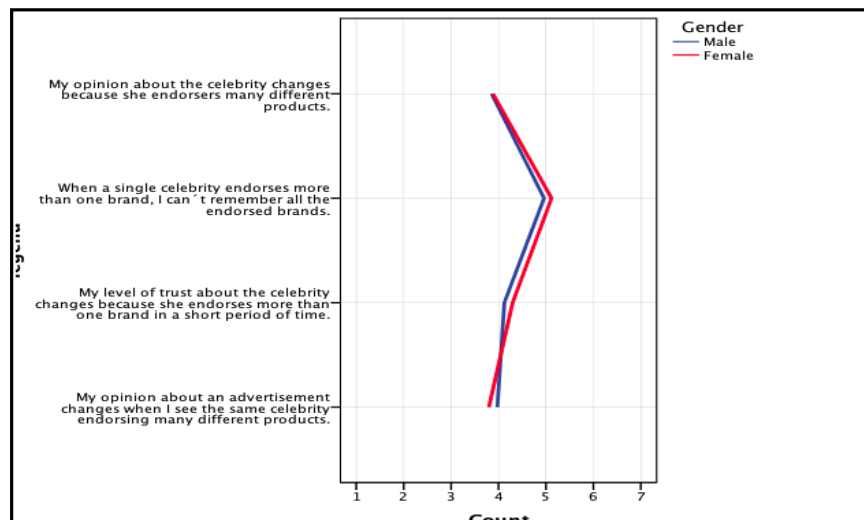
Figure 47 – Multiple product endorsements according to respondents age
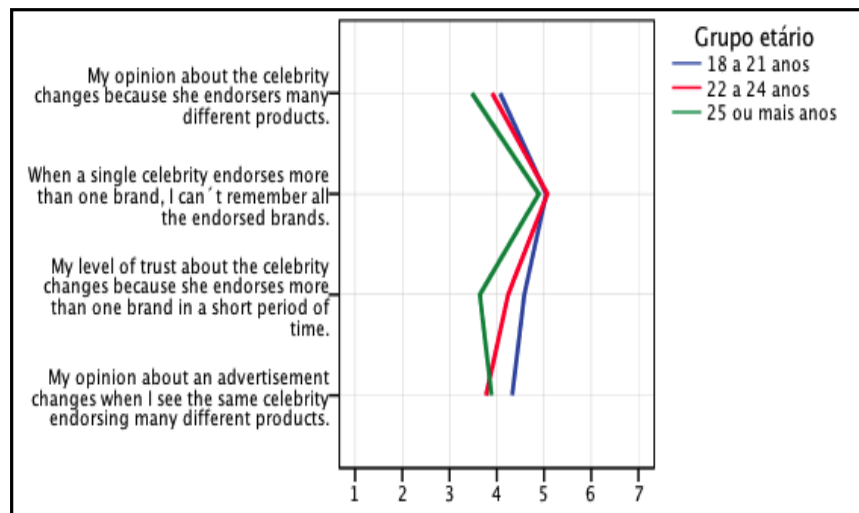
Figure 48 – Multiple product endorsements according to respondent's educational background
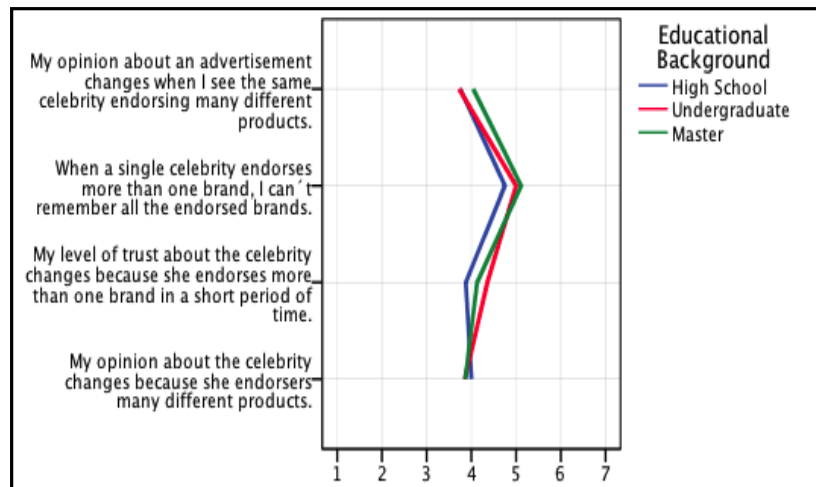
To test the last hypothesis (H6), which aims to find out if multiple product endorsement has a relationship with consumers purchase intentions, two correlations were used:

1. According to Pearson's correlation presented in table 18, there is a positive but weak relationship between the two variables ($\rho= 0.136$). Despite this low relationship, the hypothesis H6 is not rejected.

2. Spearman's correlation aims to go deeper and present results between each item of multiple product endorsement and purchase intentions (mean of 3 items). Results presented in appendix 33 shows some interesting findings based on the lack of correlation between the next three items and purchase intentions, that is to say, regardless the level of agreement with the items, consumers purchase intentions do not change.

   - My opinion about the celebrity changes because she endorsers many different products.

   - My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.

   - My opinion about an advertisement changes when I see the same celebrity endorsing many different products.

Table 18 - Pearson's Correlation between multiple product endorsements and consumers purchasing intentions

	Purchase Intentions
Multiple Product Endorsement	,136**
*, Correlation is significant at the 0.05 level (2-tailed)	

Chapter 6: Conclusions, Limitations and Future Research

6.1 Major conclusions

This study was designed to investigate how a set of endorsers characteristics (i.e., gender, credibility, attractiveness, type, multiple endorsements and multiple product endorsement) would influence consumers intention to purchase a product.

All the correlation matrices presented in the study, indicate that there was a positive relationship between the dependent variables and consumers purchasing intentions. This indicates that higher scores in those dependent variables lead to higher purchasing intentions.

One of the first purposes of this study tried to find any relationship between endorser's gender and consumers purchasing intentions. In order to avoid unbiased results, it was used a neutral product – ice cream – so no gender tendency would exist. The respective research hypothesis was considered to be valid, showing a positive and moderate correlation between the two variables.

Previously studies that analyzed endorser's gender resulted in multiple ideas. Some have explored the relationship between endorser's gender and consumer's gender resulting in two opposite ideas: endorser's gender does not significantly influence consumer attitudes toward products (Freiden, 1984) and endorser's gender significantly influences consumer attitudes toward products (Lafferty *et al.,* 2002).

Findings from the study also concluded that there was a relationship between the endorser and the consumer, particularly in what regards the use of a female endorser and male respondents answers, stressing that males do agree more in all the gender items. Previous studies reinforce this output and pointed out that consumers respond differently to female celebrity endorsers than to male celebrity endorsers and ads featuring female celebrities were evaluated more favorably (Klaus and Bailey, 2008). Furthermore, it was found that attractive female models generated superior attitudes than attractive male models across both genders but particularity among males.

It was also tested the relationship between the product – ice cream – and the use of a female endorser. It was found that the female endorser Rita Pereira was considered to create interest on the product, however the level of agreement was not too strong. Contradicting this last

finding, respondents stated that if instead of a female celebrity endorser there would be a male one, their evaluation about the product and motivation to the ad would not be different, which makes this relationship inconclusive. Carsky and Zuckerman (1991) also examined the relationship of three neutral products and male and female endorsers. They found that there was no interaction between the gender of the endorser and the gender of the respondent regarding the likelihood of purchase, and attitude toward the ads.

H2 meant to explore the relationship between endorser's credibility and consumers purchase intentions and despite presenting a moderate but positive correlation its final findings were not totally in accordance with the previous studies.

The majority of the research done about credibility states that an endorser, who has the key credibility source factors, is able to increase considerably the purchase intentions of the consumer (Liu *et al.,* 2007). Additionally, it is supported the idea that using credible endorsers and their personal sources may be a way to bring higher levels of believability into an advertising message (Beltramini and Sirsi 1992), once it has been shown that they are able to increase and influence consumers purchase intentions (Gotlieb and Sarel 1991).

Surprisingly, this study does not support all the results from the literature. José Mourinho, who is considered to have higher levels of credibility, appeared in the first advertisement endorsing a bank service. In the second advertisement appeared Paulo Futre who is considered to be less credible, endorsed a drink called Licor Beirão. However, according to the literature review José Mourinho should enhance purchase intentions due to his credibility scores.

In the study of Ohanian (1991) one of the major conclusions was that the perceived expertise of a celebrity in the eyes of the consumers is more important in explaining purchase intentions and carries more persuasiveness rather than their attractiveness and trustworthiness. When analyzing the results obtained from Spearman's correlation (José Mourinho versus Paulo Futre) it can be concluded that for all the items of expertise, Paulo Futre presented higher values, what can be part of a possible explanation.

Additionally, further research done about credibility supports the theory that highly credible sources are more persuasive than less credible ones, but only under certain conditions (Kunze, 2009). This idea finds its basis in the cognitive response theory which claims that social influence depends on a message recipient's initial opinion (Sternthal, Dholakia, and Leavitt,

1978). Theoretically, a source lacking credibility can be more persuasive than a high credible source if individuals have a positive predisposition towards the message. With this study, this theory finds here one additional empirical finding, once that the product endorsed by Paulo Futre is much more targeted to the range of ages of the sample than the product promoted by José Mourinho. In this case, the recipient's initial opinion about a bank is worst than a drink.

H3, which explored the relationship between attractiveness and consumers purchasing intentions was also valid and presented a moderate correlation in both advertisements. According to Erdogan (1999) there is no coincidence on most advertisements using attractive people once consumers tend to form positive stereotypes about such people. In addition, research has proven that physically attractive communicators are more successful at changing beliefs (Baker and Churchill 1977; Chaiken 1979; Debevec and Keman 1984) and generating purchasing intentions (Friedman *et al.* 1976; Petroshius and Crocker 1989; Petty and Cacioppo 1980) than their unattractive counterparts.

Findings from this study contradict previous authors, since the endorser who is considered to be less attractive – Ana Bola – obtained higher levels of purchasing intentions. Contrary to what happened in the credibility question, the product being endorsed in these two shown advertisements was the same, however the content of both ads were different from each other and consumers might get involved in different ways. In the advertisement of Diana Chaves (attractive endorser), respondents could read that when buying a pair of eyeglasses, they would receive a second pair as an offer and in the second ad the main message was that when buying a pair of eyeglasses, consumers would receive a discount equal to their age (i.e. 25 years old = 25% discount). One of the possible reasons to explain the results is that consumers would prefer to have a discount, especially in the economic scenario in which we are living, rather than getting an extra pair of eyeglasses, which could be unnecessary.

Additionally, Erdogan (1999) also stated that attractiveness is not merely based on physical attributes and that there are other virtuous characteristics that receivers may perceive in endorser intellectual skills, personality properties or lifestyle characteristics. Empirically, Diana Chaves is physically much more attractive than Ana Bola and this idea gets more power if we take a look into the sample's range of age due to the fact that Ana Bola has much more influence in elder generations and Diana Chaves in younger's one.

Another possible reason is that there might exist a relationship between the endorser attractiveness and credibility. Anderson (2005) tested if the physical attractiveness of endorsers would have a positive relationship with endorser's credibility and her conclusion was that attractive endorsers received statistically significantly lower ratings of endorser credibility than unattractive endorsers. Thus, despite having a greater influence power next to younger generations, Diana Chaves might be seen as a less credible endorser and as a consequence the purchasing intentions on the products she endorses are lower.

In terms of the benefits of using celebrities rather than non-celebrities to endorse the products, findings of this study didn't reach the desired precision due to failures on the construction of the questionnaire. However, results were in accordance with some of the literature.

Endorser's type presented a positive and moderate relationship with consumers purchasing intentions, which means that the hypothesis was valid. Despite agreeing positively with the majority of the purposed endorser's type items, respondents did not show a remarkable tendency in their answers, in particular as regards to the questions about attitudes toward the ads and also attitudes towards the products endorsed by celebrities. Respondents saw simultaneously two advertisements promoting the same product and the same brand: the first ad contained a celebrity and the second did not. In fact, respondents slightly agree with the fact that their evaluations about the product would be different from the ad with a celebrity to the other. It reinforced the theory supported by previous studies, which argues that when a consumer observes messages from two different brands, one containing a celebrity endorsing a product and the other not, believes the celebrity-endorsed product will have more purchases (Clark and Horstman, 2003). This increasing tendency on purchasing intentions is also related with the fact that celebrity endorsers were found to be more trustworthy, competent and slightly more attractive than non-celebrity endorsers, as it is stated by Atkin and Block (1983).

It also proved that there exists a relation between ads containing celebrities and attitudes towards the ad and product. Respondents do agree with the idea that when an advertisement contains a celebrity it becomes more popular, easier to remember or even that it can stuck their attention. These findings are not aligned with some of past studies, which shows that using a well-known celebrity as an endorser could help to improve the subjects rating of the commercial (Rashid, and Nallamuthu 2002). Furthermore, Silvera and Austad (2004) also

stated that using celebrities to endorse a product enhances positive advertising ratings and product evaluations.

However respondents agree with the idea that products being endorsed by celebrities might not be of good quality, reinforcing the idea that despite having a well-known person promoting the product there isn't a transfer of perceived quality into the product, which might go against the idea of McCraken (1989) who argued that celebrities have the capability to deliver meanings of extra depth, power, subtlety and also offers a range of lifestyle and personality which cannot be matched by anonymous people.

The use of more than one celebrity in an advertisement proved to have a positive relationship with consumers purchasing intentions and their attitude towards the ad seems to be different. In this research question it was used once again an advertisement, which was showing a bank service and respondents agree with the fact that the ad becomes more dynamic and appealing that is aligned with previous studies. Those have concluded that when using more than one celebrity in a campaign, the consumer has a positive impact on attitude toward the advertisement, attitude toward brand and purchase intentions (Saleem, 2007). Furthermore, Hsu and McDonald (2002) also concluded that this technique would help the advertisers to reduce the boredom of the ad. However, the use of multiple endorsements did not proved to be worthwhile if practionners want to make the ad more convincing or more persuasive.

Finally, despite that fact the same celebrity appears endorsing more than one product/brand, it has got a positive but weak relationship with consumers purchasing intentions.

Findings from this study, present evidence that respondents agree with the idea that when the same celebrity endorsers several different brands, the phenomenon of overexposure occurs and makes the consumer confused and unable to recall correctly all the endorsed brands.

Past research on multiple product endorsements (Mowen and Brwon 1981; Mowen, Brown and Schulman 1979) suggest that it does negatively affect consumers assessment of the endorser's trustworthiness, brand image and ad evaluations, however respondents of this study showed to be totally indifferent to those aspects.

6.2 Limitations of the study

As it happens with the majority of studies, no honest research is complete without admitting the limitations that were faced during the study. The present study has, also, some constraints that need to be mentioned.

The first limitation is related with the sampling method - non-probabilistic - that fails in not being representative of the entire population and consequently the values obtained from the statistical tests are considered to be true within the sample used but not to be extrapolated to the universe.

The second limitation lies on the fact that the majority of the participants were students. The great focus came from those aged between 22 and 24 years old and not from any other range of age, what thereby restricts the inflow of diverse opinions on the issue at hand. Although they represent a large part of the population, results cannot be conclusive for the whole population. Probably, if an older generation would have been taken into consideration then a completely diverse perspective could have been assumed.

The third limitation affects the type of advertisements that were used. Despite being conscious that the advertised products/brands should be neutral so that no bias to respondents gender would exist, those products/brands should also match the type of sample used in the study. As an example of that limitation, when the credibility item was under analysis, we had the case of the two shown advertisements comprising a bank service and a drink and no matter the credibility of the endorser, perhaps students would prefer to buy a drink rather than a bank services product.

Finally, the last limitation is related with the fact that the degree of understanding of the issues in the questionnaire was uncontrollable. There are times when the respondents answer according to the needs of the researchers, not taking the questionnaire on a serious note. However, it was assumed that all subjects would answer the questionnaire honestly but this hinders the progress of the research to be conducted in an absolute authentic manner.

Despite all the previous limitations, the empirical research and its limitations work as a basis of future recommendation in order to obtain better results in future investigations made within the same topic.

6.3 Future research

Further research on this topic should include at first a wide range of ages to be included in the sample, having in mind that this study has focused its research mainly on respondents within the age of a regular student. It would also be interesting to study not only the perceptions of students but also consumers from different stages of life, as is the case of housewives and/or children, as all of them do have a quite number of targeted advertisements in Portugal nowadays. Including them in the future research would be a good help on getting an overall perception of the Portuguese consumers.

The usage of focus groups in future studies could also be helpful on obtaining consumers thoughts and beliefs from varied angles. Despite having used a quantitative approach to collect data for this study, qualitative studies such as semi-structured interviews and focus group would also enable researchers to probe answers and enrich the understanding of the research questions.

Chaiken and Eagly (1983) noted that source characteristics are more persuasive when they appear in television ads than in print ads. Despite making the questionnaire too exhaustive, it would be interesting to present TV advertisements, not only due to sources characteristics but also to the overall dynamism that it would bring into the analysis. Another possibility would be the use of those TV ads as the content of the focus groups.

Finally, the Meaning Transfer Model by McCracken (1989) needs to be analyzed with greater depth. Study on how the meaning is transferred from the celebrity to the product, reasons on how the media selects such celebrities and how consumers are attracted towards their attributes and what in turn leads to buying behavior can also be investigated.

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- www.millenniumbcp.com
- www.activia.pt

Appendices

Appendix 1

Questionnaire

Thank you very much for your motivation to participate in my research. It is an important part of my Master's thesis in marketing. The purpose of my thesis is to investigate the effect of celebrity endorsement on consumers' purchase intentions.

Celebrity Endorser = someone (who is considered to be well known) who promotes a product or brand for a company.

Please read the questions carefully and remember that there are no right or wrong answers, just give your honest opinion. The collected data will be used for academic purposes only and will be treated confidentially.

The entire questionnaire should only take about 5-7 minutes.

Section (1/7)

Your gender:

o Male   o Female

Your age:

o 18   o 19   o 20   o 21   o 22   o 23   o 24   o 25+

Your Educational background:

o High School   o Undergraduate   o Master

Section (2/7)

All the images that are presented below are real and show advertisement campaigns where one or more celebrity promotes a product/brand.

Advertisement 1

1. Using the previous advertisement as a reference, please answer the following questions using a scale from 1 = strongly disagree to 7 = strongly agree:

	1	2	3	4	5	6	7
The use of a female celebrity endorser plays an important role in this advertisement.							
The gender of the celebrity endorser creates interest on the product.							
If a male celebrity endorser were used, my motivation for this advertisement would be different.							
The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.							
The use of a female celebrity endorser matches the advertised product.							

2. If you were in the market today for this product/brand and if you saw the previous advertisement, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Section (3/7)

In this section you will see two images / advertising campaigns.

1. Please indicate the number that best reflects your **feelings towards the celebrity**:

1. Dishonest	1	2	3	4	5	6	7	Honest
2. Unreliable	1	2	3	4	5	6	7	Reliable
3. Insincere	1	2	3	4	5	6	7	Sincere
4. Untrustworthy	1	2	3	4	5	6	7	Trustworthy

5. Not Expert	1	2	3	4	5	6	7	Expert
6. Unskilled	1	2	3	4	5	6	7	Skilled
7. Undependable	1	2	3	4	5	6	7	Dependable
8. Inexperienced	1	2	3	4	5	6	7	Experienced
9. Unknowledgeable	1	2	3	4	5	6	7	Knowledgeable
10. Unqualified	1	2	3	4	5	6	7	Qualified

2. If you were in the market today for this product/brand and if you saw this specific advertisement, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Advertisement 3

The effects of Celebrity Endorsement on Consumers Purchasing Intentions

1. Please indicate the number that best reflects your **feelings towards the celebrity**:

1. Dishonest	1	2	3	4	5	6	7	Honest
2. Unreliable	1	2	3	4	5	6	7	Reliable
3. Insincere	1	2	3	4	5	6	7	Sincere
4. Untrustworthy	1	2	3	4	5	6	7	Trustworthy
5. Not Expert	1	2	3	4	5	6	7	Expert
6. Unskilled	1	2	3	4	5	6	7	Skilled
7. Undependable	1	2	3	4	5	6	7	Dependable
8. Inexperienced	1	2	3	4	5	6	7	Experienced
9. Unknowledgeable	1	2	3	4	5	6	7	Knowledgeable
10. Unqualified	1	2	3	4	5	6	7	Qualified

2. If you were in the market today for this product/brand and if you saw this specific advertisement how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Section (4/7)

In this section you will see two images / advertising campaigns.

Advertisement 4

1. Please indicate the number that best reflect your **feelings towards the celebrity**:

1. Unattractive	1	2	3	4	5	6	7	Attractive
2. Beautiful	1	2	3	4	5	6	7	Ugly
3. Sexy	1	2	3	4	5	6	7	Not Sexy
4. Classy	1	2	3	4	5	6	7	Not Classy
5. Elegant	1	2	3	4	5	6	7	Plain

2. If you were in the market today for this product/brand and if you saw this advertisement with this endorser, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Advertisement 5

1. Please indicate the number that best reflects your **feelings towards the celebrity**:

1. Unattractive	1	2	3	4	5	6	7	Attractive
2. Beautiful	1	2	3	4	5	6	7	Ugly
3. Sexy	1	2	3	4	5	6	7	Not Sexy
4. Classy	1	2	3	4	5	6	7	Not Classy
5. Elegant	1	2	3	4	5	6	7	Plain

2. If you were in the market today for this product/brand and if you saw this advertisement with this endorser, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Section (5/7)

You will see two images at once. The brand / product in both campaigns is the same.

Advertisement 6

1. Using the previous advertisement as a reference, please answer the following questions using a scale from 1 = strongly disagree to 7 = strongly agree:

	1	2	3	4	5	6	7
My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.							
The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.							
Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.							
Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.							
I believe products that are advertised by celebrities are of good quality.							

2. If you were in the market today for this product/brand and if you saw this two advertisements and with these endorsers, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

Section (6/7)

The next image shows an advertising campaign where two or more celebrities appear together. This is called multiple endorsement.

Advertisement 7

1. Using the previous advertisement as a reference, please answer the following questions using a scale from 1 = strongly disagree to 7 = strongly agree:

	1	2	3	4	5	6	7
The presence of more than one celebrity in an advertisement makes it persuasive.							
The presence of more than one celebrity in an advertisement makes it convincing.							
More than one celebrity in a single advertisement makes it appealing.							
More than one celebrity in a single advertisement makes it dynamic.							

2. If you were in the market today for this product/brand and if you saw this advertisement with this multiple endorsers, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely   1   2   3   4   5   6   7   likely

Definitely would not 1   2   3   4   5   6   7   definitely would

Improbable   1   2   3   4   5   6   7   probable

Section (7/7)

In this last section, you will see a single celebrity who promotes three products / brands different. This is called Multiple Product Endorsement.

Advertisement 8
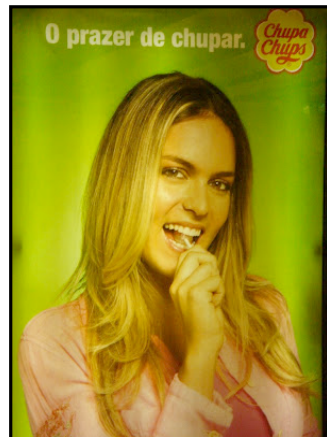
1. Using the previous advertisement as a reference (you can also use other advertisements you remember) please answer the following questions using a scale from 1 = strongly disagree to 7 = strongly agree:

	1	2	3	4	5	6	7
My opinion about the celebrity changes because she endorsers many different products.							
When a single celebrity endorses more than one brand, I can't remember all the endorsed brands.							
My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.							
My opinion about an advertisement changes when I see the same celebrity endorsing many different products.							

2. If you were in the market today for this products/brands and if you saw these advertisements with this same endorser, how likely is it that you would consider purchasing the product in this advertisement? Please indicate the number that best reflects your feelings.

Unlikely	1	2	3	4	5	6	7	likely
Definitely would not	1	2	3	4	5	6	7	definitely would
Improbable	1	2	3	4	5	6	7	probable

The END

Appendix 2

Mann-Whitney test

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of females and males.

Hypothesis:

H_0: The distribution of scores of the item *i* is the same in population groups of females and males.

H_1: The distribution of scores of the item *i* is not equal in population groups of females and males.

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
The use of a female celebrity endorser plays an important role in this advertisement.	Male	134	146,83	19675,50
	Female	135	123,26	16639,50
	Total	269		
The gender of the celebrity endorser creates interest on the product.	Male	134	151,78	20338,00
	Female	135	118,35	15977,00
	Total	269		
If a male celebrity endorser were used, my motivation for this advertisement would be different.	Male	134	155,74	20868,50
	Female	135	114,42	15446,50
	Total	269		
The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	Male	134	143,85	19276,00
	Female	135	126,21	17039,00
	Total	269		
The use of a female celebrity endorser matches the advertised product.	Male	132	148,97	19664,00
	Female	135	119,36	16114,00
	Total	267		

Test Statistics[a]	The use of a female celebrity endorser plays an important role in this advertisement.	The gender of the celebrity endorser creates interest on the product.	If a male celebrity endorser were used, my motivation for this advertisement would be different.	The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	The use of a female celebrity endorser matches the advertised product.
Mann-Whitney U	7459,500	6797,000	6266,500	7859,000	6934,000
Wilcoxon W	16639,500	15977,000	15446,500	17039,000	16114,000
Z	-2,531	-3,608	-4,411	-1,884	-3,189
Asymp. Sig. (2-tailed)	,011	,000	,000	,060	,001

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of all the items between both population groups, except in the one that states that the use of a female endorser (and not a male celebrity) changes the evaluation about the product. In all the others, males do agree more than females.

Appendix 3

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores about the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

H_1: At least one of the population groups has a different distribution of the item i of another group.

Ranks			
	Grupo etário	N	Mean Rank
The use of a female celebrity endorser plays an important role in this advertisement.	18 a 21 anos	45	136,74
	22 a 24 anos	181	135,41
	25 ou mais anos	43	131,47
	Total	269	
The gender of the celebrity endorser creates interest on the product.	18 a 21 anos	45	134,11
	22 a 24 anos	181	135,93
	25 ou mais anos	43	132,02
	Total	269	
If a male celebrity endorser were used, my motivation for this advertisement would be different.	18 a 21 anos	45	127,70
	22 a 24 anos	181	134,60
	25 ou mais anos	43	144,33
	Total	269	
The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	18 a 21 anos	45	128,90
	22 a 24 anos	181	134,76
	25 ou mais anos	43	142,40
	Total	269	
The use of a female celebrity endorser matches the advertised product.	18 a 21 anos	45	127,43
	22 a 24 anos	179	137,46
	25 ou mais anos	43	126,48
	Total	267	

Test Statistics [a,b]					
	The use of a female celebrity endorser plays an important role in this advertisement.	The gender of the celebrity endorser creates interest on the product.	If a male celebrity endorser were used, my motivation for this advertisement would be different.	The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	The use of a female celebrity endorser matches the advertised product.
Chi-square	,121	,099	1,045	,685	1,133
df	2	2	2	2	2
Asymp. Sig.	,941	,952	,593	,710	,568

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of 18-21, 22-24 and 25+ years old.

Appendix 4

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of high school, undergraduate and master.

Hypothesis:

H$_0$: The distribution of scores of the item i is the same in population groups of high school, undergraduate and master

H$_1$: At least one of the population groups has a different distribution of the item i of another group.

Ranks			
	Educational Background	N	Mean Rank
The use of a female celebrity endorser plays an important role in this advertisement.	High School	19	134,34
	Undergraduate	117	127,13
	Master	133	142,02
	Total	269	
The gender of the celebrity endorser creates interest on the product.	High School	19	125,58
	Undergraduate	117	135,36
	Master	133	136,03
	Total	269	
If a male celebrity endorser were used, my motivation for this advertisement would be different.	High School	19	149,97
	Undergraduate	117	127,15
	Master	133	139,77
	Total	269	
The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	High School	19	133,68
	Undergraduate	117	126,54
	Master	133	142,63
	Total	269	
The use of a female celebrity endorser matches the advertised product.	High School	19	117,76
	Undergraduate	116	128,96
	Master	132	140,77
	Total	267	

	The use of a female celebrity endorser plays an important role in this advertisement.	The gender of the celebrity endorser creates interest on the product.	If a male celebrity endorser were used, my motivation for this advertisement would be different.	The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	The use of a female celebrity endorser matches the advertised product.
Chi-square	2,368	,319	2,459	2,740	2,433
df	2	2	2	2	2
Asymp. Sig.	,306	,853	,292	,254	,296

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of high school, undergraduate and master degrees.

Appendix 5

Spearman Correlation:

Purpose: To present the correlation between each item of gender and purchase intentions.

	Purchase Intention
The use of a female celebrity endorser plays an important role in this advertisement.	,304**
The gender of the celebrity endorser creates interest on the product.	,345**
If a male celebrity endorser were used, my motivation for this advertisement would be different.	,139*
The use of a female celebrity endorser (and not a male celebrity) changes my evaluation about the product.	,237**
The use of a female celebrity endorser matches the advertised product.	,413**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 6

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of females and males.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of females and males.

H_1: The distribution of scores of the item i is not equal in population groups of females and males.

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Dishonest / Honest	Male	129	133,00	17156,50
	Female	130	127,03	16513,50
	Total	259		
Unreliable / Reliable	Male	129	141,20	18215,00
	Female	130	118,88	15455,00
	Total	259		
Insincere / Sincere	Male	129	139,09	17942,50
	Female	130	120,98	15727,50
	Total	259		
Untrustworthy / Trustworthy	Male	129	131,96	17023,00
	Female	130	128,05	16647,00
	Total	259		
Not Expert / Expert	Male	129	136,65	17628,00
	Female	130	123,40	16042,00
	Total	259		
Unskilled / Skilled	Male	129	138,36	17848,00
	Female	130	121,71	15822,00
	Total	259		
Undependable / Dependable	Male	129	126,46	16313,50
	Female	130	133,51	17356,50
	Total	259		
Inexperienced / Experienced	Male	129	134,89	17400,50
	Female	130	125,15	16269,50
	Total	259		
Unknowledgeable / Knowledgeable	Male	129	141,20	18214,50
	Female	130	118,89	15455,50
	Total	259		
Unqualified / Qualified	Male	129	133,05	17164,00
	Female	130	126,97	16506,00
	Total	259		

	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Mann–Whitney U	7998,500	6940,000	7212,500	8132,000	7527,000	7307,000	7928,500	7754,500	6940,500	7991,000
Wilcoxon W	16513,500	15455,000	15727,500	16647,000	16042,000	15822,000	16313,500	16269,500	15455,500	16506,000
Z	-,668	-2,512	-2,011	-,436	-1,507	-1,912	-,773	-1,113	-2,526	-,691
Asymp. Sig. (2-tailed)	,504	,012	,044	,663	,132	,056	,439	,266	,012	,489

Test Statistics[a]

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of the items unreliable/reliable, insincere/sincere and unknowledgeable/knowledgeable. In these items, males group do agree more the female one.

Appendix 7

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H_0: The distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

H_1: At least one of the population groups has a different distribution of the item *i* from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
Dishonest / Honest	18 a 21 anos	43	126,48
	22 a 24 anos	176	135,24
	25 ou mais anos	40	110,75
	Total	259	
Unreliable / Reliable	18 a 21 anos	43	113,97
	22 a 24 anos	176	136,14
	25 ou mais anos	40	120,23
	Total	259	
Insincere / Sincere	18 a 21 anos	43	128,85
	22 a 24 anos	176	137,38
	25 ou mais anos	40	98,75
	Total	259	
Untrustworthy / Trustworthy	18 a 21 anos	43	117,41
	22 a 24 anos	176	140,71
	25 ou mais anos	40	96,43
	Total	259	
Not Expert / Expert	18 a 21 anos	43	119,09
	22 a 24 anos	176	136,59
	25 ou mais anos	40	112,73
	Total	259	
Unskilled / Skilled	18 a 21 anos	43	120,78
	22 a 24 anos	176	133,07
	25 ou mais anos	40	126,40
	Total	259	
Undependable / Dependable	18 a 21 anos	43	133,90
	22 a 24 anos	176	134,92
	25 ou mais anos	40	104,18
	Total	259	
Inexperienced / Experienced	18 a 21 anos	43	116,69
	22 a 24 anos	176	135,92
	25 ou mais anos	40	118,25
	Total	259	
Unknowledgeable / Knowledgeable	18 a 21 anos	43	119,22
	22 a 24 anos	176	135,95
	25 ou mais anos	40	115,43
	Total	259	
Unqualified / Qualified	18 a 21 anos	43	123,72
	22 a 24 anos	176	134,16
	25 ou mais anos	40	118,45
	Total	259	

Test Statistics[a,b]									
	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Chi-square	3,903	4,211	9,278	13,874	4,936	1,189	5,866	3,895	3,905	2,008
df	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	,142	,122	,010	,001	,085	,552	,053	,143	,142	,366

LSD Multiple Comparisons

Hypothesis:

H$_0$: The mean rank of the item i is equal in population groups j and k.

H$_1$: The mean rank of the item i is not equal in population groups j and k.

Dependent Variable	(I) Grupo etário	(J) Grupo etário	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Rank of Insincere / Sincere	18 a 21 anos	22 a 24 anos	-8,534686	12,149936	,483	-32,46124	15,39187
		25 ou mais anos	30,098837	15,689796	,056	-,79867	60,99634
	22 a 24 anos	18 a 21 anos	8,534686	12,149936	,483	-15,39187	32,46124
		25 ou mais anos	38,633523	12,510741	,002	13,99645	63,27060
	25 ou mais anos	18 a 21 anos	-30,098837	15,689796	,056	-60,99634	,79867
		22 a 24 anos	-38,633523	12,510741	,002	-63,27060	-13,99645
Rank of Untrustworthy / Trustworthy	18 a 21 anos	22 a 24 anos	-23,300410	11,974230	,053	-46,88095	,28013
		25 ou mais anos	20,981977	15,462899	,176	-9,46871	51,43266
	22 a 24 anos	18 a 21 anos	23,300410	11,974230	,053	-,28013	46,88095
		25 ou mais anos	44,282386	12,329818	,000	20,00160	68,56317
	25 ou mais anos	18 a 21 anos	-20,981977	15,462899	,176	-51,43266	9,46871
		22 a 24 anos	-44,282386	12,329818	,000	-68,56317	-20,00160

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of the items insincere/sincere and untrustworthy/trustworthy. In order to find out between which groups those differences existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 8	

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of high school, undergraduate and master.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of high school, undergraduate and master

H_1: At least one of the population groups has a different distribution on the item i from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
Dishonest / Honest	High School	18	116,89
	Undergraduate	112	139,79
	Master	129	123,33
	Total	259	
Unreliable / Reliable	High School	18	90,86
	Undergraduate	112	130,07
	Master	129	135,40
	Total	259	
Insincere / Sincere	High School	18	107,50
	Undergraduate	112	135,05
	Master	129	128,75
	Total	259	
Untrustworthy / Trustworthy	High School	18	97,69
	Undergraduate	112	137,61
	Master	129	127,90
	Total	259	
Not Expert / Expert	High School	18	104,28
	Undergraduate	112	127,79
	Master	129	135,51
	Total	259	
Unskilled / Skilled	High School	18	98,14
	Undergraduate	112	120,54
	Master	129	142,66
	Total	259	
Undependable / Dependable	High School	18	111,14
	Undergraduate	112	134,91
	Master	129	128,37
	Total	259	
Inexperienced / Experienced	High School	18	98,00
	Undergraduate	112	131,10
	Master	129	133,51
	Total	259	
Unknowledgeable / Knowledgeable	High School	18	112,17
	Undergraduate	112	128,07
	Master	129	134,17
	Total	259	
Unqualified / Qualified	High School	18	109,97
	Undergraduate	112	128,08
	Master	129	134,46
	Total	259	

Test Statistics[a,b]										
	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Chi-square	3,788	6,134	2,319	4,974	3,271	9,982	1,753	4,063	1,660	2,033
df	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	,150	,047	,314	,083	,195	,007	,416	,131	,436	,362

LSD Multiple Comparisons

Hypothesis:

H_0: The mean rank of the item i is equal in population groups j and k.

H_1: The mean rank of the item i is not equal in population groups j and k.

Dependent Variable	(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence	
						Lower Bound	Upper Bound
Rank of Q6b	High School	Undergraduate	-39,210317	18,002872	,030	-74,66290	-3,75773
		Master	-44,538114	17,837868	,013	-79,66576	-9,41047
	Undergraduate	High School	39,210317	18,002872	,030	3,75773	74,66290
		Master	-5,327796	9,156300	,561	-23,35906	12,70347
	Master	High School	44,538114	17,837868	,013	9,41047	79,66576
		Undergraduate	5,327796	9,156300	,561	-12,70347	23,35906
Rank of Q6f	High School	Undergraduate	-22,396825	17,510391	,202	-56,87958	12,08593
		Master	-44,523902	17,349901	,011	-78,69061	-10,35720
	Undergraduate	High School	22,396825	17,510391	,202	-12,08593	56,87958
		Master	-22,127076	8,905824	,014	-39,66508	-4,58907
	Master	High School	44,523902	17,349901	,011	10,35720	78,69061
		Undergraduate	22,127076	8,905824	,014	4,58907	39,66508

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of the items unreliable/reliable and unskilled/skilled. In order to find out between which groups those differences existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 9

Spearman Correlation: Credibility (José Mourinho)

Purpose: To present the correlation between each item of credibility and purchase intentions.

	Purchase Intention
Dishonest / Honest	,342**
Unreliable / Reliable	,332**
Insincere / Sincere	,281**
Untrustworthy / Trustworthy	,319**
Not Expert / Expert	,164**
Unskilled / Skilled	,172**
Undependable / Dependable	,304**
Inexperienced / Experienced	,181**
Unknowledgeable / Knowledgeable	,216**
Unqualified / Qualified	,218**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 10

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of females and males.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of females and males.

H_1: The distribution of scores of the item i is not equal in population groups of females and males.

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Dishonest / Honest	Male	129	139,48	17993,50
	Female	130	120,59	15676,50
	Total	259		
Unreliable / Reliable	Male	129	134,16	17306,50
	Female	130	125,87	16363,50
	Total	259		
Insincere / Sincere	Male	129	139,93	18051,50
	Female	130	120,14	15618,50
	Total	259		
Untrustworthy / Trustworthy	Male	128	131,84	16875,50
	Female	130	127,20	16535,50
	Total	258		
Not Expert / Expert	Male	129	129,08	16651,00
	Female	130	130,92	17019,00
	Total	259		
Unskilled / Skilled	Male	129	137,76	17770,50
	Female	130	122,30	15899,50
	Total	259		
Undependable / Dependable	Male	129	138,56	17874,00
	Female	130	121,51	15796,00
	Total	259		
Inexperienced / Experienced	Male	129	140,56	18132,50
	Female	130	119,52	15537,50
	Total	259		
Unknowledgeable / Knowledgeable	Male	129	136,55	17615,50
	Female	130	123,50	16054,50
	Total	259		
Unqualified / Qualified	Male	129	131,28	16935,50
	Female	129	127,72	16475,50
	Total	258		

Test Statistics[a]										
	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Mann-Whitney U	7161,500	7848,500	7103,500	8020,500	8266,000	7384,500	7281,000	7022,500	7539,500	8090,500
Wilcoxon W	15676,500	16363,500	15618,500	16535,500	16651,000	15899,500	15796,000	15537,500	16054,500	16475,500
Z	-2,072	-,913	-2,160	-,512	-,202	-1,698	-1,886	-2,309	-1,438	-,393
Asymp. Sig. (2-tailed)	,038	,361	,031	,608	,840	,090	,059	,021	,150	,694

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of the items dishonest/honest, insincere/sincere and inexperienced/experienced. In these items, males group do agree more the female one

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Appendix 11

</div>

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H₀: The distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

H₁: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
Dishonest / Honest	18 a 21 anos	43	118,30
	22 a 24 anos	176	128,55
	25 ou mais anos	40	148,95
	Total	259	
Unreliable / Reliable	18 a 21 anos	43	129,51
	22 a 24 anos	176	126,63
	25 ou mais anos	40	145,36
	Total	259	
Insincere / Sincere	18 a 21 anos	43	123,71
	22 a 24 anos	176	127,35
	25 ou mais anos	40	148,44
	Total	259	
Untrustworthy / Trustworthy	18 a 21 anos	43	124,20
	22 a 24 anos	175	128,15
	25 ou mais anos	40	141,13
	Total	258	
Not Expert / Expert	18 a 21 anos	43	131,73
	22 a 24 anos	176	125,07
	25 ou mais anos	40	149,85
	Total	259	
Unskilled / Skilled	18 a 21 anos	43	121,40
	22 a 24 anos	176	127,89
	25 ou mais anos	40	148,51
	Total	259	
Undependable / Dependable	18 a 21 anos	43	130,66
	22 a 24 anos	176	126,91
	25 ou mais anos	40	142,86
	Total	259	
Inexperienced / Experienced	18 a 21 anos	43	122,97
	22 a 24 anos	176	126,91
	25 ou mais anos	40	151,16
	Total	259	
Unknowledgeable / Knowledgeable	18 a 21 anos	43	112,42
	22 a 24 anos	176	128,55
	25 ou mais anos	40	155,26
	Total	259	
Unqualified / Qualified	18 a 21 anos	43	126,31
	22 a 24 anos	175	127,77
	25 ou mais anos	40	140,49
	Total	258	

Test Statistics[a,b]									
	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Chi-square	3,830	2,145	3,041	1,310	3,774	3,296	1,571	4,041	7,342	1,090
df	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	,147	,342	,219	,520	,152	,192	,456	,133	,025	,580

LSD Multiple Comparisons

Hypothesis:

H_0: The mean rank of the item i is equal in population groups j and k.

H_1: The mean rank of the item i is not equal in population groups j and k.

Multiple Comparisons						
Rank of Q8i LSD						
(I) Grupo etário	(J) Grupo etário	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18 a 21 anos	22 a 24 anos	-16,135373	12,297097	,191	-40,35172	8,08098
	25 ou mais anos	-42,843895	15,879833	,007	-74,11564	-11,57216
22 a 24 anos	18 a 21 anos	16,135373	12,297097	,191	-8,08098	40,35172
	25 ou mais anos	-26,708523	12,662272	,036	-51,64400	-1,77304
25 ou mais anos	18 a 21 anos	42,843895	15,879833	,007	11,57216	74,11564
	22 a 24 anos	26,708523	12,662272	,036	1,77304	51,64400

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences only in distribution of the item unknowledgeable/knowledgeable. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 12

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in populations of high school, undergraduate and master.

Hypothesis:

H$_0$: The distribution of scores of the item *i* is the same in population groups of high school, undergraduate and master

H$_1$: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
Dishonest / Honest	High School	18	112,67
	Undergraduate	112	123,47
	Master	129	138,09
	Total	259	
Unreliable / Reliable	High School	18	130,89
	Undergraduate	112	128,96
	Master	129	130,78
	Total	259	
Insincere / Sincere	High School	18	136,08
	Undergraduate	112	116,75
	Master	129	140,66
	Total	259	
Untrustworthy / Trustworthy	High School	18	114,31
	Undergraduate	111	123,63
	Master	129	136,67
	Total	258	
Not Expert / Expert	High School	18	138,78
	Undergraduate	112	123,96
	Master	129	134,02
	Total	259	
Unskilled / Skilled	High School	18	145,81
	Undergraduate	112	120,80
	Master	129	135,78
	Total	259	
Undependable / Dependable	High School	18	142,11
	Undergraduate	112	117,63
	Master	129	139,05
	Total	259	
Inexperienced / Experienced	High School	18	161,17
	Undergraduate	112	114,39
	Master	129	139,20
	Total	259	
Unknowledgeable / Knowledgeable	High School	18	141,19
	Undergraduate	112	119,36
	Master	129	137,67
	Total	259	
Unqualified / Qualified	High School	18	145,00
	Undergraduate	112	124,65
	Master	128	131,56
	Total	258	

Test Statistics[a,b]										
	Dishonest / Honest	Unreliable / Reliable	Insincere / Sincere	Untrustworthy / Trustworthy	Not Expert / Expert	Unskilled / Skilled	Undependable / Dependable	Inexperienced / Experienced	Unknowledgeable / Knowledgeable	Unqualified / Qualified
Chi-square	3,460	,040	6,431	2,762	1,415	3,409	5,736	10,359	4,221	1,413
df	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	,177	,980	,040	,251	,493	,182	,057	,006	,121	,493

LSD Multiple Comparisons

Hypothesis:

H_0: The mean rank of the item i is equal in population groups j and k.

H_1: The mean rank of the item i is not equal in population groups j and k.

Dependent Variable	(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Rank of Q8c	High School	Undergraduate	19,333333	18,563480	,299	-17,22324	55,88991
		Master	-4,571705	18,393338	,804	-40,79323	31,64981
	Undergraduate	High School	-19,333333	18,563480	,299	-55,88991	17,22324
		Master	-23,905039	9,441427	,012	-42,49779	-5,31228
	Master	High School	4,571705	18,393338	,804	-31,64981	40,79323
		Undergraduate	23,905039	9,441427	,012	5,31228	42,49779
Rank of Q8h	High School	Undergraduate	46,773810	18,312260	,011	10,71195	82,83566
		Master	21,965116	18,144420	,227	-13,76622	57,69645
	Undergraduate	High School	-46,773810	18,312260	,011	-82,83566	-10,71195
		Master	-24,808693	9,313656	,008	-43,14983	-6,46755
	Master	High School	-21,965116	18,144420	,227	-57,69645	13,76622
		Undergraduate	24,808693	9,313656	,008	6,46755	43,14983

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in distribution of the items insincere/sincere and inexperienced/experienced. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 13

Spearman Correlation: Credibility (Paulo Futre)

Purpose: To present the correlation between each item of credibility and purchase intentions.

	Purchase Intention
Dishonest / Honest	,403**
Unreliable / Reliable	,393**
Insincere / Sincere	,341**
Untrustworthy / Trustworthy	,415**
Not Expert / Expert	,327**
Unskilled / Skilled	,353**
Undependable / Dependable	,304**
Inexperienced / Experienced	,304**
Unknowledgeable / Knowledgeable	,349**
Unqualified / Qualified	,353**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 14

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item *i* is the same in populations of females and males.

Hypothesis:

H_0: The distribution of scores of the item *i* is the same in population groups of females and males.

H_1: The distribution of scores of the item *i* is not equal in population groups of females and males.

Ranks				
	Gender	**N**	**Mean Rank**	**Sum of Ranks**
Unattractive / Attractive	Male	124	109,95	13634,00
	Female	128	142,53	18244,00
	Total	252		
Ugly / Beautiful	Male	124	111,16	13783,50
	Female	128	141,36	18094,50
	Total	252		
Not Sexy / Sexy	Male	124	118,77	14727,00
	Female	128	133,99	17151,00
	Total	252		
Not Classy / Classy	Male	124	123,50	15313,50
	Female	128	129,41	16564,50
	Total	252		
Plain / Elegant	Male	123	117,10	14403,50
	Female	127	133,63	16971,50
	Total	250		

Test Statistics[a]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Mann-Whitney U	5884,000	6033,500	6977,000	7563,500	6777,500
Wilcoxon W	13634,000	13783,500	14727,000	15313,500	14403,500
Z	-3,660	-3,397	-1,727	-,656	-1,850
Asymp. Sig. (2-tailed)	,000	,001	,084	,512	,064

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in the distribution of the items unattractive/attractive and ugly/beautiful. In these items, females group do agree more the male one.

Appendix 15

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

H_1: At least one of the population groups has a different distribution about the item i from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
Unattractive / Attractive	18 a 21 anos	43	124,29
	22 a 24 anos	172	125,37
	25 ou mais anos	37	134,31
	Total	252	
Ugly / Beautiful	18 a 21 anos	43	131,62
	22 a 24 anos	172	124,35
	25 ou mais anos	37	130,54
	Total	252	
Not Sexy / Sexy	18 a 21 anos	43	126,19
	22 a 24 anos	172	126,99
	25 ou mais anos	37	124,61
	Total	252	
Not Classy / Classy	18 a 21 anos	43	139,07
	22 a 24 anos	172	122,05
	25 ou mais anos	37	132,59
	Total	252	
Plain / Elegant	18 a 21 anos	42	142,45
	22 a 24 anos	171	120,99
	25 ou mais anos	37	127,09
	Total	250	

Test Statistics[a,b]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Chi-square	,538	,507	,036	2,264	3,133
df	2	2	2	2	2
Asymp. Sig.	,764	,776	,982	,322	,209

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of 18-21, 22-24 and 25+ years old.

Appendix 16

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of high school, undergraduate and master.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of high school, undergraduate and master

H_1: At least one of the population groups has a different distribution about the item i from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
Unattractive / Attractive	High School	18	132,81
	Undergraduate	109	121,78
	Master	125	129,71
	Total	252	
Ugly / Beautiful	High School	18	154,39
	Undergraduate	109	115,88
	Master	125	131,75
	Total	252	
Not Sexy / Sexy	High School	18	132,22
	Undergraduate	109	124,80
	Master	125	127,16
	Total	252	
Not Classy / Classy	High School	18	162,64
	Undergraduate	109	116,90
	Master	125	129,67
	Total	252	
Plain / Elegant	High School	18	157,00
	Undergraduate	109	117,83
	Master	123	127,69
	Total	250	

Test Statistics[a,b]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Chi-square	,889	5,973	,195	6,805	4,982
df	2	2	2	2	2
Asymp. Sig.	,641	,050	,907	,033	,083

LSD Multiple Comparisons

Hypothesis:

H_0: The mean rank of the item i is equal in population groups j and k.

H_1: The mean rank of the item i is not equal in population groups j and k

Dependent Variable	(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Rank of Q10b	High School	Undergraduate	38,512742	17,811030	,032	3,43326	73,59222
		Master	22,640889	17,648729	,201	-12,11893	57,40071
	Undergraduate	High School	-38,512742	17,811030	,032	-73,59222	-3,43326
		Master	-15,871853	9,174372	,085	-33,94112	2,19741
	Master	High School	-22,640889	17,648729	,201	-57,40071	12,11893
		Undergraduate	15,871853	9,174372	,085	-2,19741	33,94112
Rank of Q10d	High School	Undergraduate	45,739806	18,020037	,012	10,24868	81,23093
		Master	32,970889	17,855832	,066	-2,19683	68,13861
	Undergraduate	High School	-45,739806	18,020037	,012	-81,23093	-10,24868
		Master	-12,768917	9,282031	,170	-31,05022	5,51238
	Master	High School	-32,970889	17,855832	,066	-68,13861	2,19683
		Undergraduate	12,768917	9,282031	,170	-5,51238	31,05022

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in distribution of the items ugly/beautiful and not classy/classy. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 17

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of females and males.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of females and males.

H_1: The distribution of scores of the item i is not equal in population groups of females and males.

Ranks				
	Gender	**N**	**Mean Rank**	**Sum of Ranks**
Unattractive / Attractive	Male	124	138,32	17151,50
	Female	128	115,05	14726,50
	Total	252		
Ugly / Beautiful	Male	124	140,90	17471,00
	Female	128	112,55	14407,00
	Total	252		
Not Sexy / Sexy	Male	124	140,91	17473,00
	Female	128	112,54	14405,00
	Total	252		
Not Classy / Classy	Male	124	139,99	17358,50
	Female	128	113,43	14519,50
	Total	252		
Plain / Elegant	Male	124	142,29	17643,50
	Female	127	110,10	13982,50
	Total	251		

Test Statistics[a]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Mann-Whitney U	6470,500	6151,000	6149,000	6263,500	5854,500
Wilcoxon W	14726,500	14407,000	14405,000	14519,500	13982,500
Z	-2,681	-3,249	-3,255	-2,951	-3,625
Asymp. Sig. (2-tailed)	,007	,001	,001	,003	,000

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences in distribution of all the items between the population groups of males and females. In these items, the males groups do agree more than the females one.

Appendix 18

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of 18-21, 22-24 and 25+ years old.

H_1: At least one of the population groups has a different distribution about the item i from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
Unattractive / Attractive	18 a 21 anos	43	130,35
	22 a 24 anos	172	128,03
	25 ou mais anos	37	114,93
	Total	252	
Ugly / Beautiful	18 a 21 anos	43	122,12
	22 a 24 anos	172	130,77
	25 ou mais anos	37	111,76
	Total	252	
Not Sexy / Sexy	18 a 21 anos	43	134,94
	22 a 24 anos	172	125,89
	25 ou mais anos	37	119,51
	Total	252	
Not Classy / Classy	18 a 21 anos	43	131,67
	22 a 24 anos	172	131,38
	25 ou mais anos	37	97,80
	Total	252	
Plain / Elegant	18 a 21 anos	43	126,42
	22 a 24 anos	171	131,27
	25 ou mais anos	37	101,14
	Total	251	

Test Statistics[a,b]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Chi-square	1,262	2,505	1,031	7,006	5,589
df	2	2	2	2	2
Asymp. Sig.	,532	,286	,597	,030	,061

LSD Multiple Comparisons

Hypothesis:

H$_0$: The mean rank of the item i is equal in population groups j and k.

H$_1$: The mean rank of the item i is not equal in population groups j and k

Multiple Comparisons						

Multiple Comparisons						
Rank of Q12d LSD						
(I) Grupo etário	**(J) Grupo etário**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
					Lower Bound	**Upper Bound**
18 a 21 anos	22 a 24 anos	,293605	12,053393	,981	-23,44600	24,03321
	25 ou mais anos	33,877121	15,852524	,034	2,65499	65,09925
22 a 24 anos	18 a 21 anos	-,293605	12,053393	,981	-24,03321	23,44600
	25 ou mais anos	33,583517	12,811400	,009	8,35099	58,81604
25 ou mais anos	18 a 21 anos	-33,877121	15,852524	,034	-65,09925	-2,65499
	22 a 24 anos	-33,583517	12,811400	,009	-58,81604	-8,35099

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences only in distribution of the item not classy/classy. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 19

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of high school, undergraduate and master.

Hypothesis:

H₀: The distribution of scores of the item *i* is the same in population groups of high school, undergraduate and master

H₁: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
Unattractive / Attractive	High School	18	109,36
	Undergraduate	109	117,61
	Master	125	136,72
	Total	252	
Ugly / Beautiful	High School	18	110,31
	Undergraduate	109	123,88
	Master	125	131,12
	Total	252	
Not Sexy / Sexy	High School	18	117,97
	Undergraduate	109	121,13
	Master	125	132,41
	Total	252	
Not Classy / Classy	High School	18	110,17
	Undergraduate	109	136,70
	Master	125	119,96
	Total	252	
Plain / Elegant	High School	18	118,86
	Undergraduate	109	127,73
	Master	124	125,52
	Total	251	

Test Statistics[a,b]					
	Unattractive / Attractive	**Ugly / Beautiful**	**Not Sexy / Sexy**	**Not Classy / Classy**	**Plain / Elegant**
Chi-square	5,685	1,699	1,841	4,215	,257
df	2	2	2	2	2
Asymp. Sig.	,058	,428	,398	,122	,879

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of high school, undergraduate and master degrees.

Appendix 20

Spearman Correlation: Attractiveness (Ana Bola)

Purpose: To present the correlation between each item of attractiveness and purchase intentions.

	Purchase Intention
Unattractive / Attractive	,547**
Ugly / Beautiful	,504**
Not Sexy / Sexy	,417**
Not Classy / Classy	,397**
Plain / Elegant	,422**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 21

Spearman Correlation: Attractiveness (Diana Chaves)

Purpose: To present the correlation between each item of attractiveness and purchase intentions.

	Purchase Intention
Unattractive / Attractive	,325**
Ugly / Beautiful	,397**
Not Sexy / Sexy	,343**
Not Classy / Classy	,503**
Plain / Elegant	,486**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 22

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item i is the same in populations of females and males.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of females and males.

H_1: The distribution of scores of the item i is not equal in population groups of females and males.

Ranks					
	Gender	N	Mean Rank	Sum of Ranks
My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	Male	122	123,17	15026,50
	Female	128	127,72	16348,50
	Total	250		
The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	Male	122	140,88	17187,00
	Female	128	110,84	14188,00
	Total	250		
Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	Male	122	131,14	15999,00
	Female	128	120,13	15376,00
	Total	250		
Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	Male	122	130,04	15865,00
	Female	127	120,16	15260,00
	Total	249		
I believe products that are advertised by celebrities are of good quality.	Male	122	132,52	16167,50
	Female	127	117,78	14957,50
	Total	249		

Test Statistics[a]					
	My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity	The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	I believe products that are advertised by celebrities are of good quality.
Mann-Whitney U	7523,500	5932,000	7120,000	7132,000	6829,500
Wilcoxon W	15026,500	14188,000	15376,000	15260,000	14957,500
Z	-,507	-3,356	-1,228	-1,106	-1,659
Asymp. Sig. (2-tailed)	,612	,001	,219	,269	,097

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences only in distribution of the item that state that the advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser. In this item, the males groups do agree more than the females one.

Appendix 23

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H$_0$: The distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

H$_1$: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	18 a 21 anos	43	133,37
	22 a 24 anos	171	123,50
	25 ou mais anos	36	125,58
	Total	250	
The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	18 a 21 anos	43	111,19
	22 a 24 anos	171	130,14
	25 ou mais anos	36	120,57
	Total	250	
Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	18 a 21 anos	43	112,23
	22 a 24 anos	171	123,53
	25 ou mais anos	36	150,71
	Total	250	
Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	18 a 21 anos	43	124,45
	22 a 24 anos	170	120,79
	25 ou mais anos	36	145,54
	Total	249	
I believe products that are advertised by celebrities are of good quality.	18 a 21 anos	43	124,91
	22 a 24 anos	170	128,20
	25 ou mais anos	36	110,00
	Total	249	

Test Statistics[a,b]					
	My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	**The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.**	**Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.**	**Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.**	**I believe products that are advertised by celebrities are of good quality.**
Chi-square	,664	2,671	6,194	3,665	2,003
df	2	2	2	2	2
Asymp. Sig.	,717	,263	,045	,160	,367

LSD Multiple Comparisons

Hypothesis:

H$_0$: The mean rank of the item i is equal in population groups j and k.

H$_1$: The mean rank of the item i is not equal in population groups j and k

Multiple Comparisons						
Rank of Q14c LSD						
(I) Grupo etário	(J) Grupo etário	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18 a 21 anos	22 a 24 anos	-11,296682	11,986862	,347	-34,90618	12,31282
	25 ou mais anos	-38,475775	15,872998	,016	-69,73947	-7,21208
22 a 24 anos	18 a 21 anos	11,296682	11,986862	,347	-12,31282	34,90618
	25 ou mais anos	-27,179094	12,884476	,036	-52,55655	-1,80164
25 ou mais anos	18 a 21 anos	38,475775	15,872998	,016	7,21208	69,73947
	22 a 24 anos	27,179094	12,884476	,036	1,80164	52,55655

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences only in distribution of the item that state that advertisements with celebrity are more popular than advertisements with non-celebrity endorsers. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 24

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population groups of high school, undergraduate and master.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of high school, undergraduate and master

H_1: At least one of the population groups has a different distribution of the item i from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	High School	16	135,31
	Undergraduate	109	123,24
	Master	125	126,21
	Total	250	
The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	High School	16	104,50
	Undergraduate	109	123,59
	Master	125	129,85
	Total	250	
Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	High School	16	123,91
	Undergraduate	109	117,92
	Master	125	132,31
	Total	250	
Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	High School	16	143,00
	Undergraduate	109	112,16
	Master	124	133,97
	Total	249	
I believe products that are advertised by celebrities are of good quality.	High School	16	123,38
	Undergraduate	109	120,90
	Master	124	128,81
	Total	249	

Test Statistics[a,b]					
	My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	I believe products that are advertised by celebrities are of good quality.
Chi-square	,428	1,963	2,409	6,667	,749
df	2	2	2	2	2
Asymp. Sig.	,807	,375	,300	,036	,688

LSD Multiple Comparisons

Hypothesis:

H$_0$: The mean rank of the item i is equal in population groups j and k.

H$_1$: The mean rank of the item i is not equal in population groups j and k

Multiple Comparisons						
Rank of Q14d LSD						
(I) Educational Background	(J) Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High School	Undergraduate	30,844037	18,695181	,100	-5,97900	67,66708
	Master	9,032258	18,549880	,627	-27,50459	45,56911
Undergraduate	High School	-30,844037	18,695181	,100	-67,66708	5,97900
	Master	-21,811779	9,168574	,018	-39,87070	-3,75286
Master	High School	-9,032258	18,549880	,627	-45,56911	27,50459
	Undergraduate	21,811779	9,168574	,018	3,75286	39,87070

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there are significant differences only in distribution of the item that state that advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers. In order to find out between which groups that difference existed, it was computed LSD multiple comparisons, comparing the groups two by two.

Appendix 25

Spearman Correlation: Endorser type

Purpose: To present the correlation between each item of endorser type and purchase intentions.

	Purchase Intention
My ratings about the product are different from the advertisement with the celebrity to the advertisement with the non-celebrity endorser.	,236**
The advertisement with the celebrity gets my attention more than the advertisement with the non-celebrity endorser.	,306**
Advertisements with celebrity are more popular than advertisements with non-celebrity endorsers.	,360**
Advertisements with celebrities are more favorable to remember than advertisements with non-celebrity endorsers.	,294**
I believe products that are advertised by celebrities are of good quality.	,317**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 26

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of females and males.

Hypothesis:

H_0: The distribution of scores of the item *i* is the same in population groups of females and males.

H_1: The distribution of scores of the item *i* is not equal in population groups of females and males.

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
The presence of more than one celebrity in an advertisement makes it persuasive.	Male	122	122,93	14997,00
	Female	128	127,95	16378,00
	Total	250		
The presence of more than one celebrity in an advertisement makes it convincing.	Male	122	125,95	15366,50
	Female	128	125,07	16008,50
	Total	250		
More than one celebrity in a single advertisement makes it appealing.	Male	122	121,00	14762,00
	Female	128	129,79	16613,00
	Total	250		
More than one celebrity in a single advertisement makes it dynamic.	Male	122	124,17	15149,00
	Female	128	126,77	16226,00
	Total	250		

Test Statistics[a]				
	The presence of more than one celebrity in an advertisement makes it persuasive.	The presence of more than one celebrity in an advertisement makes it convincing.	More than one celebrity in a single advertisement makes it appealing.	More than one celebrity in a single advertisement makes it dynamic.
Mann-Whitney U	7494,000	7752,500	7259,000	7646,000
Wilcoxon W	14997,000	16008,500	14762,000	15149,000
Z	-,558	-,099	-,987	-,293
Asymp. Sig. (2-tailed)	,577	,921	,324	,770

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of males and females.

Appendix 27

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H$_0$: The distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

H$_1$: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
The presence of more than one celebrity in an advertisement makes it persuasive.	18 a 21 anos	43	139,19
	22 a 24 anos	171	120,64
	25 ou mais anos	36	132,22
	Total	250	
The presence of more than one celebrity in an advertisement makes it convincing.	18 a 21 anos	43	132,92
	22 a 24 anos	171	122,48
	25 ou mais anos	36	130,97
	Total	250	
More than one celebrity in a single advertisement makes it appealing.	18 a 21 anos	43	141,91
	22 a 24 anos	171	124,32
	25 ou mais anos	36	111,53
	Total	250	
More than one celebrity in a single advertisement makes it dynamic.	18 a 21 anos	43	138,64
	22 a 24 anos	171	125,32
	25 ou mais anos	36	110,64
	Total	250	

Test Statistics[a,b]				
	The presence of more than one celebrity in an advertisement makes it persuasive.	**The presence of more than one celebrity in an advertisement makes it convincing.**	**More than one celebrity in a single advertisement makes it appealing.**	**More than one celebrity in a single advertisement makes it dynamic.**
Chi-square	2,706	,991	3,801	3,134
df	2	2	2	2
Asymp. Sig.	,258	,609	,150	,209

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of 18-21, 22-24 and 25+ years old.

Appendix 28

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item i is the same in population goups of high school, undergraduate and master.

Hypothesis:

H$_0$: The distribution of scores of the item i is the same in population groups of high school, undergraduate and master

H$_1$: At least one of the population groups has a different distribution about the item i of another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
The presence of more than one celebrity in an advertisement makes it persuasive.	High School	16	105,75
	Undergraduate	109	119,50
	Master	125	133,26
	Total	250	
The presence of more than one celebrity in an advertisement makes it convincing.	High School	16	112,97
	Undergraduate	109	122,85
	Master	125	129,41
	Total	250	
More than one celebrity in a single advertisement makes it appealing.	High School	16	108,81
	Undergraduate	109	132,03
	Master	125	121,94
	Total	250	
More than one celebrity in a single advertisement makes it dynamic.	High School	16	110,09
	Undergraduate	109	128,65
	Master	125	124,73
	Total	250	

Test Statistics[a,b]				
	The presence of more than one celebrity in an advertisement makes it persuasive.	The presence of more than one celebrity in an advertisement makes it convincing.	More than one celebrity in a single advertisement makes it appealing.	More than one celebrity in a single advertisement makes it dynamic.
Chi-square	3,488	1,028	2,154	1,009
df	2	2	2	2
Asymp. Sig.	,175	,598	,341	,604

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of high school, undergraduate and master degrees.

Appendix 29

Spearman Correlation: Multiple endorsements

Purpose: To present the correlation between each item of multiple endorsements and purchase intentions.

	Purchase Intention
The presence of more than one celebrity in an advertisement makes it persuasive.	,394**
The presence of more than one celebrity in an advertisement makes it convincing.	,452**
More than one celebrity in a single advertisement makes it appealing.	,529**
More than one celebrity in a single advertisement makes it dynamic.	,431**
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Appendix 30

Mann-Whitney test:

Purpose: To test whether the distribution of scores of the item i is the same in populations of females and males.

Hypothesis:

H_0: The distribution of scores of the item i is the same in population groups of females and males.

H_1: The distribution of scores of the item i is not equal in population groups of females and males.

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
My opinion about the celebrity changes because she endorsers many different products.	Male	122	125,06	15257,50
	Female	128	125,92	16117,50
	Total	250		
When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	Male	122	123,16	15025,50
	Female	128	127,73	16349,50
	Total	250		
My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	Male	122	122,30	14920,50
	Female	128	128,55	16454,50
	Total	250		
My opinion about an advertisement changes when I see the same celebrity endorsing many different products.	Male	122	129,72	15826,00
	Female	128	121,48	15549,00
	Total	250		

Test Statistics[a]				
	My opinion about the celebrity changes because she endorsers many different products.	When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	My opinion about an advertisement changes when I see the same celebrity endorsing many different products.
Mann-Whitney U	7754,500	7522,500	7417,500	7293,000
Wilcoxon W	15257,500	15025,500	14920,500	15549,000
Z	-,095	-,516	-,699	-,915
Asymp. Sig. (2-tailed)	,924	,606	,485	,360

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of males and females.

Appendix 31

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

Hypothesis:

H_0: The distribution of scores of the item *i* is the same in population groups of 18-21, 22-24 and 25+ years old.

H_1: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Grupo etário	**N**	**Mean Rank**
My opinion about the celebrity changes because she endorsers many different products.	18 a 21 anos	43	133,37
	22 a 24 anos	171	126,73
	25 ou mais anos	36	110,25
	Total	250	
When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	18 a 21 anos	43	126,16
	22 a 24 anos	171	125,26
	25 ou mais anos	36	125,86
	Total	250	
My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	18 a 21 anos	43	141,16
	22 a 24 anos	171	126,01
	25 ou mais anos	36	104,39
	Total	250	
My opinion about an advertisement changes when I see the same celebrity endorsing many different products.	18 a 21 anos	43	143,31
	22 a 24 anos	171	121,19
	25 ou mais anos	36	124,68
	Total	250	

Test Statistics[a,b]				
	My opinion about the celebrity changes because she endorsers many different products.	When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	My opinion about an advertisement changes when I see the same celebrity endorsing many different products.
Chi-square	2,217	,007	5,330	3,324
df	2	2	2	2
Asymp. Sig.	,330	,997	,070	,190

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of 18-21, 22-24 and 25+ years old.

Appendix 32

Kruskal-Wallis test:

Purpose: To test whether the distribution of scores of the item *i* is the same in population groups of high school, undergraduate and master.

Hypothesis:

H₀: The distribution of scores of the item *i* is the same in population groups of high school, undergraduate and master

H₁: At least one of the population groups has a different distribution about the item *i* from another group.

Ranks			
	Educational Background	**N**	**Mean Rank**
My opinion about the celebrity changes because she endorsers many different products.	High School	16	129,19
	Undergraduate	109	124,98
	Master	125	125,48
	Total	250	
When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	High School	16	111,88
	Undergraduate	109	122,14
	Master	125	130,18
	Total	250	
My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	High School	16	113,03
	Undergraduate	109	130,35
	Master	125	122,87
	Total	250	
My opinion about an advertisement changes when I see the same celebrity endorsing many different products.	High School	16	118,81
	Undergraduate	109	118,51
	Master	125	132,45
	Total	250	

Test Statistics[a,b]				
	My opinion about the celebrity changes because she endorsers many different products.	When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	My opinion about an advertisement changes when I see the same celebrity endorsing many different products.
Chi-square	,048	1,413	1,184	2,385
df	2	2	2	2
Asymp. Sig.	,976	,493	,553	,304

Decision:

Based on this sample and assuming a significance level of 5%, it is concluded that there aren't significant differences in the distribution of any of the items between any of the population groups of high school, undergraduate and master degrees.

Appendix 33

Spearman Correlation: Multiple product endorsements

Purpose: To present the correlation between each item of multiple product endorsements and purchase intentions.

	Purchase Intention
My opinion about the celebrity changes because she endorsers many different products.	0,076
When a single celebrity endorses more than one brand, I can´t remember all the endorsed brands.	,139*
My level of trust about the celebrity changes because she endorses more than one brand in a short period of time.	0,088
My opinion about an advertisement changes when I see the same celebrity endorsing many different products.	-0,007
**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	