

**AN EXPERIMENTAL INVESTIGATION OF THE RELATIVE  
EFFECTS OF DIFFERENT FORMS OF ENDORSEMENT  
ON BRAND TRUST**

by

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## **DEDICATION**

**This dissertation is dedicated to my parents**

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# **ABSTRACT**

## **AN EXPERIMENTAL INVESTIGATION OF THE RELATIVE EFFECTS OF DIFFERENT FORMS OF ENDORSEMENT ON BRAND TRUST**

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Endorsement is a popular marketing communications tool that has been used by marketers for many years. However, traditional methods of marketing are now being surpassed as sophisticated consumers become more cynical and seek out unofficial, non-commercial information about brands. Due to the advent of technology, consumers are able to communicate independently via the internet in order to seek out, and provide, their own endorsements for products and brands.

This study differentiates between different forms of dependent (paid-for) endorsements and independent (non-paid-for) endorsements; namely regular consumer endorsements, expert endorsements and association endorsements, and investigates their relative effects on brand trust. In addition, this study introduces a new form of endorsement, namely implied independent association endorsement, and tests its effect on brand trust.

First, a conceptual framework of the structure of the relationship between endorsements and brand trust was compiled from relative endorsement literature. The study then investigated these relationships amongst South African nutritional supplement users who

make use of the Internet to gather product information. The study made use of an Internet-based experimental research design.

The study divided subjects into two experimental groups and one control group. The effect of each form of endorsement on brand trust was tested comparatively between the groups. The measurement instrument used to measure brand trust was an adapted version of the brand trust scale (BTS) designed by Delgado-Ballester (2004:573-592).

Three one-way between-groups ANOVAs were conducted to compare the variability of brand trust scores between the different experimental groups.

The covariate brand familiarity was included to account for previous experience with the brand used in the experiment. One-way between-groups ANCOVA's were used to control the potential confounding that the covariate brand familiarity had on each dependent variable.

The results indicate that neither dependent nor independent regular consumer endorsements have an affect on brand trust scores. However, whilst independent expert and independent association endorsements do significantly influence brand trust scores, dependent expert and dependent (implied independent) association endorsements do not. Finally, it was found that independent endorsements have a greater affect on brand trust scores than dependent (implied independent) endorsements in the association endorsement category.

The first implication for managers is that different forms of endorsement influence brand trust differently, therefore, managers should be able to distinguish between different forms of endorsement available to them to use in their marketing communications mix.

Secondly, managers should start investigating methods of monitoring or influencing independent expert and association endorsements to benefit from their positive influence on brand trust, which in turn has a positive affect on brand equity, consumer loyalty, brand extension acceptance and retailer re-purchases decisions.

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# 1 CHAPTER 1: INTRODUCTION, OBJECTIVES AND CONTEXT OF THE STUDY

## 1.1 INTRODUCTION

Endorsement is a popular marketing communications tool that has been used by marketers for many years. In the consumer domain, endorsement can be defined as an indication of approval of a product, service or brand by a third party (Hallahan, 1999:2). Traditionally, companies make use of paid-for endorsements in the form of celebrity endorsements (Byrne, Whitehead & Breen, 2003:288-296), sponsorship endorsements (Belch & Belch, 2001:12), typical consumer endorsements and association endorsements (Daneshvary & Schwer, 2000:203-213). These paid-for endorsements are also known as dependent endorsements (see Appendix A).

However, traditional methods of marketing are now being surpassed as sophisticated consumers seek out unofficial, non-commercial information in order to help them make more informed product choices and purchase decisions (Davidson & Copulsky, 2006:14). One source of such non-commercial information is through the independent (non-paid-for) endorsement of a product by a third party.

These independent endorsements include regular consumer endorsements (Wang, 2005:402-412), external expert endorsements (Davidson & Copulsky, 2006:14-22; Wang, 2005:402-412), and independent association endorsements (Graham, Harker, Harker & Tuck, 1994:31-43) (see Appendix B).

Little empirical research exists on independent (non-paid-for) endorsements. To date, most endorsement studies have focused on dependent endorsements implemented by companies as a paid-for form of advertising. There is also very little academic literature that distinguishes dependent (paid-for) endorsements from independent (non-paid-for) endorsements. Most academic literature ambiguously refers to both of these forms of endorsement as third party endorsement (Dean, 1999:1).

The majority of previous dependent endorsement studies have focused on celebrity endorsements (Byrne *et al.*, 2003:288-296; Erdogan, 1999:291-314; Hsu & McDonald, 2002:19-29; McCracken, 1989:310-321; Silvera & Austad, 2004:1509-1526). These studies almost unanimously agree that celebrity endorsement is an effective form of paid-for endorsement as long as factors such as association (Byrne *et al.*, 2003:295), cultural meaning (McCracken, 1989:310) and performance (Farrel, Karel, Monfort & McClatchey 2000:1) are considered.

However, the effectiveness of celebrity endorsements was brought into question by a consumer survey conducted by MarketWatch, a global online data and forecasting platform (Datamonitor, 2006). The MarketWatch study provides evidence that “celebrity endorsements are one of the least trusted means of conveying product information” (Datamonitor, 2006).

The results of the MarketWatch study (Datamonitor, 2006) reinforce the argument that consumers are exhibiting a greater degree of cynicism about traditional brand advertising messages and are seeking out brands that are more closely associated with corporate responsibility and trust (Datamonitor, 2006). The results also lend support to Kotler’s (2006) observation that “many [consumers] work hard to avoid advertising messages”.

The effectiveness of using dependent (paid-for) endorsements is therefore called into question by the MarketWatch study. The question therefore arises as to whether independent (non-paid-for) endorsements extract the same degree of cynicism from consumers. Dean (1999:1) found that independent endorsement by a third party had a positive influence on manufacturer esteem. Manufacturer esteem is defined as the degree to which a brand is held in high regard, trusted and respected by its customers (Dean, 1999:2).

The results of the MarketWatch survey (Datamonitor, 2006) and Dean’s (1999:2) findings suggest that further research investigating the influence of different endorsement types on brand-related outcomes, such as esteem and brand trust, is required.

A further review of the literature on endorsements indicated that many endorsement studies are conducted to measure the effect of a specific form of endorsement on one or more dependent variables.

Table 1 provides a summary of previous studies which have investigated the effect of a specific form of endorsement on one or more dependent variables. The table indicates the form of endorsement and dependent variable(s) under investigation, as well as the reported results. It must be noted that the table only lists endorsement studies that have been carried out in the last 10 years (i.e. since 1999).

**Table 1: Previous studies investigating the effect of various forms of endorsements on marketing-related variables**

Form of endorsement under investigation	Dependent variable	Summary of results	Reference
Expert and regular consumer endorsement	Attitude and behavioural intent	Positive expert and consumer endorsements both enhance participants' attitude towards the product. The higher credibility of regular consumer endorsements enhanced participants' behavioural intentions.	Wang (2005:402-412)
Association endorsement	Purchase intent	A natural fit or congruency should exist between an association and a product for the effect on purchase intent to be significant.	Daneshvary & Schwer (2000:203-213)
Third party endorsement by an independent organization – Consumer Reports	Product quality, uniqueness, manufacturer esteem and corporate citizenship	Third party endorsement significantly affected perceived quality, uniqueness and esteem.	Dean (1999:1-12)

The information in Table 1 illustrates the positive effects of different forms of endorsement on various marketing-related variables. However, to the author's knowledge, no previous studies have specifically investigated the influence of different endorsement forms on brand trust. This is an area of concern as Chiagouris and Lantieri (2009:78) recently reported that the emergence of more cynical consumers has led to a climate of mistrust amongst consumers.

In the consumer domain, brand trust can be defined as “the willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri & Holbrook, 2001:82). Previous studies conducted in the consumer domain indicated that brand trust has a positive influence on brand equity (Delgado-Ballester & Munuera-Aleman, 2005:187-196), brand loyalty (Chaudhuri & Holbrook, 2001:81-93), consumer loyalty (Delgado-Ballester, 2001:1240), brand extension acceptance (Reast, 2005:4) and retailer re-purchases decisions (Zboja & Voorhees, 2006:38). Brand trust may therefore be regarded as a “relational market-based asset” (Delgado-Ballester & Munuera-Aleman, 2005:188) that may increase the prospect of future sales.

The above demonstrated power of endorsements to influence various marketing-related variables, and brand trust’s significance as a relational market-based asset, justified a study conducted specifically to examine the influence of different types of endorsement on brand trust. As indicated in the opening paragraph of the introduction, various types of endorsement exist. It was therefore essential to this study to determine whether there is any significant difference in the effects of these different types of endorsement on brand trust.

The results of an endorsement-based study conducted by Wang (2005:402) reported that positive consumer endorsements, rather than expert endorsements, positively influence the behavioural intentions of an audience when the audience is already interested in the product. Wang’s (2005:402) study, therefore, suggested that some forms of endorsement may be more effective than others.

In order to clearly measure these differences, this study had to make a clear distinction with regard to the specific forms of both dependent and independent endorsements under investigation (see Figure 1 on p. 6 below).

The three forms of independent (non-paid-for) endorsements investigated are independent endorsements by a regular consumer, independent endorsements by an expert and independent endorsement by an association. The three forms of dependent (paid-for) endorsements investigated in this study are dependent endorsements by a regular consumer (e.g., “typical consumer” or “slice of life” endorsement), dependent endorsements by an expert and dependent endorsement by an association.



Finally, a new form of dependent association endorsement, known as an implied or simulated independent association endorsement, is introduced in the current study (see Figure 1 on p. 6 below).

The best South African example of implied independent association endorsement is provided by the Buchanan Group who currently operate five so-called “third party branded information media vehicles” in South Africa; namely Brand Power, InfoTalk, Great Chef's Show You How, MediFacts, and Zoot Review (see Appendix B, Figure 21 on p. 153 and the CD attached in Appendix G).

Although these five “media vehicles” utilise very different advertising techniques, they all attempt to simulate the opinions that third parties have of a particular product or brand by providing consumers with facts and information about the products they endorse (Brand Power, 2007). The information is presented in such a way that it seems as if it is coming from an independent source; however the product manufacturers and their advertising agencies are actually paying for the endorsement as a form of advertising (Biz-community, 2005).

According to Brand Power (Biz-community, 2005), these five “media vehicles” are being used extensively by leading companies in the fast moving consumer goods (FMCG) industry as they provide a tactical, cost-effective advertising vehicle that can be incorporated as part of a firm’s marketing communications mix. No previous studies have explicitly distinguished implied independent association endorsements from other forms of endorsements.

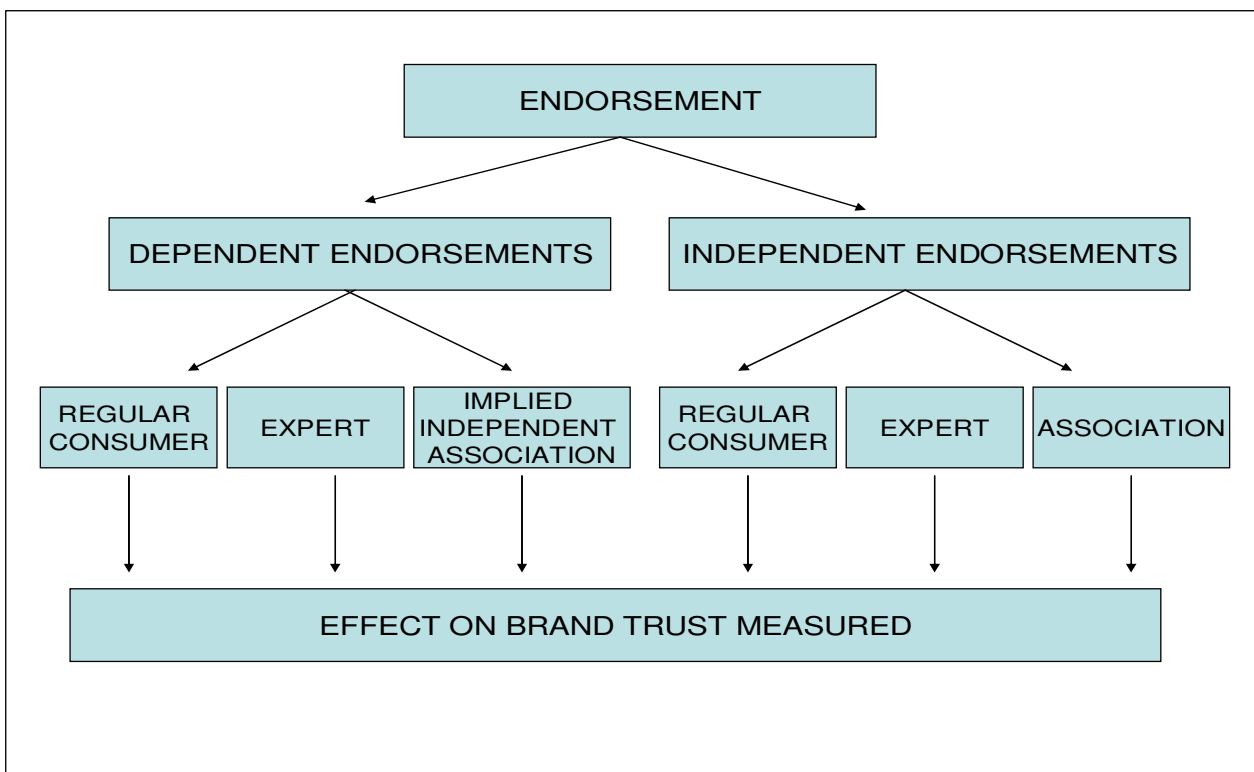
A review of the literature revealed that researchers differ greatly in the terminology used to distinguish between dependent and independent endorsements. Dean (1999:2) for example, classified an endorsement by any third party, dependent or independent, simply as a third party endorsement, while Hallahan (1999:332) classified all paid-for, dependent endorsements as implied third party endorsements.

For the sake of clarity, the following terminology is used in the current study:

- The term dependent endorsement is used to describe all paid-for endorsements used by firms as part of the marketing communications mix.
- The term independent endorsement is used to define real third parties who endorse products in a non-paid-for, non-commercial and independent manner.
- Endorsements that are purposefully simulated to represent an independent third party association, but are paid for, either directly or indirectly, by the marketers of the product being endorsed, are clearly distinguished by the term implied independent association endorsements.

Figure 1 illustrates the six specific endorsement forms that are investigated in this study. These endorsement forms are further clarified in section 1.3 below.

**Figure 1: An overview of the six endorsement forms investigated in the current study**



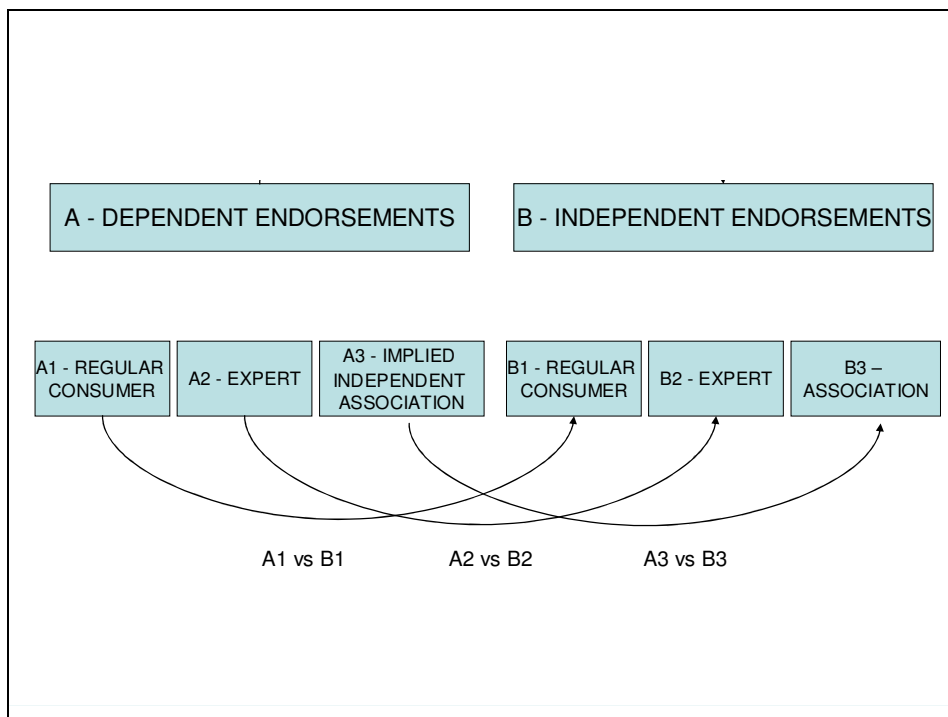
## 1.2 PROBLEM STATEMENT AND OBJECTIVES OF THE STUDY

As Figure 1 indicates, this study's primary goal was to make use of an experimental research design in order to answer the following core research question: How do different forms of dependent and independent endorsements affect consumers' brand trust in the South African nutritional supplements industry?

The paper's secondary goal was to determine whether there was a significant difference in the various forms of dependent and independent endorsements under investigation, with regards to their effect on consumers' brand trust, and if so, which form of endorsement is most effective.

This study therefore compared the results of each form of endorsement in the dependent category with the same form of endorsement in the independent category. The different forms of endorsements that are directly compared in this study are summarised in Figure 2 below.

**Figure 2: A summary of the endorsement forms compared in this study with regards to their effect on brand trust**



Considering the two goals mentioned above, the following specific research objectives were formulated for this study:

- To determine whether a dependent regular consumer endorsement of a nutritional supplement will positively influence consumers' brand trust towards the endorsed product.
- To determine whether an independent regular consumer endorsement of a nutritional supplement will positively influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent regular consumer endorsements in terms of their relative effect on brand trust.
- To determine whether a dependent expert endorsement of a nutritional supplement will positively influence consumers' brand trust towards the endorsed product.
- To determine whether an independent expert endorsement of a nutritional supplement will positively influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent expert endorsements in terms of their relative effect on brand trust.
- To determine whether a dependent (implied independent) association endorsement of a nutritional supplement will positively influence consumers' brand trust towards the endorsed product.
- To determine whether an independent association endorsement of a nutritional supplement by a third party association will positively influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent (implied independent) association endorsements in terms of their relative effect on brand trust.

The three forms of both dependent and independent endorsements mentioned in the research objectives are discussed extensively in the literature review chapters that follow. However, in order to prevent confusion, the key terms used in the study are defined in the section below.

### **1.3 DEFINITIONS OF THE KEY TERMS USED IN THE STUDY**

The following key terms used in the study are defined below:

**Endorsement:** In a general sense, the term endorsement means “... to give approval of or support to ...” (The Free Dictionary, 2009). However, for the purpose of this study, endorsement as applicable in the consumer domain was defined as “the expressed approval or support of a product or service, typically conveyed through advertising or a statement of endorsement” (Dorothy A. Johnson Centre for Philanthropy and Nonprofit Leadership, 2006).

**Independent and dependent endorsement:** The aforementioned definition of endorsement indirectly suggests two broad categories of endorsement; namely independent and dependent endorsement.

In the academic literature, dependent and independent endorsements were both interchangeably referred to as third party endorsements (Dean, 1999:3; Hallahan, 1999:331).

However, in the current study, dependent endorsement was defined as any paid-for endorsement of a product or service used by firms as part of the marketing communications mix, while independent endorsement was defined as any non-paid-for endorsement of a product or service provided by or on behalf of an external party.

These two broad categories, or types of endorsement, may take on many specific forms. For the purpose of this study, only three specific forms were investigated in each category. The ways in which these six specific forms of endorsement were defined is discussed below.

**Dependent regular consumer endorsement:** Dependent regular consumer endorsements are also commonly known as typical consumer endorsements (Daneshvary & Schwer, 2000:205) or “testimonials” (Wang, 2005:403). For the purpose of this study dependent regular customer endorsement was defined as the use of unidentifiable individuals to endorse products or brands on behalf of a company. This is a specific form of dependent customer endorsement because the endorsed company directly pays for the endorsement (see Appendix A, Figure 15, on p. 149).

**Dependent expert endorsement:** For this study dependent expert endorsements were defined as endorsements provided by critics or experts, who possess a higher expertise than regular consumers, as part of their ongoing business or careers (Wang, 2005:403). The dependent expert endorser is paid to provide the endorsement by the company or firm (see Appendix A, Figure 16, on p. 149).

**Independent regular consumer endorsement:** There is no direct definition of independent regular consumer endorsement in academic literature. However, it is often referred to as “word of mouth communication”, which is defined as “... oral, person to person communication between a perceived non-commercial communicator and a receiver concerning a brand, a product, or a service ...” (Arndt, in Ennew, Banerjee & Li, 2000:75) (see Appendix B, Figure 18 on p. 152).

In the consumer domain, this form of communication can also be described as consumer knowledge sharing (Lee, Cheung, Lim & Sia, 2006:291). For the purpose of this study, independent regular consumer endorsement was therefore defined as the independent approval or support of a product or service by another regular consumer.

**Independent expert endorsement:** An independent expert endorsement was defined as the independent (non-paid-for) approval or support of a product or service by any individual who shows a high level of experience and expertise with regards to the product being endorsed. These independent expert endorsers can be distinguished from independent regular consumer endorsers by a title or qualification, indicating expertise in the relevant product category (see Appendix B, Figure 19 on p. 152).

**Independent association endorsement:** An independent association endorsement was defined as the endorsement provided by an experienced third party organization which gives its independent (non-paid-for) association or support of a product through the form of a “proprietary asset such as name, logo or symbol” (Graham *et al.*, 1994:35) (see Appendix B, Figure 20 on p. 153).

**Implied independent association endorsement:** The term implied independent association endorsement was specifically created for this study (see section 2.4.3 on p. 30). An implied independent association endorsement is a form of dependent (paid-for)

endorsement. The endorsement has been purposefully simulated to represent an independent third party association, but has been paid for, either directly or indirectly, by the marketers of the product or service being endorsed. The associations are sold to companies as an advertising tool and the endorsement is presented in such a way that the consumer is led to believe that the endorsement is being provided by an independent external source (see Appendix B, Figure 21 on p. 153 and the CD attached in Appendix G).

**Brand trust:** In a consumer brand domain, brand trust is seen as a multi-dimensional construct and has been described as the “confident expectation about a brand’s reliability and intentions in situations entailing risk...”, (Delgado-Ballester, 2004:574) and “... the willingness of the average consumer to rely on the ability of the brand to perform its stated function” (Chaudhuri & Holbrook, in Hong-Youl, 2004:392).

Brand trust was formally defined in this study as an expectancy based on a consumer belief that the brand has specific qualities that make it consistent, competent, responsible and honest (Delgado-Ballester & Munuera-Aleman, 2005:188).

## **1.4 IMPORTANCE AND BENEFITS OF THE STUDY**

Academically, this study provides new insights into endorsement literature by differentiating between dependent and independent endorsements, and introducing the concept of implied independent association endorsement. This study’s results can also practically benefit the nutritional supplement industry in South Africa, by providing insight into the effects of different endorsement forms on the perceptions of brand trust of nutritional supplement users.

These academic and practical benefits of the study are further discussed below.

### **1.4.1 Academic benefits of the study**

The existing literature on endorsements primarily focuses on dependent endorsements and, more specifically, on celebrity endorsements (Byrne *et al.*, 2003:288-296; Erdogan, 1999:291-314; Hsu & McDonald, 2002:19-29; Silvera & Austad, 2004:1509-1526).

Currently, little empirical research exists on independent (non-paid-for) endorsements. In fact, most endorsement studies do not differentiate between dependent and independent endorsement and refer to both types as third party endorsement.

Dean (1999:2) stated that endorsements by a third party have a positive influence on manufacturer esteem and Wang (2005:402) concluded that positive third party expert and consumer endorsements enhance participants' attitude towards the product.

The current study specifically differentiated between dependent and independent endorsements and also tested whether this differentiation is significant in terms of its effect on a consumer perception such as brand trust. In addition, this study introduced a new form of endorsement, namely implied independent association endorsement, and tested its influence on brand trust.

Literature on brand trust may also benefit from the results of this study. The researcher found no studies that investigated brand trust as the dependent variable in the study. All previous brand trust studies researched brand trust as an independent variable where its effect on other variables was investigated.

Studies conducted by Delgado-Ballester and Munuera-Aleman (2005), Chaudhuri and Holbrook (2001), Reast (2005) and Zboja and Voorhees (2006) all supported evidence that brand trust has a positive influence on brand equity, brand loyalty, extension acceptance, and retailer re-purchases decisions respectively.

A gap therefore exists in current brand trust literature with regards to brand trust as a dependent variable, where the effects of different marketing-related variables on brand trust are measured.

#### **1.4.2 Practical benefits of the study**

Nutritional supplement companies in South Africa have been making extensive use of celebrity endorsements. USN, for example, uses more than 100 athletes in 30 different sporting codes to endorse their products (Unsworth, 2006). USN also invests substantially in marketing, and allocates R1 million per month on advertising (Unsworth, 2006). With



such a large amount being invested in advertising and endorsements, this endorsement-based study can make a valuable contribution to the body of consumer knowledge available in this industry.

Furthermore, the industry proved significant to this study's variables of endorsement and brand trust. Nutritional supplements carry a risk of unknown side effects (Kohler, Meltzer, Jakoek & Noakes, 2005:5; Ruxton & Gardner, 2005:112) due to the lack of regulation and control by a governing body or institution.

The user therefore carries "strict liability" (Kohler *et al.*, 2005) for the products consumed, thus elevating the importance of brand trust and perhaps the need for endorsed opinions. Due to the lack of regulation, many supplements may contain banned or unhealthy substances, and there is a possibility that not all the ingredients in the supplement are accurately listed on the accompanying label. The responsibility for using supplements is therefore placed on the user (Kohler *et al.*, 2005), thus increasing the likelihood that the user will turn to independent sources to gather information.

Finally, the nutritional supplement industry is an emerging market that has shown exponential growth over the past 10 years (Unsworth, 2006). Therefore, the results of this study can be used by South African nutritional supplement companies to help understand their consumers better and optimise their marketing communications efforts.

## **1.5 CONTEXT OF THE STUDY: THE SOUTH AFRICAN NUTRITIONAL SUPPLEMENT INDUSTRY**

The South African nutritional supplement industry provided the context for the study. On a global scale, the nutritional supplement industry has grown substantially over the past 10 years (Burcon NutraScience, 2006) and is heading towards the trillion dollar mark (Planting, 2005). This is due to the increased focus on health and wellness, as well as the industry's appeal to a wide spectrum of consumers, from average gym-goers wishing to boost their nutrient intake, to professional sportspeople at the height of their performance, to pensioners looking for health and well-being (Unsworth, 2006).

The two strongest trends in the overall food market are health and convenience. However, these two trends tend to contradict each other as convenience foods are traditionally seen as unhealthy. This is where the nutritional supplement industry has found its niche by developing conveniently packaged nutritional supplements that are ready to be consumed (Divine & Lepisto, 2005:275).

In South Africa, the market for sports nutrition took off in the late 1990s with the introduction of creatine. Since then the market has boomed with the addition of an endless array of new products (Planting, 2005).

Not only has the number of nutritional supplements being produced increased, but so has the variety of uses for which they are promoted (Federal Trade Commission, 2001:1), and the broad spectrum of consumers they entice (Planting, 2005). Channels of distribution in which they are sold (Unsworth, 2006) have also increased significantly in the last few years. This growth phase is expected to continue with new products being developed, due to the continued global focus on health and wellness.

The South African market is led by the multi-billion rand business, Ultimate Sports Nutrition (USN). The company showed growth in turnover from zero in December 1999 to R14m per month in 2005, and annual growth has been between 60% and 80% between 1999 and 2005 (Planting, 2005). Other examples of leaders in the South African market include EVOX, Vital, Nutri-health, Biogen, EAS and Betaway.

### **1.5.1 Control measures and regulation of the South African market**

Unlike medicines, which are regulated by the Medicines Control Council, there is currently no governing body to control and regulate the nutritional supplement industry in South Africa (Kohler *et al.*, 2005:5).

Consumers, however, still want to know that the supplements they are taking are safe, effective and that they contain the beneficial ingredients that are promised on the packaging or in the advertising of the product (Vital Health News, 2007).

Good manufacturing practice (GMP) is currently used to govern the industry (Planting, 2005). These manufacturing standards are implemented in order to assure quality and to ensure the safety and efficacy of nutritional supplements. The application of good manufacturing procedures is the manufacturer's responsibility in the case of nutritional supplements (Vital Health News, 2007).

GMP is applied internationally as a set of guidelines for the manufacturing of pharmaceutical products and concerns itself with:

- Production standards
- Quality control
- Public safety (Vital Health News, 2007).

According to Planting (2005), GMP, however, still boasts a "free-for-all [attitude] with low barriers to entry and no rules". Consumers are left responsible for themselves in order to ensure their own safety. Planting (2005) also affirms that "trusted" is not an adjective one would typically ascribe to the nutritional supplement industry.

In summary, the nutritional supplements industry was chosen as a suitable industry in context of the study because of the following:

- The size of the market and the marketing budgets and advertising spend used on endorsements within this market.
- The significant growth trend shown in this industry over the last 10 years; and
- The lack of regulation in the market.

## 1.6 A SUMMARY OF THE RESEARCH DESIGN AND METHODOLOGY

This section briefly describes the research design and methodology of the study based on selected descriptors taken from Cooper and Schindler (2006:139) and Page and Meyer (2000:41-48).

The study can be described as a formal study as it was aimed at solving specific research objectives and aimed to test specific hypotheses (Cooper & Schindler, 2006:139). The purpose of this study was to explain the relationship between the independent and dependent variables under investigation.

The method of data collection used was the method of interrogation or communication (Cooper & Schindler, 2006:139; Page & Meyer, 2000:41-48) as a questionnaire was used to collect data from subjects who had been exposed to the independent variables as stimuli.

This study is a statistical study as hypotheses were tested quantitatively. Data were therefore gathered quantitatively and analysed statistically. This study is also cross-sectional as research was carried out at one point in time to determine the measured effects of the independent variables on brand trust (Cooper & Schindler, 2006:139).

The research design applied in this study is an experimental design as independent variables were manipulated in an experimental design through the simulation of online web pages containing slogans representing the independent variable cues (Cooper & Schindler, 2006:290).

Using Cooper and Schindler's (2006:286-291,302-304) classifications of experimental designs, the study made use of a post-test-only control group design. There was no pre-test measurement in the design and the experimental effect was measured as the difference between the scores of the test groups and those of the control group.

This study was conducted on the Internet and can, therefore, be classified as an Internet-based experiment. Subjects were exposed to the web experiment via a simulated online web site and questionnaire. The physical environment was not controlled as subjects were

situated in front of their own computers. The chosen sample under investigation consisted of 180 South African nutritional supplement users who make use of the Internet to gather product information. The subjects were assigned into three groups consisting of 60 subjects per group.

The sampling method used was a snowball sampling method and subjects were requested to invite friends to participate in this study via email and online social networking groups. The measurement instrument used in this study was the brand trust scale (BTS) designed by Delgado-Ballester (2004:573-592). The scale was pre-tested in a South African context before it was applied in this study.

A simple coding system was applied to the BTS and online questionnaire. Subjects' responses were linked directly to a Microsoft Excel spreadsheet, and data were captured as subjects completed the online questionnaire. A one-way between-groups ANOVA was conducted to explore the impact of the different forms of endorsement tested in this study on brand trust. The ANOVA was conducted three times in order to test all the hypotheses formulated in this study.

The covariate brand familiarity was included to account for previous experience with the brand used in the experiment. One-way between-groups ANCOVAs were used to test for the effect of this covariate on each dependent variable.

## **1.7 STRUCTURE OF THE DISSERTATION**

A brief overview of each chapter presented in this dissertation is provided below.

### **Chapter 1: Introduction, objectives and context of the study**

This chapter introduces the core focus of the intended study through the presentation of the research questions and objectives. Key definitions are discussed. The context of the study is introduced together with a discussion of the study's importance and benefits. This chapter also provides a brief overview of the study's research design and methodology and concludes with an outline of the structure of the rest of the dissertation.

## **Chapter 2: Endorsement: Definitions, types and theories**

Chapter 2 explores the essence of the intended study by clearly defining the different types and forms of endorsements under investigation. These are clearly differentiated through the use of practical examples. The chapter also discusses endorsement theories relevant to this study.

## **Chapter 3: Brand trust and its relationship to third party endorsement**

Chapter 3 reviews the available literature on brand trust. This chapter introduces and examines the brand trust scale (BTS) developed by Delgado-Ballester (2004:573-592). This chapter also examines the literature linking brand trust and endorsement theory, and introduces the hypotheses formulated for the purpose of this study.

## **Chapter 4: Research design and methodology**

This chapter begins with an overview of experimental designs in marketing. The major components of experiments, as well as experimental control measures, are discussed.

The chapter then outlines the proposed experimental design, the methods of data collection, sampling and subject assignment that were used in order to conduct the experiment with reasonable certainty.

## **Chapter 5: Research findings**

Chapter 5 presents the empirical results of the experimental research.

## **Chapter 6: Conclusions and recommendations**

This chapter concludes this study with a discussion and summary of the results. Implications for further academic researchers, as well as marketers, are presented in this chapter. The limitations of this study are discussed and future recommendations are made.

### **1.8 CHAPTER SUMMARY**

This chapter presented an overview of this study. It provided an introduction and presented the study's primary and secondary research goals and objectives. The key terms were defined and the context of this study was introduced. The importance and

benefits of the study were presented and the research design and methodology were summarised. An outline of the structure of the rest of the dissertation was also presented.

The next chapter presents the first section of literature review. The chapter defines the concept of endorsement and classifies the various forms of endorsement under investigation. The chapter also provides a detailed discussion on endorsement theories relevant to this study.

## 2 CHAPTER 2: ENDORSEMENT: DEFINITIONS, TYPES AND THEORIES

### 2.1 INTRODUCTION

The foundation for this study is presented in this chapter. The chapter begins by clearly defining endorsement in the consumer domain. It classifies the various types of endorsements used by marketers and then further explores the various forms of endorsement investigated in this study. This chapter also reviews relevant theories and conceptual models developed in endorsement literature and introduces the notion that endorsement may have an effect on consumer perceptions, such as brand trust.

### 2.2 ENDORSEMENT DEFINED

For the purpose of this study it is necessary to clearly define the construct of endorsement, as well as accurately distinguish between the different forms of endorsement under investigation.

In general terms, to endorse is “...to acknowledge...” or “...to give approval of or support to, especially by public statement...” (The Free Dictionary, 2009).

Endorsement in the consumer domain can be described as an extrinsic cue used by consumers to infer beliefs and attitudes about a product (Dean, 1999:3). According to Hallahan (1999:2), an endorsement provides an indication of approval of a product, service or brand. Endorsement has also been formally defined as “the expressed approval or support of a product or service, typically conveyed through advertising or a statement of endorsement” (Dorothy A. Johnson Centre for Philanthropy and Nonprofit Leadership, 2006). This definition of endorsement was used to define endorsement for the purpose of this study.

The construct of endorsement has been extensively researched by academics over the last 10 years. The most common form of endorsement to receive academic review is celebrity endorsement (Byrne *et al.*, 2003:288-296; Erdogan, 1999:291-314; Hsu &



McDonald, 2002:19-29; Silvera & Austad, 2004:1509-1526). However, many different forms of endorsement exist in the consumer domain and not all of these have been thoroughly researched or clearly classified in academic literature. The different forms of endorsement are classified and discussed in section 2.4. The next section of this chapter looks at the origins of endorsement as a marketing communications tool, and its development throughout history.

### **2.3 THE HISTORICAL DEVELOPMENT OF ENDORSEMENT AS A MARKETING COMMUNICATIONS TOOL**

A quotation by the Greek philosopher Aristotle (in Erdogan, 1999:301), “Beauty is a greater recommendation than any letter of introduction,” suggests that the concept of endorsement by referral may have originated a long time ago. However, according to Erdogan (1999:292), celebrity endorsements have officially been used by firms since the late 19<sup>th</sup> century. An early example would include the use of Queen Victoria in association with Cadbury’s Cocoa (Sherman, in Erdogan, 1999:292).

Endorsement grew as an advertising technique due to the introduction of commercial radio in the 1930s, and commercial television in the 1950s (Erdogan, 1999:292). The largest growth period, however, was experienced during the 1970s when the supply of celebrities available to provide endorsements grew rapidly (Thompson, in Erdogan, 1999:292), thus resulting in a large increase in the use of celebrity endorsers.

The growth trend continued as estimates from the late ‘70s indicated that celebrity endorsements were used in 15% of all advertisements. This figure rose to 20% in the ‘80s, and 25% in the ‘90s (Erdogan, 1999:292). In 1996, American companies invested over \$1 billion dollars in athletic endorsement deals and approximately \$10 billion more on promoting celebrity endorsers (Farrel *et al.*, 2000:1).

Endorsement deals from the 21<sup>st</sup> century have raised the bar even higher, with a good example being Tiger Woods’ \$100 million dollar endorsement deal extension with Nike (Forbes, 2004).

The above examples indicate that endorsement deals have increased in value throughout every decade. It is vital then that managers monitor the success and return on investment of these endorsement deals in comparison with other less expensive forms of advertising in their marketing communications mix.

## 2.4 THE CLASSIFICATION OF ENDORSEMENT IN THE CONSUMER DOMAIN

The formal definition of endorsement used throughout this study (Dorothy A. Johnson Centre for Philanthropy and Nonprofit Leadership, 2006) indirectly distinguishes the two broad categories of endorsement, namely dependent and independent endorsements. The former are endorsements paid for by a firm as a form of advertising, and the latter refer to non-paid-for statements of endorsement issued by an external party.

To clarify the distinction between the two terms, one can also label dependent endorsements, which are part of the firm's marketing communications mix, as paid-for endorsements, and independent endorsements, provided for free by external parties, as non-paid-for endorsements.

In the academic literature, dependent endorsements and independent endorsements are both interchangeably referred to as third party endorsements (Dean, 1999:3). This terminology can be misleading as it does not clarify whether the third party was being paid or compensated in some way by the beneficiary to provide the endorsement.

For consistency throughout this study, paid-for endorsements used by firms as part of the marketing communications mix are referred to as dependent endorsements, and non-paid-for endorsements issued by an external party are referred to as independent endorsements.

The two broad categories of endorsement distinguished in this study, namely dependent and independent endorsement, can take several forms. Table 2 below provides an overview of the different forms of endorsements in each category that have received academic review in the last 10 years. The table lists practical examples to ensure that the distinction between the terms is clear, and provides reference to the appendices in which these practical examples are visually illustrated.

**Table 2: Definitions and practical examples of dependent and independent endorsements**

	Definition	Practical examples	References	Visual example
<b>Dependent endorsements</b>	Paid-for endorsements used by firms as part of their marketing communications mix.			
Celebrity Endorsement	The use of identifiable individuals who make use of their recognition to endorse, use or promote a product or brand on behalf of a company. Large fee structures normally apply.	Sport celebrities (Michael Jordan), movie stars (Charlize Theron), politicians and reality TV celebrities.	Daneshvary & Schwer (2000:203); McCracken (1989:310)	See Appendix A, Figure 13 on p. 148
Sponsorship	Also seen as a form of endorsement. The company assumes responsibility by endorsing a production, person or event on their own behalf.	The Vodacom Blue Bulls, The COSAFA Castle Cup	Belch & Belch (2001, GL12)	See Appendix A, Figure 14 on p. 148
Regular consumer endorsement	The use of unidentifiable individuals (i.e., typical consumers) to endorse a product or brand on behalf of a company. Used to increase perceived similarity with the audience.	Omo's 'slice of life' commercials, TV infomercials which feature regular people	Daneshvary & Schwer (2000:203); Wang (2005:403)	See Appendix A, Figure 15 on p. 149
Expert endorsement	The endorsement of a product or brand by a source exhibiting "expertness" in the product field, on behalf of a company. Used to increase the credibility of the endorsement.	A medical doctor endorsing Panado in the Panado TV commercial	Daneshvary & Schwer (2000:205); McCracken (1989:311)	See Appendix A, Figure 16 on p. 149
Association endorsement	Endorsements provided by an association, corporation or organization on behalf of the company. Normally partnerships between organisation and brand exist or a fee structure applies.	SAB's endorsement of the Arrive Alive campaign; The Proudly South African campaign	Daneshvary & Schwer (2000:203)	See Appendix A, Figure 17 on p. 150

Independent endorsements	Non-paid-for endorsements provided by external third parties.			
Regular consumer endorsement (own opinion)	The opinion, testimonial or evaluation of a product by a regular consumer/s shared with another consumer/s.	Blog writers, forum members, book clubs, Facebook posts.	Wang (2005:402-403)	See Appendix B, Figure 18 on p. 152
Expert endorsement (own opinion)	The shared opinion or evaluation of a product or brand by an expert or product maven.	Barry Ronge (movie critics), webmavens, online health experts	Davidson & Copulsky (2006:14)	See Appendix B, Figure 19 on p. 152
Association endorsement (own opinion)	The published opinion or evaluation of a product or brand by an external organisation. Normally a non-profit organisation or one accepting no advertising.	South African Dental Association, Consumer Reports, New York Times	Dean (1999:3); Wang (2005:402-403)	See Appendix B, Figure 20 on p. 153

The table summarises the basic forms of dependent and independent endorsements that have received academic attention in the last 10 years. Sections 2.4.1 and 2.4.2 below discuss the above-mentioned endorsements and associated examples in more detail.

### 2.4.1 Dependent endorsements

As presented in Table 2, dependent endorsements can be defined as paid-for endorsements used by firms as part of their marketing communications mix. There are many forms of dependent endorsements used by marketers. This study, however, focused on three forms of dependent endorsements, namely; dependent regular consumer endorsement, dependent expert endorsement, and implied independent association endorsement. The section that follows briefly reviews all the forms of dependent endorsements presented in Table 2, and provides a more detailed discussion of the three main forms of dependent and independent endorsements investigated in this study.

- **Dependent celebrity endorsement (paid-for)**

Celebrity endorsement is described as the association of a product or service with a person whose name and face are already well known. This association can quickly

achieve the kind of awareness that might otherwise take many years of marketing (Henriks, 1996:130-136).

According to Henriks (1996:131), celebrity endorsements help to differentiate a product, service or company in a crowded marketplace. A celebrity endorsement can be a powerful boost to a business. Small firms can probably best afford celebrity endorsements by concentrating on local or regional stars. A person who is well-known only in a single city or state is unlikely to be sought after by the big national firms but may be a perfect and economical fit for a company's target market (Henriks, 1996:130-136).

Many companies have traditionally selected high profile athletes from major sports to endorse all types of products (see Appendix A, Figure 13 on p. 148). These high profile athletes are aggressively pursued because it is believed that they most effectively achieve endorsement objectives. For large companies with well-established brand equity and image, the value of partnering with high profile athletes may be most effective (Jowdy & McDonald, 2002:186). Many endorsement models and theories are based on celebrity endorsers. These models and theories are further discussed in section 2.5.

- **Dependent sponsorship (paid-for)**

Gardner and Shuman (1998:1) define sponsorship as an investment in an event or cause in order to support the company's corporate objectives, such as an enhancement of corporate image or an increase in brand awareness (see Appendix A, Figure 14 on p. 148).

Management objectives for sponsorship may be indicated as both economic and non-economic, where the former refers to an increase in profits and an increased brand recognition and awareness. Non-economic benefits refer to the improvement of corporate image, creation of goodwill, boosting employee morale, and the recruiting of new employees (Cornwell & Maignan, 1998:22).

Cornwell and Maignan (1998:22) also suggested that there are many reasons why firms enter into sponsorship arrangements. However, two of the most common reasons are: "(1) to increase brand awareness, and (2) to establish, strengthen, or change brand image".

Thebe Ikalafeng, Executive Director of Marketing of Nike (in Penstone, 2001:19) claimed that sponsorship remains one of the greatest opportunities to build relationships with customers. Ikalafeng argued that “it [sponsorship] offers brands a platform to communicate emotionally with consumers who are passionate about sport ... it provides a platform to develop brand associations, create brand exposure, demonstrate new products and services, and build the corporate image” (Penstone, 2001:19).

The drawbacks in sport sponsorship are that it cannot be measured accurately and that it can become unfocused and difficult to track (Cornwell & Maignan, 1998:22). Return on investment can be indirectly measured in TV time, media coverage, and increased sales, amongst other methods, however there is no scientific formula that calculates exact benefits, financial or otherwise.

The next three forms of dependent endorsements discussed below form the core of this study’s research objectives, and were investigated in this study’s Internet-based experiment.

- **Dependent regular consumer endorsement (paid-for)**

Dependent regular consumer endorsements are also commonly known as typical consumer endorsements (Daneshvary & Schwer, 2000:205), or “testimonials” (Wang, 2005:403), and can be described as the use of unidentifiable individuals to endorse products or brands on behalf of a company.

Common examples of this form of endorsement technique are the Omo “slice of life” commercials which depict a typical housewife making use of the washing powder and providing her positive opinion of the brand (see Appendix A, Figure 15 on p. 149).

Regular consumer endorsements were proposed by Dean and Biswas (in Wang, 2005:403) to persuade consumers through the similarity and credibility dimension, as well as the identification process of social influence (Kelman, in Daneshvary & Schwer, 2000:204). Similarity is defined as “the supposed resemblance between the source and the receiver of the message.” (Erdogan, 1999:298). Credibility refers to “... the perceived level of expertise and trustworthiness in an endorser” (Erdogan, 1999:297).

These theories together with the identification process of social influence are discussed in more detail in section 2.5.

- **Dependent expert endorsement (paid-for)**

Wang (2005:403) described expert endorsers as critics or experts who possess a higher expertise than regular consumers as part of their ongoing business or careers. Expertise is defined as “the extent to which a communication is perceived to be a source of valid assertions” (Erdogan, 1999:298). In a dependent (or paid-for) context this expertise is leveraged by marketers to add credibility to the dependent endorsements.

Dependent expert endorsers can be distinguished from dependent regular consumer endorsers by a title or qualification, indicating expertise in the relevant product category (see Appendix A, Figure 16 on p. 149). A good example of a dependent expert endorsement is the Panado television commercial which provides a paid-for endorsement by a medical practitioner of Panado headache tablets as the “GP’s choice”. Erdogan (1999:298), however, claimed that it does not really matter if a dependent expert endorser is an actual expert; all that matters is how the target audience perceive the endorser.

Expert endorsements in general were also proposed by Wang (2005:403) to persuade through the credibility dimension where the endorser is perceived to have credible information and expertise that may help the consumer make a more informed decision. This theory is discussed in more detail in section 2.5.

- **Implied independent association endorsement (paid-for)**

This new form of dependent endorsement will be discussed in section 2.4.2, following the discussion of independent endorsements below.

## **2.4.2 Independent endorsement**

As indicated above, independent endorsement can also be referred to as a non-paid-for endorsement. Wang (2005:402) defined this form of endorsement as a third party’s opinion about a product, incorporating the third party’s name together with a positive or negative evaluation of the product.

The three main forms of independent endorsements used in this experimental study are presented in the section that follows. Most academic literature does not distinguish between these three forms of endorsement; therefore definitions were created by the researcher for the purpose of this study.

▪ **Independent regular consumer endorsement (non-paid-for)**

Word of mouth communication may be considered as one of the oldest forms of marketing communications (Ennew *et al.*, 2000:75). Word of mouth communication is defined as an “oral, person to person communication between a perceived non-commercial communicator and a receiver concerning a brand, a product, or a service...” (Arndt, in Ennew *et al.*, 2000:75).

However, this definition was created before the advent of the Internet and advanced communication technologies. Now word of mouth communication occurs through an array of new technologies, including e-mail, sms messages, blog entries and postings in online chat forums and social network platforms such as Facebook, which assist the flow of communication between sender and receiver (see Appendix B, Figure 18 on p. 152).

This form of online communication has been branded as electronic word of mouth (e-WOM). According to Andreassen and Streukens (2009:249) consumers make use of electronic discussion forums (e-WOM) to have conversations revolving around the following four core categories; i.e. information requests, usage experiences, business practice issues, and comments pertaining to new product launches. This type of communication in the consumer domain can also be described as consumer knowledge sharing. Lee *et al.* (2006:291) discovered that the most frequently cited reason for consumer knowledge sharing is the enjoyment of helping others. The Internet has now provided a self-service environment in which consumers can share knowledge and endorse their favourite brands (Lee *et al.*, 2006:290). This has provided a new platform for independent regular consumer endorsements.

For the purpose of the study, independent regular consumer endorsement is defined as the independent approval or support of a product or service by another regular consumer. This form of endorsement is an expressed form of word of mouth communication or consumer knowledge sharing.



Wang (2005:403) stated that endorsements provided by an independent regular consumer may function as a chunk of information about a product or service, and can be perceived as a cost effective guide to product quality assessment. Cue utilization theory elaborates on this opinion and is discussed further in section 2.5.

As discussed in section 2.4.1, regular consumer endorsements, regardless of whether they are dependent or independent, are proposed by Dean and Biswas (in Wang, 2005:403) to persuade consumers through the credibility dimension and the identification process of social influence.

- **Independent expert endorsement (non-paid-for)**

Davidson and Copulsky (2006:1087) use the term “product maven” to refer to individuals who have superior knowledge about a product compared with regular users. Product mavens are individuals who “know a lot about an area or product category” (Davidson & Copulsky, 2006:14), therefore they are able to provide a more experienced opinion or endorsement of a product. These individuals can be seen as independent expert endorsers when they present a positive opinion about a product to other consumers.

An independent expert endorsement is defined in this study as the independent approval or support of a product or service by any individual who shows a high level of experience and expertise with regards to the product being endorsed. These independent expert endorsers can be distinguished from independent regular consumer endorsers by a title or qualification, indicating expertise in the relevant product category.

The independent endorsement of a nutritional supplement by a sports doctor or a qualified personal trainer can be used as an example of an independent expert endorsement (see Appendix B, Figure 19 on p. 152).

With the advent of advanced communication technologies, product mavens or experts now have access to an extensive platform to share their expertise and endorsements. Empowered by the Internet, these individuals are referred to as webmavens (Davidson & Copulsky, 2006:1087). These webmavens help empower consumers by providing a virtually unlimited amount of information on products and brands that can assist them in making better choices (Lee *et al.*, 2006:291). Marketers need to carefully monitor the

online activities of these “influential infomediaries” in order to capitalise on them and make use of the information shared to their advantage (Davidson & Copulsky, 2006:1087).

As with dependent expert endorsements, independent expert endorsements were proposed by Wang (2005:403) to persuade through the credibility dimension. This is discussed in section 2.5.

▪ **Independent association endorsement (non-paid-for)**

An independent association endorsement is the endorsement provided by an experienced third party organization which gives their independent association or support of a product through the form of a “proprietary asset such as name, logo or symbol” (Graham *et al.*, 1994:35).

Examples of such endorsements include the Heart Foundation, the South African Dental Association or Consumer Reports (see Appendix B, Figure 20 on p. 153).

The identification process of social influence (Kelman, in Daneshvary & Schwer, 2000:204) suggests that “a person is more likely to adopt an attitude or behaviour of another person or a group if he/she identifies with the person [or group]”. This theory is relevant to the relative influence of independent association endorsements and will be further discussed in section 3.3.

**2.4.3 Implied independent association endorsement**

One of the main hypotheses of the study is that implied independent association endorsement will affect brand trust differently to real independent endorsement. There are no evident empirical studies which have differentiated implied independent association endorsement in their research. Dean (1999:2) classified an endorsement by any third party, real or implied, simply as a third party endorsement. Hallahan (1999:332), however, distinguished paid for, simulated independent endorsement with the term “implied third party endorsement”.

The term “implied independent association endorsement” has been specifically created for this study.

An implied independent association endorsement is a form of dependent endorsement. The endorsement has been purposefully simulated to represent an independent third party association, but has been paid for, either directly or indirectly, by the marketers of the product being endorsed. The associations are sold to companies as an advertising tool and the endorsement is presented in such a way that the consumer is led to believe that the endorsement is being provided by an external source.

The best example of such implied independent association endorsements is provided by the Buchanan Group who operates five third party branded information media vehicles, namely; Brand Power, InfoTalk, Great Chef's Show You How, MediFacts and Zoot Review.

Although all five of these branded information vehicles utilise very different advertising techniques, they are built on similar principles that simulate third parties' opinions by providing consumers with facts and information about the products they endorse as if they are coming from an independent source (Brand Power, 2007). However, the product manufacturers and their advertising agencies are in fact paying for the endorsement as a form of advertising used to stimulate retail sales (Biz-community, 2005).

Wang (2005:402) conducted a study measuring the effects of expert and regular consumer endorsements on audience responses. His study found that positive consumer endorsements and higher perceived credibility of consumer endorsements, rather than expert endorsements, enhanced audiences' behavioural intentions when audiences were already interested in the endorsed product.

Although the two forms of endorsement in Wang's (2005:402) study, i.e. regular and expert endorsement, were not directly referred to as real or implied association endorsements respectively, the study provided important evidence that real consumers' opinions may be valued over expert opinions, and that source credibility does affect behavioural intentions.

Attribution theory suggests that "consumers will question whether an endorser's claims are made because they are true, or as a result of situation factors" (Kelly in Dean 1999:3). Attribution theory will be discussed further in section 2.5. This theory highlights the importance of differentiating implied independent association endorsements from real

independent endorsements, as the theory assumes consumers will question the source of the endorsement.

The argument may be raised that all forms of dependent endorsements are in fact implied forms of independent endorsements. However, with the introduction of new marketing methods, such as the ones used by the Buchanan Group which deliberately sell the impression of a non-paid-for association endorsement to companies, it is necessary to provide a term for this new form of endorsement method which clearly distinguishes it from other dependent endorsement forms.

## **2.5 RELEVANT ENDORSEMENT MODELS AND THEORIES**

The following section examines relevant endorsement models and theories. These models and theories make up the majority of academic endorsement literature. The theoretical perspectives of these models and theories, namely the source credibility model, the source attractiveness model, the identification process of influence, the product match up hypothesis, the meaning transfer model, cue utilization theory, balance theory, and attribution theory begin to provide relevant associations between endorsements and brand trust and are reviewed in more detail below:

### **2.5.1 The source credibility model**

The source credibility model was derived from social influence theory and was originally developed for the study of communication (Kelman, in Erdogan, 1999:297). This model maintains that “the effectiveness of a message depends on the perceived level of expertise and trustworthiness in an endorser.” Expertise refers to the extent to which “the communicator is perceived to be a source of valid assertions” and trustworthiness refers to the “honesty, integrity and believability” of the source (Erdogan, 1999:297).

Friedman *et al.* (in Erdogan, 1999:297) hypothesised that trustworthiness is the major determinant of source credibility and their findings showed that likeability was the most important attribute of trust.

The theory, therefore, states that if information is received from a credible source, it can influence the receiver's opinions, attitudes, beliefs and behaviour through the process of internalisation. Internalisation refers to the receiver's acceptance of source influence based on their personal attitude and value structures (Erdogan, 1999:297).

Furthermore, Lafferty and Goldsmith (in Daneshvary and Schwer, 2000:205) stated that if a receiver perceives a source as credible they are more likely to buy the product due to the process of internalisation.

The above research, however, is not conclusive and considers endorsement as a uni-dimensional process. Erdogan (1999:298), therefore, stated that although source credibility is an important factor for marketers in choosing endorsers it is not the only factor that should be considered.

The source credibility model is, however, relevant to this study as it assumes that source credibility has a significant and direct effect on attitudes and behavioural intentions. The six forms of endorsement that are investigated in this study vary in their perceived credibility status.

### **2.5.2 The source attractiveness model**

The source attractiveness model also rests on social psychological research. The model assumes that physically attractive communicators are more successful at changing beliefs and influencing purchase intentions than their less attractive counterparts (Erdogan, 1999:298).

Attractiveness does not simply refer to physical attractiveness, but can include "...any number of virtuous characteristics..." that consumers might perceive as attractive, such as intellectual skills, lifestyle or athletic prowess (Erdogan, 1999:298).

The model contends that an effective message depends on the "familiarity", "likeability" and/or "similarity" of the source (McGuire, in McCracken, 1989:311).

Many studies have been conducted to test the effectiveness of attractive celebrity endorsers (Patzner, Petty & Cacioppo, Goldman and Schumann, in Erdogan, 1999). However, in summary, Erdogan (1999:301) stated that while there is no doubt that attractive endorsers enhance receivers' attitudes towards brands, the notion that they will increase purchase intentions is ambiguous.

### **2.5.3 The identification and internalization processes of social influence**

The identification process of social influence suggests that a consumer is more likely to adopt an attitude or behaviour of an association or a group if he/she identifies with the association or group (Daneshvary & Schwer, 2000:205). The credibility of the source is also important to the acceptance of the source of influence.

The internalization process of social influence occurs "...when an individual accepts influence because the induced behaviour is congruent with his value system". The individual accepts the influence as it provides a solution to a problem. The influence is also accepted as it was "demanded" by the individual's own values (Kelman, in Daneshvary & Schwer, 2000:205).

Daneshvary and Schwer (2000:205) claimed that the identification and internalization processes of social influence will affect behaviour change in consumers resulting in possible increases in purchase.

These two theories are relevant to the independent association endorsement and dependent (implied independent) association endorsement variables investigated in this study as the theories refer to group psychologies and social influences.

#### **2.5.4 The product match-up hypothesis**

The product match-up hypothesis maintains that a congruent fit between the message conveyed and the endorser's image is vital in order to ensure effective advertising (Forkan, in Erdogan, 1999:302).

“The determinant of the match between celebrity and brand depends on the degree of the perceived ‘fit’ between brand (brand name, attributes) and celebrity image” (Misra & Beatty, in Erdogan, 1999:302). The congruency of the match between product and endorser, therefore, lends to the believability of the endorsement.

On the other hand, the absence of connection between the endorser and the product being endorsed may lead consumers to believe that the product has been bought or paid-for (Erdogan, 1999:303), thus lowering the effectiveness of the endorsement. Evans (in Erdogan, 1999:302), labelled this the “vampire effect”, whereby the audience remembers the endorser, rather than the product, thus sucking the life blood of the product dry.

This theory is very important as this study proposed a difference between the effects of paid-for versus non-paid-for endorsements on the dependent variable under investigation.

#### **2.5.5 The meaning transfer model**

This model contends that endorsers may bring their own symbolic meaning to the endorsement process. The number and variety of meanings are large, and include distinctions of “...status, class, gender, and age, as well as personality and lifestyle types...” (McCracken, 1989:312).

According to McCracken (1989:313), the meaning transfer process consists of three phases. Meaning originates as something resident in the physical, social and culturally constituted world. Meaning then moves onto consumer goods and is finally transferred to the life of the consumer. McCracken (1989:314) claimed that celebrity endorsement is a special form of the general meaning transfer model. The path of movement also reflects three phases of meaning transfer starting with the formation of celebrity image, followed by the transfer of image from celebrity to product, and finally from product to consumer.

McCracken's (1989) meaning transfer research claimed that the source models are insufficient in classifying the reason for endorser effectiveness, and that cultural and symbolic perspectives should be considered by marketers when making endorsement based decisions.

It is therefore essential that advertisers determine the relevant symbolic properties for their product, and select a celebrity that approximates or represents these symbolic properties (Byrne *et al.*, 2003:293). Consumers must then recognize the essential similarity between the message elements and the product in order to achieve successful meaning transfer from celebrity endorser to product (Tom *et al.*, in Byrne, Whitehead & Breen, 2003:293).

### **2.5.6 Cue utilization theory**

Cue utilization theory provides a way to assess consumer perceptions of product quality. According to this theory, products consist of an array of cues that serve as surrogate indicators of quality to shoppers (Richardson, Dick & Jain, 1994:29). Richardson *et al.* (1994:29) stated that cues are evoked according to their predictive and confidence values. The predictive value of a cue is the degree to which consumers associate a given cue with product quality. The confidence value of the cue is the degree to which consumers have confidence in their ability to use and judge that cue accurately.

Jacoby, Olsen and Haddock (1971:570-579) classified cues as either intrinsic or extrinsic. Intrinsic cues refer to physical product attributes such as size, ingredients or other attributes that cannot be manipulated without also altering the physical properties of the product. Extrinsic cues refer to intangible product attributes such as brand name, price and packaging. Richardson *et al.* (1994:30) claimed that consumers focus highly on extrinsic cues in product quality assessment.

It is common practice for companies to incorporate extrinsic cues, such as endorsement, into their advertising (Dean, 1999:1). Therefore cue utilization theory is relevant to the current study as it establishes the notion that endorsement is an extrinsic cue used by consumers to access product quality.



Consumers infer information where relevant product information is absent to form an integrated, overall evaluation of a product (Huber & McCann, 1982:324-333). Therefore cue utilization theory is also relevant to the study's independent endorsement claims as consumers can make use of endorsers' opinions when other extrinsic cues are absent.

As discussed in the problem statement, recent research indicates that nowadays consumers tend to overlook commercial cues and actively seek out more independent forms of information to emphasise corporate responsibility and trust (Datamonitor, 2006; Davidson & Copulsky, 2006:14; Kotler, 2006).

### **2.5.7 Balance theory**

Heider (in Dean, 2002:77) formulated the balance theory, which stated that the evaluation of an object is affected by how the evaluation will fit with other related attitudes held by the consumer. The theory offers a useful explanation of attitude formation and change.

Balance theory is relevant to the proposed study as it envisions a relationship between the endorser, the object, and the endorsement as the three points of a triangle. The theory focused on balance between the elements in the triad and maintained that consumers will alter their perceptions in order to maintain this consistency.

For example, if the endorsed product is lowly valued and the endorser's opinion is highly valued, the consumer will hopefully alter his/her attitude positively towards the product. This alteration occurs because consumers desire harmony in their beliefs, and it would be unstable (unbalanced) to have a positively valued element linked to a negatively valued element. The disadvantage of this theory is that consumers may also alter their attitude negatively in order to achieve this balance (Dean, 2002:77).

Balance theory envisions a relationship between endorsement and consumer beliefs. Brand trust is described by Delgado-Ballester and Munuera-Aleman (2005:188) as a consumer belief about a brand and its qualities. It can, therefore, be speculated that a similar relationship may exist between endorsement and the consumer belief of brand trust.

Balance theory, therefore, provides an important perspective towards the study's proposed hypotheses (see section 3.3 on p. 45 which proposes a positive relationship between the two constructs of endorsement and brand trust).

### **2.5.8 Attribution theory**

Attribution theory assumes that consumers will question an endorser's claims on the basis of whether they are true or as a result of a situational factor such as payment or mutual benefit for the endorser. The effect of the endorsement will be lost if the latter is believed to be true (Kelly in Dean 1999:3). Consumers will evaluate the endorser to determine the expertise and trustworthiness of the source (Dean, 1999:3).

For example, Trip *et al.* (in Silvera & Austad, 2004:1509) showed that celebrities who endorse multiple products are seen as less credible than those who endorse only one product. Louie and Obermiller (in Silvera & Austad, 2004:1509) also found that if a celebrity endorser is blamed for a negative event, such as an accident, it can have a detrimental effect on the products they endorse. Therefore, the effectiveness of an endorser is dynamic and depends on the endorser, the product, the relationship between the product and the endorser, and even societal conditions experienced at the time of the endorsement (Silvera & Austad, 2004:1510).

This theory proves significant in the differentiation of dependent and independent endorsement by an association. Consumers will either perceive the dependent claims to be true indications of the dependent endorser's feelings or not. An objective of the proposed study is to determine whether consumers perceive this difference in their evaluations of brand trust.

The above mentioned theories have provided some evidence as to the proposed link between endorsement and consumers' perceptions such as brand trust. The construct of brand trust will be further explored in chapter 3. Chapter 3 will provide further literature linking endorsement and brand trust theory. This will be followed by the presentation of this study's hypotheses.

## 2.6 CHAPTER SUMMARY

This chapter began by defining endorsement in the consumer domain. It then presented a brief overview of the historical development and growth of endorsement as a marketing communications technique. The different forms of endorsements that have received academic attention over the last 10 years were then classified and discussed, and a new endorsement form, namely implied independent association endorsement, was introduced.

This chapter also presented relevant endorsement models and theories, and introduced the literature that suggests that endorsement will have an effect on consumer perceptions such as brand trust. The causal relationship between endorsement and brand trust will be explored further in the next chapter.

## **3 CHAPTER 3: BRAND TRUST AND ITS RELATIONSHIP TO ENDORSEMENT**

### **3.1 INTRODUCTION**

This chapter begins with an overview of the literature on brand trust and provides a definition for this construct. The significance of brand trust as a construct in the consumer-brand domain is considered. The brand trust scale (BTS), which was used as the measurement scale for the purpose of this study, is presented. The chapter then provides a discussion on the link between endorsement and brand trust, and concludes with a presentation of the study's hypotheses.

### **3.2 BRAND TRUST: AN OVERVIEW**

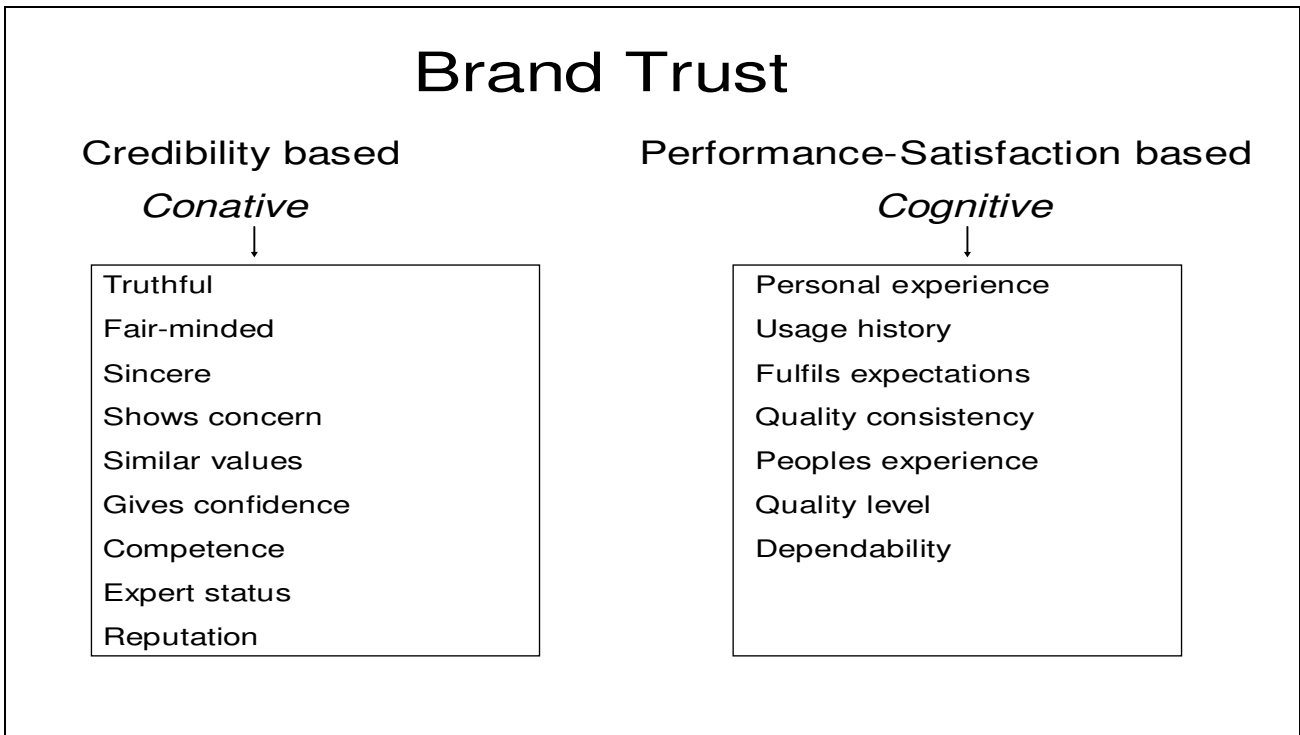
Research of the trust concept originates from the field of social psychology and has only recently become a popular topic in the marketing literature. The study of trust has resulted in some mixed terminology being used, including terms such as altruism, benevolence and honesty (Delgado-Ballester & Munuera-Aleman, 2001:1242). However, all these terms share the same idea that trust is a feeling of security based on the belief that the intentions of the trusted person/group are guided by the welfare and interest of the person to whom the trust is provided.

The above discussion can lead one to the assumption that in the consumer-brand domain, trust is the feeling of security held by the consumer that the brand will live up to its promises and meet expectations (Delgado-Ballester & Munuera-Aleman, 2001:1242).

More formally, brand trust in the consumer-brand domain can be defined as a multi-dimensional construct and has been described as the "confident expectation about a brand's reliability and intentions in situations entailing risk...", (Delgado-Ballester, 2004:574) and "the willingness of the average consumer to rely on the ability of the brand to perform its stated function" (Chaudhuri & Holbrook, in Hong-Youl, 2004:392).

Reast (2005:5) regarded brand trust as a two-dimensional construct founded on credibility and performance satisfaction. Figure 3 below illustrates Reast’s (2005:5) two component model of brand trust illustrating the conative and cognitive variables under each component.

**Figure 3: Reast’s (2005) two component model of brand trust**



Source: Adapted from Reast (2005:5)

Delgado-Ballester (2004:574) also described brand trust as a two-dimensional construct, defining the two dimensions as “brand reliability” and “brand intention”. According to Delgado-Ballester (2004:575), brand reliability is based on the extent of the consumer’s belief that the brand will fulfil its value promises, and brand intention is based on the extent of the consumer’s belief that the brand will put the consumer’s interests ahead of its own self-interest.

For the purpose of the proposed study, brand trust will be viewed as a two-dimensional construct based on Delgado-Ballester’s (2004:576) descriptors (see Table 4 on p. 45). Brand trust is defined as an expectancy based on a consumer’s belief that the brand has specific qualities that make it consistent, competent, responsible and honest (Delgado-Ballester & Munuera-Aleman, 2005:188).

### 3.2.1 The significance of brand trust in the consumer domain

Brand trust is a popular construct that has been researched extensively in consumer-brand domain studies. Many of these studies examined brand trust's ability to influence other variables significant to overall marketing success.

Table 3 highlights recent studies that have investigated the effect of brand trust on end consumer variables that influence final purchase decisions.

**Table 3: Previous studies investigating the effects of brand trust on marketing-related variables**

Variable affected by brand trust	Result summary	Author reference
Retailer re-purchase	Customer trust in and satisfaction with a retailer mediate the effects of brand trust and satisfaction on customer repurchase intentions.	Zboja & Voorhees (2006:381-390)
Brand extension acceptance	A significant association between brand trust and brand extension was found, greater than the perceived quality level of the parent brand.	Reast (2005:4-13)
Brand equity	Brand trust can be positively associated with brand loyalty, which, in turn, has a positive relationship with brand equity.	Delgado-Ballester & Munuera-Aleman (2005:187-196)
Brand loyalty - (purchase loyalty and attitudinal loyalty)	When product and brand levels are controlled, brand trust and brand affect combine to determine purchase and attitudinal loyalty.	Chaudhuri & Holbrook (2001:81-93)
Consumer brand loyalty – (customer commitment and brand repurchase intention)	Brand trust is a variable that influences customers' commitment, most prominently in situations of high involvement.	Delgado-Ballester & Munuera-Aleman (2001:1238-1258)

The table above provides evidence that brand trust has a significant influence on many variables that may affect future profits. Brand equity was described by Delgado-Ballester (2004:188) as a “relational market-based asset” that “exhibits the qualities required for creating a sustainable competitive advantage”. Consumer brand loyalty contributes to the brand re-purchase intention (Delgado-Ballester & Munuera-Aleman, 2001:1240), and both re-purchase and brand extension increase the prospect of future sales (Reast, 2005:4; Zboja & Voorhees, 2006:381). These variables are further discussed below.

- **Retailer repurchase**

Zboja and Voorhees (2006:381) hypothesised that a “spill-over effect” exists between consumers’ perceptions of brand trust and satisfaction, and consumers’ evaluations of a retailer. They suggest that a halo effect exists between consumer perceptions of brands and retailers. Their findings showed that “...consumer trust in and satisfaction with a retailer mediate the effects of brand trust and satisfaction on consumer repurchase intentions.” Brand trust, therefore, has an indirect effect on the repurchase intention, and in order for the consumers to return, the retailer needs to satisfy them and earn their trust as well.

- **Brand extension acceptance**

Reast (2005:4-13) proposed that a positive relationship exists between brand trust and brand extension acceptance. Aaker and Keller (in Reast, 2005:5) defined brand extension acceptance as “... the stretch of the established franchise to a different product class.” Reast’s (2005:4-13) study found support for a significant association between the two variables, comparable in strength between media weight and brand share and greater than the association delivered by the parent brand’s perceived level of quality.

Although Reast’s (2005:4-13) association was limited to low risk, low involvement products and services, and only for brands in five different retail and service categories, the study provided significant support for the brand trust concept as a powerful marketing tool that needs to be managed and monitored with care.

- **Brand equity**

Delgado-Ballester and Munuera-Aleman’s (2005:187-196) paper linking brand trust and brand equity revealed that brand trust is rooted in the results of past experiences with a brand, therefore, positively affecting brand loyalty. Brand loyalty, in turn, maintains a positive relationship with brand equity. Brand equity was defined by Delgado-Ballester and Munuera-Aleman (2005:188) as an intangible asset that helps create competitive advantage, adds value to customers, is inherently complex, and cannot be easily transferred to other companies.

- **Brand loyalty and consumer brand loyalty**

Brand loyalty and consumer brand loyalty are terms used interchangeably in the literature about branding. Chaudhuri and Holbrook (2001:81-93) related this loyalty to purchase loyalty and attitudinal loyalty, whereas Delgado-Ballester and Munuera-Aleman (2001:1238-1258) associated it with customer commitment and brand repurchase intention.

Chaudhuri and Holbrook (2001:81) found that brand trust plays a vital role in the chain of effects from brand trust to brand effect and brand performance, with brand loyalty linking the chain. Their results indicated that "...when product- and brand-levels are controlled for, brand trust and brand effect combine to determine purchase loyalty and attitudinal loyalty."

Delgado-Ballester and Munuera-Aleman's (2001:1238-1258) results indicated that brand trust plays a key role as a variable that generates commitment from customers, especially in situations of high involvement.

As noted, most academic brand trust studies focus on the effects of brand trust on a dependent variable. The current study, however, focuses on the effects of an independent variable (i.e. endorsement) on brand trust, where brand trust is the dependent variable. This meant that a reliable, valid and generalizable scale was needed to measure trust in a brand setting. The brand trust scale used in this study was designed by Delgado-Ballester (2004:573-592) and is discussed in detail in the next section.

### **3.2.2 The brand trust scale (BTS)**

Delgado-Ballester (2004:573-592) developed a scale to measure brand trust. The scale was developed with the intention of providing future researchers and managers with a strategic tool to manage consumers' relationships with brands.

The scale was developed through a thorough investigation of brand trust research, in-depth consumer interviews, and finally assessed via expert opinion. Churchill's guidelines for scale development were applied (Delgado-Ballester, 2004:580) and the scale was then statistically tested in order to confirm its validity and reliability.



Table 4 below lists the final eight items in the brand trust scale (BTS). The table also indicates the two dimensions of brand trust defined by the Delgado-Ballester (2004:576) as “brand reliability” and “brand intention”.

**Table 4: Items in Delgado-Ballester’s (2004:573-592) brand trust scale (BTS)**

<b><i>Brand reliability</i></b>
X <sup>1</sup> : [X] is a brand name that meets my expectations
X <sup>2</sup> : I feel confidence in [X] brand name
X <sup>3</sup> : [X] is a brand name that never disappoints me
X <sup>4</sup> : [X] brand name guarantees satisfaction
<b><i>Brand intention</i></b>
X <sup>5</sup> : [X] brand name would be honest and sincere in addressing my concerns
X <sup>6</sup> : I could rely on [X] brand name to solve the problem
X <sup>7</sup> : [X] brand name would make any effort to satisfy me
X <sup>8</sup> : [X] brand name would compensate me in some way for the problem with the product

Source: Delgado-Ballester (2004:586)

A measurement scale, such as the BTS, consists of two main components, namely the item wording and the response scale design used. The BTS can therefore be described as a two-dimensional eight-item Likert scale with five labelled scale points ranging between 1 = Strongly disagree, to 5 = Strongly agree. The scale measures two dimensions of brand trust, namely brand reliability (items 1-4) and brand intentions (items 5-8).

The BTS is further reviewed in section 4.3.6 on p. 79.

The review of studies on both endorsement and brand trust will now be combined in the following section in order to present the study’s proposed hypotheses.

### **3.3 THE LINK BETWEEN ENDORSEMENT AND BRAND TRUST**

There is no academic study available that directly measures the effect of endorsement on brand trust. However, many of the academic studies reviewed in the literature study provide evidence that a positive relationship exists between the two constructs.

The endorsement-based theories discussed in chapter 2 also provide insight into the possible relationship between the two constructs. The relevant studies and theories are collated below in order to present the hypotheses tested in the current study.

Dean (1999:1) found that endorsement positively influences manufacturer esteem. Manufacturer esteem can be defined as the degree to which a brand is held in high regard, trusted and respected by its customers (Dean, 1999:2). Although Dean's (1999:2) definition of manufacturer esteem does not directly refer to brand trust, it suggests that endorsements may have an influence on trust as one of the factors that make up manufacturer esteem.

Cue utilization theory (Richardson *et al.*, 1994:29) suggests that endorsements could be used as an extrinsic cue influencing consumers' perceptions of product quality. Product quality is one of Reast's (2005:5) cognitive components of brand trust. The link between endorsement and brand trust is therefore indirectly suggested, as product quality is one of the factors that make up brand trust as a construct.

Balance theory envisions a relationship between endorsement and consumer beliefs. Brand trust is described by Delgado-Ballester and Munuera-Aleman (2005:188) as a consumer's belief about a brand and its qualities. It can, therefore, be argued that a similar relationship may exist between endorsement and the consumer belief of brand trust.

The above theories all refer to endorsement in general. Wang (2005:402), however, was more specific in his classification of endorsements and distinguished between regular and expert endorsers. Wang (2005:402) concluded that a regular consumer's positive endorsement enhanced the audiences' attitude toward the endorsed product.

One of the variables used by Wang (2005:407) to measure audience attitude was behavioural intent. Zboja and Voorhees (2006:381-390) found a positive relationship between brand trust and behavioural intent. Thus, if a positive relationship is established between brand trust and behavioural intent it seems reasonable to assume from Wang's results (2005:407) that a regular consumer's endorsement may also indirectly enhance perceptions of brand trust.

The studies of Dean (1999:1-12), Wang (2005:402-412) and Zboja and Voorhees (2006:381-390) all suggest a link between endorsement and various marketing related variables which are either directly or indirectly linked to brand trust. The argument is strengthened by cue utilization theory and balance theory, which reinforce the notion that endorsement will have a positive effect on product quality and consumer beliefs. The two theories, however, do not specify which types or forms of endorsement will incur the desired effects; therefore the assumption is that they refer to endorsement in general.

Therefore, due to the classification of brand trust as a consumer belief about a brand and its qualities (Delgado Ballester & Munuera-Aleman, 2005:188), the following two hypotheses were posited:

**H1a:** Subjects exposed to a dependent regular consumer's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to a dependent regular consumer's endorsement claim for the same brand.

**H1b:** Subjects exposed to an independent regular consumer's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to an independent regular consumer's endorsement claim for the same brand.

Wang (2005:402) also concluded that an expert's positive endorsement enhanced audiences' attitudes toward the endorsed product. Expert endorsements were proposed by Wang (2005:403) as persuading consumers through a credibility dimension where the endorser is perceived to have credible information that may help the consumer make a more informed decision. Reast (2005:5) defined brand trust as credibility based construct; therefore it may be assumed that the credibility dimension provided by expert endorsements may positively influence the consumer belief of brand trust.

As discussed in chapter 2, the source credibility model maintained that the effectiveness of a message depends on the perceived level of expertise and trustworthiness of the source. Expertise was referred to as the extent to which the communicator was perceived to be a

source of valid assertions and trustworthiness, referred to as the “honesty, integrity and believability” of the source (Erdogan, 1999:297).

By applying the results of the general endorsement studies of Dean (1999:1-12), Wang (2005:403), and Zboja and Voorhees (2006:381-390), together with cue utilization, balance theory and the source credibility model, the next two hypotheses are presented:

**H2a:** Subjects exposed to a dependent expert’s endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to a dependent expert’s endorsement claim for the same brand.

**H2b:** Subjects exposed to an independent expert’s endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to an independent expert’s endorsement claim for the same brand.

Daneshvary and Schwer’s (2000:204) study claimed that endorsements by an association have led to the successful selling of products. The study based its conclusions on the identification process of social influence proposed by Kelman (in Daneshvary & Schwer, 2000:204). As discussed in chapter 2, the internalization process of social influence suggests that a person is more likely to adopt the attitude or behaviour of a person/group if he/she identifies with that person/group.

Daneshvary and Schwer’s (2000:203-213) study did not involve brand trust as one of the constructs under investigation. However, their results indicated that endorsements provided by a credible association will result in increased purchases.

The studies of Dean (1999:1-12), Wang (2005:402-412) and Zboja and Voorhees (2006:381-390) provide a link between endorsement in general and brand trust. Daneshvary and Schwer’s (2000:204) results support association endorsements in general as a credible form of endorsement. A combination of the results of the above mentioned studies, together with the evidence provided by social influence theory, provide support for the following two hypotheses:

**H3a:** Subjects exposed to a dependent (implied independent) association's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to a dependent (implied independent) association's endorsement claim for the same brand.

**H3b:** Subjects exposed to an independent association's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to an independent association's endorsement claim for the same brand.

Wang's (2005:402) study concluded that regular consumer endorsements, rather than expert endorsements, enhanced audiences' behavioural intentions.

Although the two forms of endorsement in Wang's (2005) study, i.e. regular and expert endorsement, were not directly referred to as dependent or independent endorsements respectively, the study provided important evidence that regular consumers' opinions are valued over the opinions of experts. The study introduced the notion that different forms of endorsement may affect brand trust differently.

Attribution theory assumes that consumers will question an endorser's claims on whether they are true or a result of situational factors. The theory assumes that the effect of the endorsement will be less if the claim is not believed to be real (Kelly in Dean 1999:3). Consumers will evaluate the endorser to determine the expertise and trustworthiness of the source (Dean, 1999:3). This theory proves significant in the differentiation of dependent and independent endorsement by an association. Consumers will either perceive the dependent claims to be true indications of the dependent endorser's feelings or not.

Over many years researchers have investigated the perceived difference between dependent forms of advertising and independent forms such as word of mouth (WOM), public relations and referrals. Buttle (1998:242) claimed that word of mouth (WOM) is more influential on behaviour than other marketer-controlled sources. This is due to source credibility and the fact that personal sources are viewed as more trustworthy.

Chaiken and Maheswaran (in Hallahan, 1999:338) found that independent endorsements provided by Consumer Reports, rather than traditional advertising, positively impacted attitudinal behaviour. Cameron (in Hallahan, 1999:338) found that information gain was highest immediately after exposure to an editorial news story when compared with a traditional advertorial.

Although none of the studies directly refer to brand trust it can be concluded that when advertising is provided by an independent party the effects on the dependent variable under investigation are greater.

The assumptions derived from the above research studies led to the following hypotheses:

**H4a:** Subjects exposed to an independent endorsement claim by a regular consumer will have higher brand trust scores compared with subjects exposed to a dependent endorsement claim by a regular consumer.

**H4b:** Subjects exposed to an independent endorsement claim by an expert will have higher brand trust scores compared with subjects exposed to a dependent endorsement claim by an expert.

**H4c:** Subjects exposed to an independent endorsement claim by an association will have higher brand trust scores compared with subjects exposed to a dependent (implied independent) endorsement claim by an association.

### **3.4 CHAPTER SUMMARY**

This chapter introduced the construct of brand trust and discussed its significance in the consumer-brand domain. The BTS was presented, followed by a discussion on the link between endorsement and brand trust literature. The chapter concluded with a presentation of the study's hypotheses.

The next chapter will present the current study's research design and methodology used to test these hypotheses.

## **4 CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY**

### **4.1 INTRODUCTION**

This study makes use of an Internet-based experimental design. In order to plausibly introduce Internet-based experimental designs as a background to this study's specific research design, this chapter is presented in two sections. The first section presents a general overview of experimental research methodology and Internet-based experiments. The chapter then describes the specific research design used in this study in detail.

### **4.2 AN OVERVIEW OF EXPERIMENTAL RESEARCH METHODOLOGY**

This section introduces experimental designs in marketing research and summarizes the basic terminology and classifications used in experimental research. The section also discusses literature on Internet-based experiments and the importance of reliability and validity in Internet-based experimental research.

#### **4.2.1 The purpose of experimental research**

The term experiment is defined as “a test under controlled conditions that is made to demonstrate a known truth, examine the validity of a hypothesis, or determine the efficacy of something previously untried” (The Free Dictionary, 2007). Academic research experiments are most frequently conducted in the fields of marketing, medicine and social sciences (Patzner, 1996:4). However, contrary to Patzner's (1996:4) view, Ryals and Wilson (2005:347) claimed that there is a still relatively low penetration of experimental studies in market research practice.

Experiments in marketing have the potential to benefit marketing research immensely (Patzner, 1996:vii). This is primarily because experiments can test, with reasonable certainty, a hypothesis which proposes a causal relationship between two or more variables (Patzner, 1996:3).

#### 4.2.2 The three conditions of causality

Patzer (1996:3) described an experiment as one that involves causality, where a change in one variable causes a change in another. “The variable[s] being manipulated are referred to as the independent variable[s], and the variable that is affected is termed the dependent variable” (Ryals & Wilson, 2005:349).

The basic expression for causality is that a change in one variable will definitely cause a change in another (Patzer, 1996:6). This certainty of causation is referred to as deterministic causation. It is important to note that causal relationships in marketing or business are rarely deterministic, and researchers therefore normally infer probable causation. Probable causation is where a change in an independent variable is likely to cause a change in the dependent variable (McDaniel & Gates, 2000:29; Patzer, 1996:7). Both McDaniel and Gates (2000:211) and Patzer (1996:7) provided the same three conditions for causality; namely evidence of association, appropriate timing and elimination of alternative explanations. These three conditions are discussed in further detail below.

- **Evidence of association**

Evidence of association can be concluded when there is a concomitant variation or correlation between the two constructs under investigation (McDaniel & Gates, 2000:29; Patzer, 1996:7). Concomitant variation is the extent to which cause and effect occur together or vary together (Patzer, 1996:7), and a stable predictable relationship exists between the two variables (McDaniel & Gates, 2000:212). Concomitant variation is a required condition of causality, however, it must be noted that it alone is not a sufficient condition (Patzer, 1996:8).

- **Appropriate timing**

An appropriate time order of occurrence needs to be determined in order to fulfil the second requirement of causality. Therefore a change in an independent variable must occur before a change is observed in the dependent variable (McDaniel & Gates, 2000:213).



- **Elimination of alternative explanations**

In order for causality to be legitimately concluded all alternative explanations that may cause an influence on a dependent variable need to be eliminated (Patzner, 1996:8). According to McDaniel and Gates (2000:213), this is the most difficult condition to demonstrate. Experiments make it possible to accomplish this task through the implementation of research control.

#### 4.2.3 Basic terminology in experimental research

- **Independent variable**

An independent variable is the variable manipulated by the researcher which is believed to have an effect on the value of the dependent variable (Cooper & Schindler, 2006:40; McDaniel & Gates, 2000:437).

- **Dependent variable**

A dependent variable “expresses the presumed effect in a study” (Page & Meyer, 2000:68). It is the variable whose value is believed to change in response to changes the independent variable (McDaniel & Gates, 2000:437).

- **Multiple variables and values**

An experiment can have more than one independent variable. These are referred to as multiple variables (Patzner, 1996:17). Each of these independent variables can also have more than one value. These are referred to as multiple values (Patzner, 1996:17). For example an experiment testing new toothpaste packaging can have an independent variable (package colour) with three values (red, green and yellow), as well as a second independent variable (package size) with three more values (small, medium and large). An advantage of an experimental study making use of both multiple variables and values is that it can identify differences in effects caused by different independent variables, as well as different independent variable values at the same time (Patzner, 1996:17).

- **Subjects**

Integral to any experiment are the entities that the hypothesized effects are measured on. These are referred to as the subjects of the experiment and can also be formally defined as the participants in an experiment (Patzner, 1996:24).

Two broad categories of subjects normally exist in an experiment; those in the treatment group and those in the control group (Patzner, 2006:25). The treatment (or experimental) group is the group receiving the experimental conditions, while in the control group conditions remain the same (Page & Meyer, 2000:16), thus providing a platform for comparison or a “baseline measure” (Patzner, 1996:25). A baseline measure is the result of measures under normal conditions, and can also be referred to as the norm (Patzner, 1995:250).

#### 4.2.4 A classification of experimental designs

Ryals and Wilson (2005:349) described four groups of experimental designs that tend to occur in management research. These are presented in the Table 5 below. The table provides a brief overview of each type of experiment, the setting used to conduct the experiment, as well as the group assignment and measurement method used.

**Table 5: Ryals and Wilson’s (2005) classification of experimental designs**

Type of experiment	Brief overview	Setting	Group assignment	Dependent variable measurement
Laboratory experiment	Subjects perform some task or activity within a controlled physical environment. Experimental and control group allocated.	Laboratory	Random or systematic	Quantitative
Field experiment	Subjects are in the context of actual purchase or consumption of a product or service. Experimental and control group allocated.	Field	Random or systematic	Quantitative
Ex post facto study	Measurement issue is considered before intervention begins. Experimental group versus naturally occurring group.	Field	Naturally occurring	Quantitative
Quasi-experimental qualitative design	Experimental and control group allocated. Post-test measurement carried out qualitatively, instead of quantitatively, through the use of interviews or focus groups.	Field	Naturally occurring	Qualitative

Ryals and Wilson's (2005:349) description of quasi-experimental designs, however, differs from most research literature.

A quasi-experimental design is more commonly defined by researchers as an experiment that lacks control over the scheduling of the treatment; therefore the subjects are not randomly assigned to different treatment conditions (Harris, 2002:189; McDaniel & Gates, 2000:253).

Ryals and Wilson's (2005:349) classification, however, referred to a specific type of quasi-experimental design which applies a qualitative post-test measurement. An experimental and control group are allocated, as in previous approaches. However, post-test measurements are carried out through interviews or focus group discussions.

Cooper and Schindler (2006:286-291, 302-304) referred to a different variation of generic experimental designs. Table 6 illustrates these designs by presenting the basic and complex experimental designs listed by Cooper and Schindler (2006:286-291, 302-304). The table presents a brief overview of each type of experiment, the sub-categories of each experimental type, as well as the dependent variable measurement method used.

**Table 6: Cooper and Schindler’s (2006) classifications of experimental designs**

Basic and complex experimental designs			
Type of experiment	Brief overview	Types	Dependent variable measurement
Pre-experimental designs	Used when there are no comparison groups that are truly equivalent and if there is little control over various threats to internal validity. These basic designs are weak in scientific measurement power.	After-only study One-group pre-test-post-test design Static group comparison	Quantitative
True experiments	These designs achieve equivalence in groups through the use of matching and random assignment.	Pre-test-post-test control Group design Post-test only control group design	Quantitative
Field experiments: Quasi- or semi-experiments	These designs are used when extraneous variables or field conditions cannot be controlled. Subjects are therefore not randomly assigned.	Non-equivalent control group design Separate sample pre-test-post-test design Group time series design	Quantitative
Complex experimental designs	These designs are the basic forms of true experiments and are used for sophisticated experiments and market tests.	Complete randomized design Randomized block design Latin square design Factorial design covariance analysis	Quantitative

As seen in Table 5 and Table 6, neither Ryals and Wilson’s (2005:349) nor Cooper and Schindler’s (2006:286-291, 302-304) classifications of experimental designs distinguished laboratory or field experiments from experiments conducted online. A brief overview on Internet-based experiments in research is therefore provided below.

#### **4.2.5 Internet-based experiments**

- **An overview of Internet-based experiments**

The Internet has created a communication revolution enabling one to retrieve and send information everywhere (Neumann, O’Murchu, Breslin, Decker, Hogan & MacDonaill, 2005:473). In recent years, researchers have increasingly begun to use the Internet to conduct Internet-based experiments (iPsychExpts, 2006; Reips, 2002:243).

Several terms have been used synonymously for these types of Internet-based experiments: web experiment, online experiment, Internet-based experiment, World Wide Web (WWW) experiment, and Internet experiment (Reips, 2002:241). For the purpose of the study the term Internet-based experiment will be used.

The use of Internet-based experiments is still relatively new amongst researchers. However, in the last five years, several researchers have conducted studies to investigate and promote the validity of Internet-based experiments (Brand & Hahn, 2003:1-22; iPsychExpts, 2006; Reips, 2002:241-249). Reduced cost, sheer numbers, and the accessibility of specific subjects are only a few of the aspects that make Internet-based experiments attractive to researchers. However, these experiments are not suitable for all research projects (Reips, 2002:244). It is therefore necessary to be aware of the criteria, advantages and disadvantages of conducting Internet-based experiments before using such experimental designs.

The advantages and disadvantages of Internet-based experiments are summarised below:

▪ **Advantages of Internet-based experiments**

- 1) Sample size - Internet-based experiments enable a much larger number of subjects to participate than laboratory experiments (Brand & Hahn, 2003:3). The size of the population pool from which web participants are obtained is considerably larger than the size of the population from which laboratory participants are obtained. Another contributing factor is the ability to have subjects participate simultaneously, and at any time (iPsychExpts, 2006).
- 2) Sample specificity - The demographics of the participants in a web experiment are partially related to the web sites and forums that are used to recruit participants. Therefore, participants from specific target populations can be accessed (Schmidt in iPsychExpts, 2006).
- 3) Experimenter's absence - The absence of an experimenter in Internet-based experiments allows the data collected to be free of experimental bias (Reips, 2002:245).
- 4) Financial benefit – Internet-based experiments are more cost effective than laboratory experiments, especially if the experiment requires a large sample size as

there is no need to pay an experimenter to conduct every session. Subjects also make use of their own computers and online facilities (Reips, 2002:245).

- 5) Ease of access for participants and avoidance of time constraints (Reips, 2002:245).

- **Disadvantages of Internet-based experiments**

- 1) Environmental and technical variance – During a web experiment, environmental conditions such as background noise, lighting, and the presence of other distractions cannot be controlled and may vary between subjects (iPsychExpts, 2006).
- 2) Dropout – The rate of mortality (drop-out) in Internet-based experiments is higher than that of laboratory experiments (Piper in iPsychExpts, 2006). This can reduce the sample size and may also have an adverse effect on the results obtained. Drop out can, however, be turned into a detection device for motivational confounding. It can also be minimized by offering immediate feedback, financial incentives, or by personalization (Reips, 2002:245).
- 3) Multiple submission and hacking – “It may be possible for participants in a web experiment to repeatedly submit data and as result multiple submissions may impair the quality data obtained from Internet-based experiments” (iPsychExpts, 2006). Hackers can also access experiments and manipulate the data. However, there is little incentive for hackers or subjects to participate more than once. To date this has not posed a serious problem for Internet-based experiments (iPsychExpts, 2006). Multiple submissions can be controlled through the collection of personal identification items and by checking the internal consistency as well as date and time consistency of answers (Reips, 2002:245).
- 4) Absence of researcher – This may cause problems if instructions are misunderstood or complicated. Possible solutions for this are the pre-testing of material and providing the opportunity for subjects to provide feedback (Reips, 2002:245).

- **“Best practice” guidelines for Internet-based experiments**

The use of Internet-based experimenting is fast becoming a standard; therefore it is a method that needs standards (Reips, 2002:254). Reips (2002:254) proposed “best practice” standards to guide researchers in the correct design and implementation of

Internet-based experiments. These standards were condensed and are summarized below:

- 1) *Standard 1*: Consider making use of an Internet-based software tool to create experimental materials. Such tools can automatically implement standard procedures for web experiments that can guard against common problems.
- 2) *Standard 2*: Pre-test experiments for clarity of instructions and allow subjects to provide feedback.
- 3) *Standard 3*: Link experiments to several Internet sites to determine the effects of self-selection and estimate generalizability.
- 4) *Standard 4*: Check experiments for configuration errors (e.g. do not allow external access to unprotected directories). Also check for obvious naming of files, conditions and passwords.
- 5) *Standard 5*: Minimize drop out by making use of various techniques such as incentives, or the warm up technique which allows for a natural drop out curve.
- 6) *Standard 6*: Run experiment both online and offline, for comparison.
- 7) *Standard 7*: Ask filter questions at the beginning of the experiment (seriousness of participation, expert status, language skills) to encourage serious and complete answers.
- 8) *Standard 8*: Avoid multiple submissions by using personalisation and password techniques.
- 9) *Standard 9*: Perform consistency checks.
- 10) *Standard 10*: Store experimental log and data files for future analysis.

The manner in which the above guidelines were applied to this study is presented throughout section 4.3.

In conclusion, Internet-based experiments can provide many advantages to both new and experienced researchers. However, established methods need to be implemented in order to avoid both technical and methodological errors.

#### **4.2.6 Reliability and validity in experimental research**

Several factors can affect the accuracy of conclusions deduced from using experimental research methodologies. Patzer (1996:31) lists these aspects as validity, experimental error, extraneous variables or threats, demand characteristics, as well as reliability. These aspects are discussed below:

- **Internal and external validity**

Patzer (1996:39) defines validity as the extent to which a measure is free of error in terms of the providing the information it was intended to provide. Validity is reflected in the data collected for an experiment and is salient in experimental research. If data lack validity then conclusions based on these data are not justified.

There are two types of validity, namely internal and external validity. Internal validity is “the extent to which competing explanations for experimental results can be avoided” (McDaniel & Gates, 2000:214). Patzer (1996:43) defines internal validity as the extent to which changes in the dependent variable are actually caused by changes in the independent variable.

External validity is defined as “the extent to which the results are relevant to individuals and settings beyond the study conditions” (Page & Meyer, 2000:86). Prominent factors that reduce external validity are variables, environments and subjects that are dissimilar to reality (Patzer, 1996:53).

Internal and external validity are not mutually exclusive to experiments. Experiments that have a high level of internal control do not accurately reflect reality; therefore, to achieve reasonable levels of both internal and external validity it is often necessary to make some trade offs dependent on the objectives of the experiment (Patzer, 1996:43). Internal validity is directly influenced by experiments’ experimental error, extraneous variables, and demand characteristics. These variables are listed and discussed below.

- **Experimental error**

When an error occurs during an experiment that has no specific identification it is referred to as experimental error. These errors come in the form of random error or constant error



(Patzner, 1996:31), also referred to as sampling and systematic error respectively (McDaniel & Gates, 2000:253). Random error occurs by chance and its effect on experimental conditions is, therefore, inconsistent. Random error is often associated with the random assigning of the experiment's sample of subjects (Patzner, 1996:32). Constant error is more serious than random error and is caused by an extraneous threat that the researcher may not be aware of. This means that the error results in a consistent and constant bias in the measurement (McDaniel & Gates, 2000:253). The extraneous threats that may influence constant error are discussed further in the next section.

- **Extraneous threats**

Extraneous threats are variables outside the hypothesized relationship that can cause an effect on the dependent variable (Patzner, 1996:33). McDaniel and Gates (2000:216) presented five extraneous threats that may have an effect on the dependent variable. These are history, maturation, instrument variation, selection bias and mortality. Patzner (1996:43) provided an additional two threats in the form of the testing effect and the statistical regression effect. A brief description of each of these seven extraneous threats is provided in Table 7 below.

**Table 7: A summary of the seven extraneous threats affecting experimental validity**

Extraneous threats	Definition	Reference
History Effect	The effect on a dependent variable by an extraneous variable associated with the passing of time. This effect is especially evident in test market experiments carried out over a long time period.	Patzer (1996:45)
Maturation Effect	Refers to the change in subjects during the course of an experiment that are a function of time. This effect is associated with the normal aging process of the subjects involved. The longer the experiment runs the more likely that the maturation effect will affect results.	McDaniel and Gates (2000:217); Patzer (1996:45)
Instrument Effect	Refers to any changes in measurements instruments that affect measurements taken.	McDaniel and Gates (2000:217)
Selection Bias	When the experimental or test group is systematically different from the target population due to a biased selection process.	McDaniel and Gates (2000:217)
Mortality Effect	The loss of subjects during the course of an experiment. Those who leave may be systematically different from those who stay.	McDaniel and Gates (2000:217)
Testing Effect	The effect on a dependent variable associated with exposure to the measure of the dependent variable. Merely being exposed to the experiment or experimental measure may alter subjects' responses.	Patzer (1996:45)
Statistical Regression Effect	Extremes tend to average out over time; therefore the statistical regression effect is the effect on a dependent variable associated with a subject characteristic that may moderate from the extreme. This effect is in evident in experiments using an extreme level of some characteristic to assign groups.	Patzer (1996:48)

The table above provides definitions of seven extraneous threats that can have an influence on the dependent variable. These threats have a significant influence on an experiment's internal validity. The manner in which each of these threats is addressed for the current experiment is presented in section 4.4.1 on p. 86.

▪ **Demand characteristics**

“A demand characteristic unintentionally provides subjects with information about the study” (Patzer, 1996:34). This characteristic is directly related to the Hawthorne effect which states that subjects may behave differently than normal simply because they are aware that they are part of an experiment (Patzer, 1996:35). Demand characteristics can

be minimized in experiments that are properly designed and conducted. The manner in which demand characteristics were minimized for the current experiment is presented in section 4.4.1.

- **External validity**

As mentioned, external validity is a reflection of how well an experiment reflects the reality of the world outside of the experiment. Some researchers refer to the term “ecological validity” rather than external validity. However, according to Patzer (1996:53) these two terms can be used interchangeably. Prominent factors that lessen external validity are environments, subjects, and variables that are dissimilar between an experiment and reality (Patzer, 1996:53). These are discussed below.

- **Dissimilar environments**

Since the marketplace is difficult to duplicate, this may result in an experimental environment that is often very different to reality (Patzer, 1996:54). Creating an experimental environment that is similar to reality often competes directly with the internal validity of an experiment. The researcher therefore needs to plan the research design carefully to ensure that the trade off between reality and internal validity is most beneficial to the research objectives.

- **Dissimilar subjects**

The more similar the subjects taking part in an experiment are to actual consumers, the more valid the results of the experiment, and the more readily the results can be generalized for the marketing manager’s decision situation.

- **Dissimilar variables**

According to Patzer (1996:53), even sophisticated experiments are limited in the quality and quantity of independent variables used in comparison with reality. A large number of controllable marketing variables are also not often easy to acknowledge in an experiment.

In summary, it is essential that a researcher finds the proper balance between the internal components and procedures of an experiment, and the larger world outside of the experiment (Patzer, 1996:53).

The manner in which the above factors are addressed in the current experiment is presented in sections 4.4.1 and 4.4.2.

- **Reliability**

A final factor to consider in the accuracy of the experimental design is reliability. This refers to the degree to which the measure used provides consistent results (Cooper & Schindler, 2006:318). Reliability is a necessary contributor to validity. However, it is not a sufficient condition for validity (Cooper & Schindler, 2006:321).

The reliability of the scales used in the study was tested using Cronbach's coefficient alpha. Although various authors differ on a cut off value that constitutes an acceptable value for Cronbach's alpha, Nunnally (in Kent, 2007:143) recommends a cut off value of 0.7. A Cronbach's alpha coefficient of 0.7 was therefore chosen as the cut off value for this study.

The steps taken to ensure that all aspects of reliability and validity in this study were considered are presented in section 4.4 of this chapter.

The next section of this chapter presents this study's experimental research design which was based on the principles that have been presented so far.

### **4.3 THE CURRENT STUDY'S RESEARCH DESIGN**

This study made use of an Internet-based experimental research design. This section first provides a general description and classification of the study's design. This is followed by a detailed explanation of the experimental design used to conduct the study.

#### **4.3.1 A general description and classification of the current study's research design**

Table 8 provides a summarized overview of the research design used in this study, based on a set of general descriptors of a research design proposed by Cooper and Schindler (2006:139) and Page and Meyer (2000:41-48).

**Table 8: A summary of the current study's research design**

Category	Type used in study	Description	Reason for use
The degree to which the research questions were crystallized	Formal study	Begins with a hypothesis or research question and involves precise procedures and data source specifications.	This study can be classified as a formal study as precise procedures were followed to test the hypotheses.
The method of data collection	Interrogation/ communication	The researcher questions the subjects and collected their responses by personal or impersonal means.	An online research questionnaire was used to collect data from subjects who were exposed to experimental stimuli.
The power of the researcher to have produced effects in the variables under study	Experimental	The researcher attempts to control and/or manipulate the variables in the study.	The independent variables were manipulated in the experimental design through the simulation of online web pages containing slogans representing the independent variable cues.
The purpose of the study	Causal	The relationship among variables is explained.	The purpose of the study was to explain the relationship between the independent and dependent variables under investigation and to determine whether changes in the independent variable had an impact on the dependent variable.
The time dimension	Cross-sectional	Carried out once and represents a snapshot of one point in time.	This study was carried out once to determine the measured effects of the independent variables on the dependent variable at one point in time.
The topical scope (breadth and depth) of the study	Statistical study	Hypotheses are tested quantitatively and inferences for a population's characteristics are made from a sample's characteristics.	This study was a statistical study as quantitative data was gathered and analysed statistically.

Category	Type used in study	Description	Reason for use
The research environment	Web experiment	“Internet-based experiments are experiments which are accessed via the World Wide Web (WWW) and are conducted in the participant’s web browser” (iPsychExpts, 2006).	Subjects were exposed to a web experiment via a simulated online web page and questionnaire. The physical environment was not controlled as subjects were situated in front of their own computers while taking part in the experimental study.

The table indicates that an experimental approach was used in order to conduct the research successfully.

According to Ryals and Wilson’s (2005:349) classification of experimental designs (see Table 6 on p. 56), the study’s design was similar to that of a laboratory experiment as subjects were presented with a “mock” (i.e. an artificial) environment, and a control group was assigned to provide a baseline measure for the results.

Ryals and Wilson’s (2005:349) classification, however, does not include a classification of Internet-based experiments. This experiment was a web experiment as it was conducted on the Internet. This means that the experiment was not a true laboratory experiment as all environmental conditions could not be controlled. The experiment, however, cannot be described as a field experiment as subjects were not in the normal context of purchase or consumption.

Using Cooper and Schindler’s (2006:286-291, 302-304) classifications of experimental designs (see Table 6 on p. 56), this study made use of a post-test-only control group design. There was no pre-test measurement in the design and the experimental effect was measured as the difference between the scores of the test groups and those of the control group.

An overview of the experimental design used in this study, according to both Ryals and Wilson’s (2005:349) and Cooper and Schindler’s (2006:286-291;302-304) classifications, is presented in section 4.3.2 below.

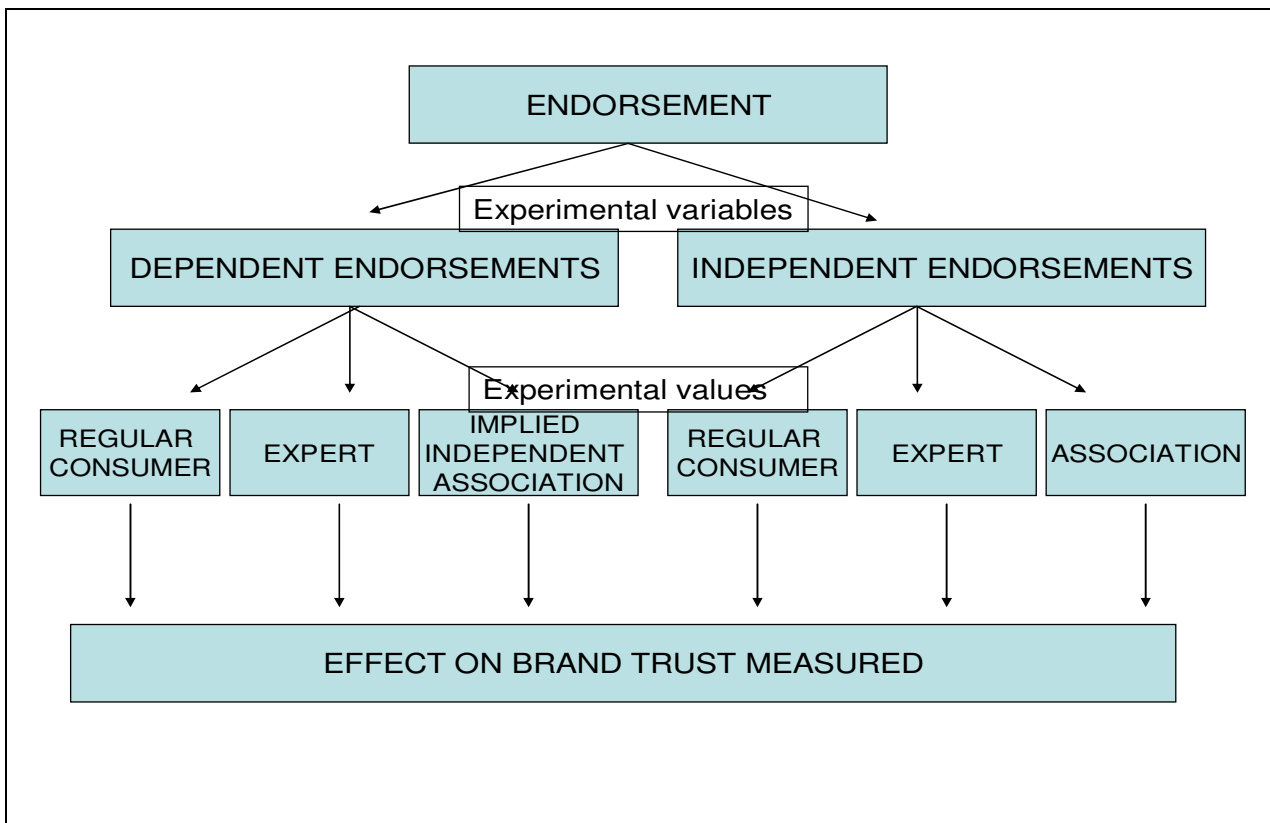
#### 4.3.2 A brief overview of the current study's experimental design

The current study made use of an experimental design as it manipulated the independent variables under investigation, in a semi-controlled environment, in order to measure the effect of this manipulation on a dependent variable. The study had two independent variables, namely dependent and independent endorsement. Each of these two variables also had three multiple values.

For the purpose of this study the independent variables are referred to as the types of endorsement under investigation, and the multiple values as the forms of endorsement under investigation.

Figure 4 illustrates the two specific endorsement types (i.e., the multiple variables) that were investigated in this study, as well as the three endorsement forms (multiple values) of each variable.

**Figure 4: An illustration of the six endorsement forms investigated in the current study**



This study investigated the effect of the aforementioned six forms of endorsements on brand trust.

The target population selected was South African nutritional supplement users who made use of the Internet to gather product information. The sample was collected via an Internet-based experiment and subjects were invited to participate via personal emails and links to the experiment posted on various social networking sites.

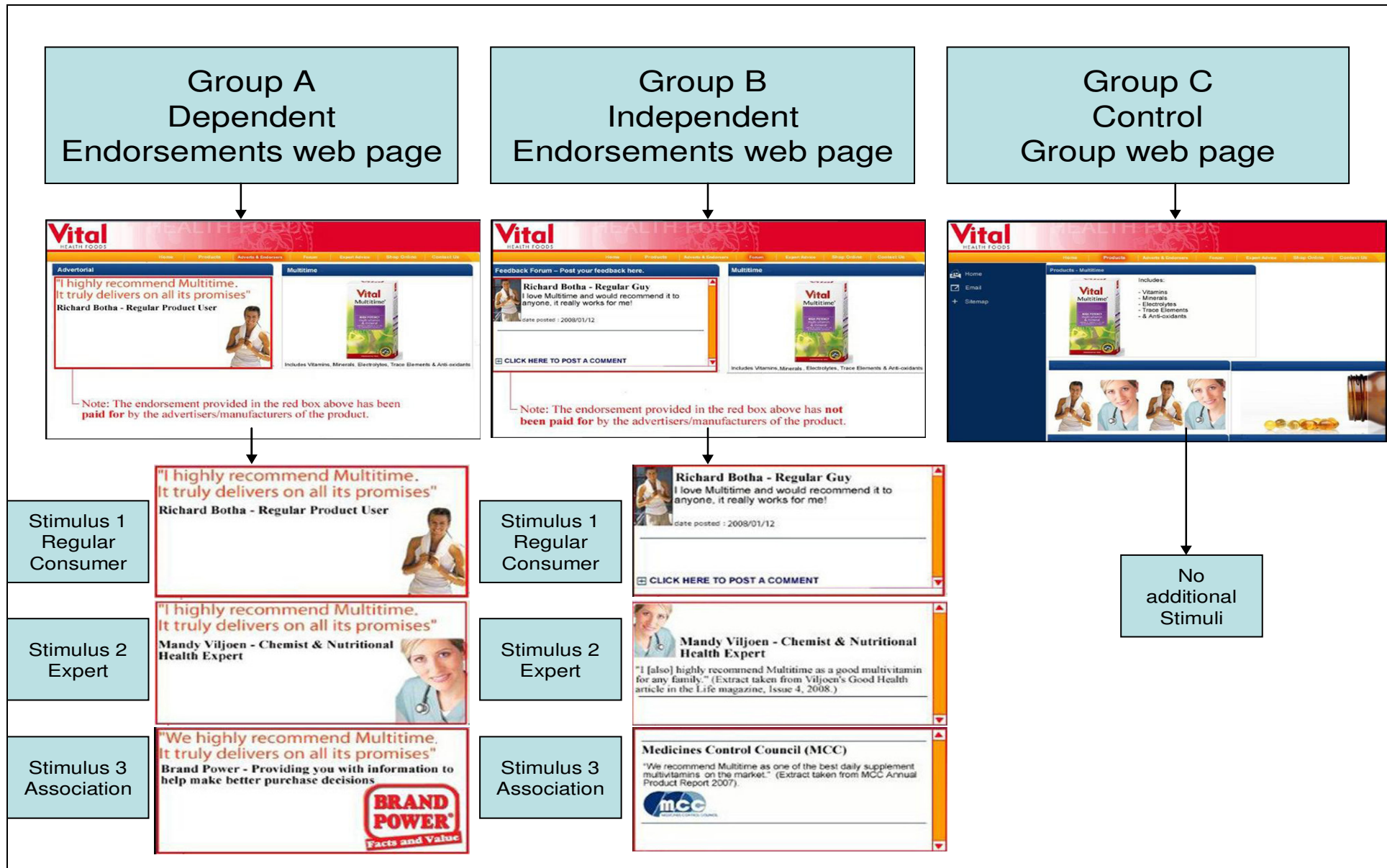
The subjects were randomly divided into three groups. Group A received the three dependent endorsement stimuli, namely dependent regular endorsement, dependent expert endorsement and implied independent association endorsement. Group B received the three independent endorsement stimuli, namely independent regular endorsement, independent expert endorsement and independent association endorsement. Group C received no endorsement stimulus and was used as a control group for a baseline measure.

Each stimulus was presented separately on a simulated web page. After subjects had viewed each web page, they were asked to complete the brand trust scale (BTS) to indicate their brand trust score.

Figure 5 provides a visual representation of the experimental stimuli used for each of the three experimental groups (for larger versions of the experimental stimuli used in the experiment see the questionnaires in Appendices C, D and E).



Figure 5: An illustration of the experimental stimuli presented to each of the three experimental groups



Brand familiarity was included in the study as a covariate. Extensive pre-testing and a manipulation check were also used to ensure the stimuli used accurately represented the forms of endorsement under investigation.

This study also facilitated all criteria stipulated by McDaniel and Gates (2000:211) and Patzer (1996:7) in order to infer this cause and effect relationship with reasonable certainty (see section 4.4 on p. 86).

The section above provided a brief overview of the current study's research design. The rest of this section will present this research design in more detail by elaborating on each of the below points:

1. Sampling design
2. Measurement of the constructs brand trust and brand familiarity
3. The experimental stimuli
4. Pre-testing the experiment

#### **4.3.3 Sampling design**

##### **▪ Definition of the target population**

The chosen target population for this study was South African nutritional supplement users who made use of the Internet to gather product information. These included a wide spectrum of supplement users from gym-goers wishing to boost their nutrient intake, to professional sportspeople at the height of their performance, to pensioners looking for health and well-being. As the study was conducted online it was necessary to define the target population further as supplement users who had access to the Internet.

##### **▪ Description of the subjects who participated in the study and where they were found**

The subjects who took part in this study were nutritional supplement users who had access to the Internet. The subjects had to be above the age of 18 in order to take part in the study.

The subjects were found online and asked to participate in the study via the Internet. Firstly, users of the [getfit.co.za](http://getfit.co.za) web site were asked to participate in the survey via a link situated on the site's forum. Secondly, members of the SA Muscle and Fitness group on MySpace.com and the GetFIT South Africa and Fitness Magazine groups on Facebook.com were asked to participate in the survey via a group request on the group's home pages and personal messages to all members of each group.

The Muscle and Fitness group (MySpace Groups, 2008) and the GetFIT South Africa and Fitness Magazine groups (Facebook, 2008) are social networking groups formed and governed by the members of the groups. Members of the groups join at their own discretion and choose to interact freely with other members of group. The researcher was a member of all three of these groups and, therefore did not need to gain permission to post a link to the web experiment on these platforms.

At the time that the survey was conducted, the [getfit.co.za](http://getfit.co.za) web site had 1377 registered readers ([getfit.co.za](http://getfit.co.za), 2008). The SA Fitness and Muscle group had 32 members and continues to grow weekly (MySpace Groups, 2008). The GetFIT South Africa and Fitness Magazine groups have 129 and 255 members respectively (Facebook, 2008) and are also growing exponentially.

#### ▪ **Sampling method**

This study made use of a snowball sampling method to recruit potential participants. A snowball sample is a non-probability sample in which the selection of additional participants is based on referrals from the original participants (McDaniel & Gates, 2000:350).

Each invited participant was also asked to forward the survey link to fellow nutritional supplement users in South Africa. This created a snowball effect to multiple referrals. Although the sampling method used was a non-probability sampling method, the stimuli assigned to the three groups of participants was randomized. Randomization involves randomly assigning subjects to treatment conditions to ensure equal representation of characteristics

throughout the groups (McDaniel & Gates, 2000:350). This random assignment improves the internal validity of the experiment (Cooper & Schindler, 2006:290).

To ensure that participants were from the correct target population as defined above, screening questions were asked at the start of the survey. All participants had to make use of some kind of nutritional supplement. The participants were also screened to ensure they were above 18 years of age and South African citizens.

- **Target and realised sample size**

Sample sizes in marketing experiments vary greatly, from 11 to 95,000 (Ryals & Wilson, 2005:354). The endorsement based study by Dean (1999:7) made use of a total sample of 185 subjects with approximately 22 participants assigned to each of the cells in the experiment. The experiment made use of eight cells. The endorsement based study conducted by Wang (2005:405) involved 210 subjects. The subjects were assigned to four treatment conditions with approximately 52 subjects per group.

The brand trust study conducted by Delgado-Ballester and Munuera-Aleman (2005:189) made use of 271 subjects from a region of 1,100,000 inhabitants. The desired sample size chosen for the proposed study was guided by the above similar studies sample sizes, focusing specifically on the sample sizes administered by the endorsement-based studies conducted by Dean (1999:7) and Wang (2005:405).

The desired sample size for the study was 180. This study assigned subjects into three groups. Each of the three groups should therefore have received 60 subjects. A minimum sample size of 90 participants was set which would result in a minimum of 30 participants per group. The survey was online for six weeks and 150 participants participated. After all duplicates and incomplete questionnaires were eliminated, Group A was left with 39 subjects, Group B had 37 subjects, and Group C had 31 subjects.

#### **4.3.4 A description of the data collection method used**

The experiment was conducted online as an Internet-based experiment and made use of a self-administrated online questionnaire. A brief motivation as to why an Internet-based experiment was conducted is provided below.

The primary reason for the experiment to be conducted online was to ensure that the correct target population was represented effectively and that the correct number of subjects was reached.

Social networking portals, such as the abovementioned forums, as well as MySpace and Facebook groups, connect people based on data stored about them in their profiles (Neumann *et al.*, 2005:472). These portals provide a focal point and an information source that can be personalized, allowing people to gather detailed and specific information on demand (Neumann *et al.*, 2005:472). The study took advantage of this modern trend in social communication and used the platform as an information gathering tool for the purpose of the study.

The online environment also assisted the viral chain of responses used in the snowball sampling method using the recently demonstrated communicative power of the Internet (Davidson & Copulsky, 2006:14), the web (Lee *et al.*, 2006:289) and social networking groups (Neumann *et al.*, 2005:472).

The web pages and design work of the images used in the study were conducted by SBITS Technologies. The online questionnaire and management of the online survey was conducted by ITR Resolutions.

#### **4.3.5 The experimental stimuli**

The framework for the experimental design used in this study came from a study conducted by Dean (1999:1-12). He used a simulated print advertisement which was presented to three groups. The conditions being measured were either present or absent in the advertisement.

A study by Wang (2005:402-412) was also used as a guideline as it used an Internet-based survey where participants were requested to log on to a web page in order to participate in the research. Wang's (2005: 402-412) study was also an endorsement-based study and also included six dependent variables. However, participants were only exposed to one experimental stimulus and responded on six measures; one for each dependent variable.

The subjects participating in the current study were randomly divided into three groups. Stimuli were presented individually to the subjects in each group through a mock web page. The subjects were presented with three identical web pages containing images of a nutritional supplement brand. Each page listed four product ingredients commonly found in such nutritional supplements. These were intrinsic product cues and were not under investigation. Notably absent was any mention of the store or selling price. The images presented contained one cue corresponding to the independent variables and multiple variable values under investigation (see Figure 5 on p. 69):

- Group A received the three dependent endorsement stimuli; namely dependent regular endorsement, dependent expert endorsement, and implied independent association endorsement.
- Group B received the three independent endorsement stimuli; namely independent regular endorsement, independent expert endorsement, and independent association endorsement.
- Group C received no endorsement stimulus and was used as a control group.

Each stimulus was presented separately on a simulated web page. After subjects had viewed the first web page, they were asked to complete the brand trust scale online. The subjects were then requested to view the second web page after which they completed the BTS a second time. The same process was used for the third experimental stimulus. Each subject in Group A and B was therefore presented with three stimuli and completed the BTS three times; once for each stimulus.

In order to simulate the endorsements correctly, Wang’s (2005:402) suggestions for presenting different types of endorsements were reviewed:

- The product/service can be ranked against competing products/services in its class
- The product/service can awarded a seal of approval by the third party
- A subjective or non-comparative statement can be made about the product/service

For the purpose of this study only one method of endorsement was used as a stimuli method. A subjective or non-comparative statement was used to represent each form of endorsement tested.

Table 9 clearly demonstrates the assignment of stimuli to each group. The table illustrates which stimuli each group received in order to complete the BTS, where  $\bar{x}$  represents the mean brand trust score per stimulus. The hypotheses were tested through the direct comparison of brand trust mean scores between different groups (see Figure 6 on p. 103).

**Table 9: Prototype table illustrating the assignment of endorsement stimuli per subject group**

	Endorsement form and group assignment						
	Group A - Dependent endorsement			Group B – Independent endorsement			Group C - Control Group
Endorsement Stimuli	Regular Consumer	Expert	Implied Independent Association	Regular Consumer	Expert	Association	Control Group
Brand Trust Score	$\bar{x}_1$	$\bar{x}_2$	$\bar{x}_3$	$\bar{x}_4$	$\bar{x}_5$	$\bar{x}_6$	$\bar{x}_7$

▪ **The choice of the nutritional supplement brand**

The question arose as to whether a real brand or a fictitious brand should be used in order to accurately set up the experiment. Different views on this topic were reviewed and are presented below:

Dean's (1999:5) simulation of a television set notably omitted any mention of a specific brand. Wang's (2005:404) study, however, made use of real movie reviews where subjects logged into the Yahoo Movie's web site. Subjects were, however, asked to choose a movie that they knew little about to limited possible preconceived attitudes.

In Delgado-Ballester and Munuera-Aleman's (2005:190) study, participants were asked to choose a brand they were familiar with before responding to the questionnaire. Delgado-Ballester and Munuera-Aleman's (2005:190) study did, however, compare brand trust and brand reliability constructs on the specific brand being investigated.

Even though the current study was most closely modelled on Dean's (1999) experimental design, which made use of a fictitious brand, a pre-test was conducted in order to determine which method was best suited to the current study and its objectives. This pre-test is discussed in detail in section 4.3.7 on p. 83 and Appendix F).

The results of the pre-test indicated that a real brand should be used in order to conduct the experiment. The next question arose as to which brand should be used. The first pre-test was conducted using the brand USN in the web page simulations. USN is currently the market leader in the South African market. The pre-test indicated that the USN brand was too controversial and participants' responses were based on their perceptions of the brand itself and not on the experimental stimuli. A second pre-test was conducted to find a less controversial brand.

The results indicated that the Vital brand could be used in order to conduct the experiment (see Appendix C, D and E).

▪ **The independent variables and simulation of experimental stimuli**

The main premise of this study was that different forms and types of endorsements would affect brand trust differently. The two main types of



endorsements that were manipulated in this study were dependent endorsements and independent endorsement. For the purpose of the study, each of these independent variables also had three multiple values, namely regular consumer, expert, and association endorsement (see Figure 1 on p. 6).

Table 10 provides an overview of the multiple independent variables and multiple values used in this study.

**Table 10: Multiple independent variables and multiple independent values investigated**

	Multiple Independent Variable A	Multiple Independent Variable B
	Dependent endorsement	Independent endorsement
Multiple Value 1	Regular consumer endorsement	Regular consumer endorsement
Multiple Value 2	Expert endorsement	Expert endorsement
Multiple Value 3	Implied independent association endorsement	Association endorsement

The table above presents the two independent variables, as well as the multiple independent values which were tested under each type of endorsement. For the purpose of this study the multiple independent variables were referred to as the types of endorsement under investigation, and the multiple values as the forms of endorsement under investigation.

In order for the study to be successful it was important that each form and type of endorsement under investigation was simulated accurately and presented clearly to the subjects participating in the study.

All the endorsement simulations were presented on a simulated web page for the Vital brand. Each web page contained an endorsement image which differentiated each form of endorsement under investigation. The different forms and types of endorsement were differentiated on each page via the web page's slogan context and slogan text. The slogan context differentiated the type of endorsement and the slogan text was used to differentiate between

the different forms of endorsement as per the classifications (see Figure 5 on p. 69 and Appendix C, D and E).

Table 11 below indicates the slogan context and text that were used to simulate each form of endorsement under investigation.

**Table 11: Slogan context and text used to simulate the multiple independent variables and values**

	<b>Slogan Context</b>	<b>Slogan Text</b>
<b>Group A Dependent Endorsements (Paid-for)</b>		
Regular consumer endorsement	Simulated Advertorial text:	"I highly recommend Multitime. It truly delivers on all its promises. Richard Botha – Regular Product User
Expert endorsement	Simulated Advertorial text:	"I highly recommend Multitime. It truly delivers on all its promises. – Mandy Viljoen – Chemist and Nutritional Health Expert
Implied independent association endorsement	Simulated Advertorial text:	"We highly recommend Multitime. It truly delivers on all its promises. - Brand Power - Providing you with information to help make better purchase decisions.
<b>Group B Independent Endorsements (Non-paid-for)</b>		
Regular consumer Endorsement	Simulated Feedback Forum: Post your own comments here:	Richard Botha – Regular Guy: I love Multitime and would recommend it to anyone, it really works for me!
Expert Endorsement	Simulated Magazine Extract:	"I [also] highly recommend Multitime as a good multivitamin for any family." (Extract taken from Viljoen's Good Health article in the Life magazine, Issue 4, 2008.)
Independent association endorsement	Simulated Report Extract:	Medicines Control Council (MCC): "We recommend Multitime as one of the best daily supplement multivitamins on the market." (Extract taken from MCC Annual Products Report 2007).

As is indicated in Table 11 above, the dependent endorsements were portrayed through the simulation of advertorial text on the web page, implying that the endorsement came from the product advertisers themselves.

The independent endorsements were simulated through the use of an interactive text box on the web page which implied that independent endorsers had the opportunity to post independent comments such as on a forum or in a independent discussion group (see Appendices C, D and E).

The images and simulations used for each form and type of endorsement were pre-tested extensively to ensure that the simulations accurately presented the independent variable under investigation (see Appendix F).

The pre-test indicated that the simulation of each form of endorsement was successful, e.g., regular consumer, expert and association endorsements. It was, however, noted that participants were not able to accurately distinguish between the two types of endorsement, namely the dependent and independent endorsement simulations. A note was therefore inserted on each stimulus informing the participant which type of endorsement they were being presented with (see Figure 5 on p. 69).

The accurate simulation of the independent variables also brought about the issue of ecological validity which is discussed in section 4.4.2 on p .90. A detailed presentation of each simulated web page and the Internet-based questionnaire are available in Appendix C, D and E.

#### **4.3.6 Measurement of the constructs “brand trust” and “brand familiarity”**

##### **▪ Brand trust**

The dependent variable in this study was brand trust (see section 3.2 on p. 40). The brand trust scale (BTS) developed by Delgado-Ballester (2004:573-592) was used in this experiment to assess participants' levels of brand trust.

The BTS can be described as a two-dimensional eight-item Likert scale with five labelled scale points ranging from 1 = Strongly disagree to 5 = Strongly agree. The scale measures two dimensions of brand trust, namely brand reliability (items 1-4) and brand intensions (items 5-8).

The wording of the scale items used by Delgado-Ballester (2004:573-592) was adapted slightly as the original scale was developed in a Spanish context. Pre-tests were conducted on each item in order to ensure that the statements were relevant and clearly understood in a South African context.

Based on the results of the pre-testing phase, the BTS was also adapted to include eight labelled scale points ranging from 1 = Strongly disagree to 7 = Strongly agree. The eighth point included an “I don’t know” option (see pre-test 6 on p. 85). The final scale used in the experiment is presented below.

**Table 12: The adapted version of Delgado-Ballester’s (2004:573-592) brand trust scale used in the current study**

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
Vital is a brand that would meet my expectations.	1	2	3	4	5	6	7	0
I feel confident in the Vital brand name.	1	2	3	4	5	6	7	0
Vital is a brand that would never disappoint me.	1	2	3	4	5	6	7	0
Vital brand name guarantees satisfaction.	1	2	3	4	5	6	7	0
Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	1	2	3	4	5	6	7	0
I could rely on the Vital brand to solve a problem should I have one.	1	2	3	4	5	6	7	0

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
Vital brand would make any effort to satisfy me.	1	2	3	4	5	6	7	0
Vital brand would compensate me in some way for a problem with the product.	1	2	3	4	5	6	7	0

A low response of 1 on the BTS indicated that the subjects disagreed strongly with the item wording on the scale. A high response of 7 indicated that the subjects agreed strongly with the statement and therefore felt a high level of trust in the brand. None of the items in the BTS were reverse scored.

▪ **Reliability of the brand trust scale**

The reliability of the BTS was assessed by Delgado-Ballester (2004:580) using the following measures:

- Composite reliability was reported as higher than the minimum recommended level of 0.60 (Fornell & Larcker in Delgado-Ballester, 2004:581). Both dimensions of brand trust exceeded the preferred level of 0.7 (Churchill in Delgado-Ballester, 2004:581).
- Other estimates of internal consistency were also computed by Delgado-Ballester (2004:581). First, the average variance extracted estimates for both dimensions of brand trust exceeded the advocated level of 0.5 suggested by Fornell and Larcker (in Delgado-Ballester, 2002:581). In addition, an examination of the corrected item-to-total correlations revealed that they ranged from 0.52 to 0.70 for reliability items, and from 0.54 to 0.71 for intentions items.
- Finally, coefficient alpha estimates of both dimensions exceeded the level of 0.70 (Delgado-Ballester, 2002:581).

The reliability of the BTS was also tested in this study using Cronbach's coefficient alpha. The results, which are presented in section 5.2.2 on p. 96,

indicate that the Cronbach alpha reliability coefficient for the BTS was above the recommended cut-off of 0.7 for all the experimental groups (Kent, 2007:143) (see Table 17 on p. 96).

Taken collectively, the above measures provide support for the internal consistency reliability of the BTS used in this study.

- **Brand familiarity**

Brand familiarity was included in this study as a covariate. A covariate is a continuous variable that is not part of the main experimental manipulation, but that can have an influence on the dependent variable (Field, 2005:363).

Pre-tests indicated that a real brand should be used in this study rather than a fictitious brand. The problem, however, existed that subjects may have had previous experiences with the brand chosen for the experiment that may have influenced the results of the experiment by influencing the dependent variable of brand trust. The brand familiarity covariate was, therefore, incorporated into the study as a control variable. This ensured that the results of the study were accurately regressed and that previous brand knowledge would be calculated into the responses of each participant.

The brand familiarity scale of Kent and Allen (1994:98) was used to measure the brand familiarity construct. This scale requires subjects to respond to three items (familiar/unfamiliar, inexperienced/experienced, knowledgeable /not knowledgeable) given in 7-point numeric format. The scale therefore consists of three sets of bipolar pairs. Each bipolar pair has seven scale points in-between each descriptive word by which participants rate the concepts on each scale. The scale can therefore be described as a semantic differential scale producing interval data. The final scale used in the experiment is presented in Table 13 below.

**Table 13: The adapted version of Kent and Allen’s (1994:98) brand familiarity scale used in the current study**

unfamiliar	1	2	3	4	5	6	7	familiar
inexperienced	1	2	3	4	5	6	7	experienced
not knowledgeable	1	2	3	4	5	6	7	knowledgeable

A low response of 1 on each of the three items of the scale indicated that the subjects were not familiar with the brand chosen for the experiment, while a high response of 7 indicated that the subjects were familiar with the brand.

▪ **Reliability of the brand familiarity scale**

The reliability of the brand familiarity scale used in the study was also tested in this study using Cronbach’s coefficient alpha. The results, presented in section 5.2.2, indicate that the Cronbach alpha reliability coefficient for the brand familiarity scale was 0.819, which is above the chosen cut-off of 0.7 (Kent, 2007:143). These results were concurrent with Kent and Allen (1994:98), who reported a coefficient alpha for brand familiarity of above 0.85.

**4.3.7 Pre-testing the experimental design**

A number of pre-tests were used to ensure the validity of the Internet-based experiment. Alterations were made to the experimental design of the study after each pre-test. The section below provides a brief summary of the results of each pre-test (see Appendix F for a full report of the pre-test conducted).

▪ **Pre-test 1: To determine whether a real or fictitious nutritional supplement brand should be used in the experiment**

The results of pre-test 1 indicated that if a real brand was to be used in order to conduct the online experiment then the participants could be influenced by their previous experiences and opinions on the brand when completing the BTS.

However, the results also indicated that if a fictitious brand was to be used in order to conduct the experiment subjects found the experiment unrealistic. It was decided that a real brand would be used and the covariate of brand familiarity would be included as a control measure.

- **Pre-test 2: To determine the applicability of the brand trust scale (BTS) to the current experiment**

The BTS was designed to determine/measure consumer's trust in real brands (Delgado-Ballester, 2004:573-592). This study, however, made use of the BTS in order to measure how brand trust is affected by different endorsement forms, regardless of knowledge and experiences the participants had with the brand.

The results of the pre-test indicated that adjustments had to be made to the BTS in order to allow participants to respond to the cues presented to them in the experiment, and not from previous experiences with the brand. The statements in the scale therefore had to be worded in the future tense in order to make the experiment more realistic.

This would allow the participants to form realistic opinions about the brand making use of the endorsement cues presented to them on the web page.

The BTS was designed by a Spanish researcher (Delgado-Ballester, 2004:573-592), and may not have been correctly translated into the English language.

The sentence formulation of each of the scale items was therefore adjusted slightly for the purpose of the experiment.

- **Pre-test 3: To determine whether the simulations accurately represented the forms and types of endorsement under investigation**

It was concluded that the participants were successful in distinguishing between the three different forms of endorsement, namely regular consumer, expert, and association, and the simulations were accurate enough to be used in the actual experiment.

Subjects were, however, not able to distinguish between the two different types of endorsement (i.e. whether the simulated endorsements had been paid for or not).



Adjustments were therefore made to the simulated web pages in order to ensure that participants would be able to distinguish between these two forms. Further pre-tests were then conducted.

▪ **Pre-test 4: To determine which brand to use in the experiment**

Due to the varying positive and negative responses recorded in pre-test 1 when the USN brand was used, it was necessary to find a less controversial, more neutral brand to use throughout the experiment that was not the market leader in the brand category under investigation (i.e. nutritional supplements).

Due to the stability, familiarity and neutrality that the Vital brand showed during the pre-test it was decided that Vital would be the brand name used for the experiment.

▪ **Pre-test 5: To test the brand familiarity scale**

It was concluded that the unadjusted brand familiarity scale borrowed from Kent and Allen (1994:98) could be used in the research experiment to measure the covariate “brand familiarity”.

▪ **Pre-test 6: To test the adjusted BTS scales in the South African context using the chosen brand from the pre-test**

The BTS was adjusted to an eight-point scale that contained a neutral point as well as an “I don’t know” option.

▪ **Pre-test 7: To re-test the adjusted independent and dependent endorsement simulations**

Although simulations were adjusted, subjects were still unable to distinguish independent from dependent forms of endorsement.

It was therefore necessary to inform participants as to whether the endorsements were paid for or not. A note was therefore added to each simulated web page (i.e. experimental stimulus) providing the participant with this information.

- **Pre-test 8: To access the functionality and ease of use of the web site and Internet-based experiment**

This test was conducted to determine whether the web site and links were easy to follow and were functioning properly. A few technical and functional errors were located and fixed before the experiment went live. The live experiment was monitored throughout the six weeks that it was online and technical errors could be reported directly to the researcher.

The above pre-tests were conducted in order to ensure the accuracy of the Internet-based experimental design before it went online. Another area of importance with regards to experimental research is the validity of the experimental design. The internal, external and ecological validity of this study's experimental design are discussed in the next section.

#### **4.4 THE VALIDITY OF THE CURRENT STUDY'S EXPERIMENTAL DESIGN**

Validity is the extent to which a design is free of errors in terms of providing the information intended (Patzner, 1996:42). As was mentioned in section 4.2.6, factors that can affect the accuracy of conclusions deduced from using experimental research methodologies need to be considered and monitored throughout the experiment. The section below discusses these factors and how they were managed.

##### **4.4.1 The internal validity of the study's experimental design**

- **Extraneous threats and how these were managed**

The extraneous threats affecting the accuracy of an experiment were discussed in Table 7 (on p. 62) in section 4.2.6. Table 14 below presents the effects of these threats in the context of this study. The last column indicates if and how these extraneous threats may have affected the experiment conducted for this study.

**Table 14: The effect of extraneous variables on this experimental study**

Extraneous variable	Definition	Effect on this experimental study
History Effect	The effect on a dependent variable by an extraneous variable associated with the passing of time. This effect is especially evident in test market experiments carried out over a long time period (Patzner, 1996:45).	The experiment took on a cross-sectional time dimension and results are measured at one point in time. Subjects could, therefore, not be affected by the history effect.
Maturation Effect	Refers to the change in subjects during the course of an experiment that are a function of time. This effect is associated with the normal aging process of the subjects involved, the longer the experiment runs the more likely that the maturation effect will affect results (McDaniel & Gates, 2000:217).	The experiment took on a cross-sectional time dimension and results were measured at one point in time therefore subjects were unlikely to be affected by the maturation effect. The subjects were however exposed to three different stimuli therefore the maturation effect could have occurred to some extent as being exposed the first stimuli may have affected the subjects opinion on the second and third stimuli. This could also be a factor influencing the testing effect discussed below.
Instrument Effect	Refers to any changes in measurements instruments that affect measurements taken (McDaniel & Gates, 2000:217).	The BTS scale is a numeric (Likert) scale and the questions asked in the scale stayed identical throughout the entire experiment.
Selection Bias	When the experimental or test group is systematically different from the target population due to a biased selection process (McDaniel & Gates, 2000:217).	Subjects were asked a screening question to determine if they were nutritional supplement users. The experiment was Internet – based, therefore subjects had to have access to the Internet to participate. This ensured the correct target population (nutritional supplement users who made use of the Internet to gather information) was reached. Subjects were also assigned randomly to each experimental group.

Extraneous variable	Definition	Effect on this experimental study
Mortality Effect	The loss of subjects during the course of an experiment. Those who leave may be systematically different from those who stay (McDaniel & Gates, 2000:217).	Firstly, if subjects were lost (drop out) during the experiment the initial problem would be a reduction in the sample size. The study, however, was kept online until the correct number of subjects completed the experiment. Selective drop out in one condition could to some degree have undermined results.
Testing Effect	The effect on a dependent variable associated with exposure to the measure of the dependent variable. Merely being exposed to the experiment or experimental measure may alter subjects' responses (Patzner, 1996:45).	Subjects may have been influenced by a direct testing affect whereby merely being exposed the first stimuli may have affected their results for the second and third stimuli. The three stimuli should therefore have been presented in a randomized order.
Statistical Regression Effect	Extremes tend to average out over time; therefore the statistical regression effect is the effect on a dependent variable associated with a subject characteristic that may moderate from the extreme. This effect is in evident in experiments using an extreme level of some characteristic to assign groups (Patzner, 1996:48).	The selected sample size was small and no extremes were used when assigning subjects to groups.

As is indicated in Table 14, the three extraneous variables most likely to have influenced the results of the survey were the maturation effect, testing effect and mortality effect.

The testing effect and maturation effect may have played a role in influencing subjects after the first image had been presented and the first BTS completed. The subjects may have begun to believe that they had figured out the experiment and could have influenced their next BTS scores for the second and third stimuli.

To overcome these extraneous threats, the researcher intended to present the three stimuli in a randomised order to random participants in each group. This, however, was not possible due to technical limitations related to the design of the online experiment's web site. This will be acknowledged as a limitation of the study.

It must, however, be noted that even if the testing or maturation effect had occurred during the experiment, the results would not be seriously compromised as none of the hypotheses were tested based on a comparison of BTS scores within the same group of subjects. All hypotheses were tested across the three experimental groups.

The mortality effect is a common and prevalent problem in Internet-based experiments as subjects are not under the influence of a researcher and are, therefore, not obliged to complete the experiment (Piper in iPsychExpts, 2006). The mortality effect can reduce the active sample size and thus decrease the statistical power of the experiment. "However, large sample sizes are easily obtained in Internet-based experiments; hence the reduction in sample size due to dropout is not in itself a serious problem" (iPsychExpts, 2006).

More importantly, selective drop out in one condition, or the selective drop out of participants with specific traits, characteristics or attitudes can seriously undermine results and the findings of the experiment (iPsychExpts, 2006).

The issue of the mortality effect was managed by ensuring that the sample size collected was larger than the required sample size suggested for the study. This ensured that all non-complete questionnaires could be discarded and the correct number of completed questionnaires was still collected.

The selective drop out of subjects could not be monitored and is acknowledged as a limitation of the study.

#### **4.4.2 The external validity of the study's experimental design**

External validity is a reflection of how well an experiment reflects the reality of the world outside of the experiment (see section 4.2.6 on p. 60). External validity is also interchangeably referred to as ecological validity (Patzer, 1996:54).

Ecological validity is defined as the applicability of the results of environmental simulations to real life settings (Bateson & Hui, 1992). The validation of such environmental simulations, whether in a laboratory or online, is important for the study's external validity.

Since this study was conducted online, with no researcher present, it was especially important to evaluate the external validity of the web experiment and its independent variable simulations.

First, the study's research design was pre-tested to maximize the validity of the research design and independent variable simulations. The pre-tests conducted to improve the external validity of the study were pre-tests 1, 3, 4, 6 and 7. Once the study was completed the external validity was accessed by reviewing the factors affecting external validity discussed in section 4.2.6. The technical design of the online web experiment was also reviewed to improve external validity. These are now discussed below:

- **Dissimilar environments**

The main factor possibly affecting the external validity of this experiment was the online environment in which the survey was conducted.

The environment created by the online web experiment may have decreased the external validity of the study as subjects were in a mock environment that did not entirely reflect reality. However, the target population was South African nutritional supplement users who make use of the Internet to gather information. The online environment may therefore have been advantageous to the validity of the study. Subjects were in a normal environment (i.e. in front

of their computers) for gathering product information online. They were also not faced with the extreme conditions of a laboratory or the possibility of interference from the researcher.

- **Dissimilar subjects**

The chosen target population under investigation was South African nutritional supplement users who make use of the Internet to gather product information. To ensure that the participants were representative of the specified target population, a screening question was asked at the beginning of the survey to ensure that the subject was South African and made use of nutritional supplements. Users of the getfit.co.za web site and forum and the social networking groups targeted are all focused on health and wellness with a high percentage of the members being nutritional supplement users.

The subjects also had to have some form of access to the Internet in order to participate in the study. However, the external validity of the experiment may have been affected as subjects recruited to take part in the study made use of specific web sites and may not have represented a true sample of all South African nutritional supplement users who make use of the Internet. This is listed as a limitation of the study in section 6.7 on p. 136.

- **Dissimilar variables**

The multiple independent variables and values under investigation had to be simulated in order to be presented to the subjects of the experiment. This may have decreased the external validity of the variables. However, all laboratory and Internet-based experiments make use of simulation and this factor plays a role in even the most sophisticated of experiments (Patzer, 1996:53). As shown in Table 11 (on p. 78), the independent variables and values are carefully simulated to represent reality as closely as possible.

Extensive pre-testing was conducted to ensure the simulations were realistic, and post-test manipulation checks were also used to determine whether the simulations accurately represented the dependent variables under investigation in the study.

Although imperfections in the above three factors may seem detrimental to this study's external validity, it must be noted that the marketplace is difficult to replicate. Regardless of this, marketing experiments still need to be conducted (Patzner, 1996:54).

This section has provided evidence of high levels of internal validity throughout the current study, together with external validity variables that were well monitored and tested to represent reality in the closest way possible.

- **The technical design of the Internet-based experiment**

As discussed in section 4.4, Reips (2002:245) provided standards for Internet-based experiments. This study followed the guidelines provided by Reips (2002) by firstly making use of specific Internet-based software in order to conduct the online study. This software was provided by ITR Resolutions CC. The Internet-based experiment was pre-tested to ensure the clarity of instructions and the accuracy of stimuli. A filter question was placed at the start of the questionnaire to ensure serious responses (applicants had to be above the age of 18 to participate). Multiple submissions were avoided by gathering personalised information (age, gender, residential area and voluntary contact details). Duplicates were identified and deleted. Configuration errors, back up and consistency checks were controlled by ITR Resolutions CC.

#### **4.4.3 Manipulation checks**

A manipulation check is used to determine whether the independent variables in an experimental simulation were accurately controlled (Thompson, 2005). In other words, the researcher would like to conclude that the differences observed in the dependent variable were in fact caused by the independent variable manipulations (Perdue & Summers, 1986:318). Manipulation checks can be performed during the pre-test as well as the post-test stages of an experiment.



In order to ensure that the simulations in the experiment accurately represented the variables under investigation it was necessary to include a manipulation check in the experiment.

At the end of the questionnaire the subjects were asked whether they could identify the forms of endorsement that they were presented with in the study from a list of three possible answers:

- An endorsement provided by a regular consumer
- An endorsement provided by an expert
- An endorsement provided by an association/group of people

The test was conducted to ensure subjects could correctly identify the three different stimuli presented to them in the study. The results and conclusions of this manipulation check are presented in section 5.3.7 on p. 125.

#### **4.5 CHAPTER SUMMARY**

This chapter began with the presentation of the literature on experimental research designs. The chapter also discussed the importance of experimental research and Internet-based experiments, as well as the importance of validity and reliability in experimental research.

The second section of the chapter introduced the current study's research design, followed by a detailed description sampling design, measurement constructs, experimental stimuli and pre-testing methods used in order to conduct the study. The chapter ended with a discussion on the validity of the study's experimental design.

The next chapter will present the research findings of the experiment conducted.

## 5 CHAPTER 5: RESEARCH FINDINGS

### 5.1 INTRODUCTION

The findings in this chapter are presented comprehensively in two sections. The descriptive statistics are first summarized, followed by the inferential statistics used to test the hypotheses under investigation in this study.

### 5.2 DESCRIPTIVE STATISTICS

The descriptive statistics relevant to the research objectives of this study are presented in this section. Also presented are the tests for reliability of the measurement scales used to test the hypotheses.

#### 5.2.1 Demographic profile of participants

Table 15 below presents the gender of the participants who took part in the experimental study by indicating the frequency and percentage of males and females in each experimental group, as well as in the total sample of participants.

**Table 15: Gender of participants**

	Group A		Group B		Group C		Total	
	n=41		n=37		n=33		n=111	
Gender of participants	Frequency	Percentage of group total	Frequency	Percentage of group total	Frequency	Percentage of group total	Frequency	Percentage of total sample
Male	13	31.71%	9	24.32%	15	45.45%	37	33.33%
Female	28	68.29%	28	75.68%	18	54.55%	74	66.67%
<b>Total</b>	<b>41</b>	<b>100%</b>	<b>37</b>	<b>100%</b>	<b>33</b>	<b>100%</b>	<b>111</b>	<b>100%</b>

Note: Percentages are based on column totals and add up to 100% down the cells in the same column. n = size of group.

As presented above, the sample consisted of 111 participants, two thirds of whom were women (n=74).

Table 16 below shows the age of the participants by indicating the frequency and percentage of participants in each age group.

**Table 16: Age of participants**

Age of participant	Total Sample (n=111)	
	Frequency	Percentage
19 - 24	24	21.62%
25 - 29	60	54.05%
30 - 34	10	9.01%
35 - 39	7	6.31%
40 - 49	6	5.41%
50 - 60	4	3.60%
<b>Total</b>	<b>111</b>	<b>100%</b>

Note: Percentages are based on column totals and add up to 100% down the cells in the same column. n = size of group.

The table above shows that the highest percentages of participants are between 25 and 29 years of age. The minimum age is 19 and the maximum age is 58. The mean age of the total sample is 28.97 and the standard deviation of the age variable for the total sample is 7.69.

Although the age is not used as a variable in the testing of hypotheses, the age of participants is used to ensure that the participants are above the age of 18 in order to meet the age requirement for the target population specified for the study.

### **5.2.2 Reliability analysis**

The reliability of the scales used in the study was tested using Cronbach's coefficient alpha. Cronbach's coefficient alpha measures the internal consistency of a summated rating scale. It takes the average correlation among items in the scale and adjusts it for the number of items in the scale (Kent, 2007:142).

“The coefficient varies between zero for no reliability to unity for maximum reliability”, therefore, the higher the average correlation the more reliable the scale (Kent, 2007:143). A Cronbach’s alpha coefficient of 0.7 was chosen as cut off value for this study.

Table 17 contains the Cronbach’s alpha reliability coefficients ( $\alpha$ ) of the constructs measured in this study. As a reminder, the dependent variable used in the study was brand trust, and this variable was measured for all the experimental groups using the BTS. The measurement was taken three times per group after the experimental stimuli were viewed.

Brand familiarity was included in the study as a covariate and was measured using the three-item brand familiarity scale. Brand familiarity was measured before any of the experimental manipulations.

In Table 17, the Cronbach’s alpha coefficient is presented for each group and for each form of endorsement under the brand trust construct.

**Table 17: Cronbach’s alpha reliability coefficients ( $\alpha$ ) and sample size representations (n)**

	( $\alpha$ )	(n)
<b>Construct: Brand Familiarity</b>		
Brand familiarity	0.819	111
<b>Construct: Brand Trust</b>		
Group A - Regular Endorsement	0.899	39
Group A - Expert Endorsement	0.935	38
Group A - Association (Implied) Endorsement	0.955	39
Group B - Regular Endorsement	0.888	36
Group B - Expert Endorsement	0.906	37
Group B - Association Endorsement	0.909	37
Group C - Control Group	0.830	31

Note: n = size of group.

As Table 17 indicates, the Cronbach’s alpha of the brand familiarity scale is 0.819. The results indicate that the Cronbach alpha reliability coefficient for the BTS is above the chosen cut-off of 0.7 for all the experimental groups.

This indicates that, for this experiment, a satisfactory level of internal consistency and reliability is achieved across all measures.

### 5.2.3 Descriptive statistics on the brand familiarity scale

The three-item brand familiarity scale was used to measure the level of familiarity the participant had with the brand chosen for the experimental study. Brand familiarity was included as a potential covariate in the study.

Table 18 presents the means (M) and standard deviations (SD) of the brand familiarity scale per item of the scale.

**Table 18: Mean and standard deviations of the brand familiarity scale per scale item, total sample (n=111)**

	M	SD
<b>Brand Familiarity: Total</b>	<b>4.736</b>	<b>1.341</b>
Familiarity	5.730	1.414
Knowledge	4.342	1.660
Experience	4.135	1.610

Note: M = mean, SD = standard deviation.

The table shows that the total mean score for brand familiarity is 4.736 with a standard deviation of 1.341. The scale values ranged from 1 (low familiarity) to 7 (high familiarity) and a mean score of 4.746 indicates a total brand familiarity score that is slightly above the scale mid-point.

Table 19 presents the means (M) and standard deviations (SD) of the brand familiarity scale per experimental group.

**Table 19: Means and standard deviations of the brand familiarity scale per experimental group**

	Group A		Group B		Group C	
	n=41		n=37		n=33	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
<b>Familiarity</b>	4.642	1.300	4.793	1.323	4.788	1.443

Note: n = size of group.

The scale points ranged from 1 to 7 where a score of 1 indicates a low level of familiarity with the brand and a score of 7 a high level of familiarity with the brand. As is indicated in Table 19, the mean scores for all three groups are between the 4<sup>th</sup> and 5<sup>th</sup> scale points on the scale. This indicates that, on average, participants have a neutral to slightly higher level of brand familiarity with the Vital brand.

#### **5.2.4 Descriptive statistics on the brand familiarity scale**

The brand trust scale (BTS) was used as a measure of the independent variable brand trust. Table 20 presents the means (M) and standard deviations (SD) of the BTS per item of the scale, as well as per experimental group.

**Table 20: Means and standard deviations of the brand trust scale**

	Group A Regular		Group A Expert		Group A Association		Group B Regular		Group B Expert		Group B Association		Group C	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
	n=39		n=38		n=39		n=36		n=37		n=37		n=31	
Brand Trust Q1	4.718	1.276	5.079	1.194	4.615	1.515	5.278	1.137	5.730	0.932	5.919	0.924	5.097	1.3
Brand Trust Q2	4.949	1.503	5.105	1.448	4.641	1.547	5.361	1.246	5.784	0.787	5.946	0.880	5.677	1.137
Brand Trust Q3	3.949	1.521	4.237	1.532	3.872	1.560	4.778	1.150	5.135	1.084	5.27	0.972	4.226	1.383
Brand Trust Q4	4.539	1.334	4.632	1.567	4.256	1.517	4.722	1.256	5.234	1.065	5.378	1.037	4.645	1.404
Brand Trust Q5	4.333	1.243	4.974	1.461	4.256	1.634	4.806	1.064	5.108	1.048	5.378	1.139	5.065	1.263
Brand Trust Q6	4.333	1.364	4.763	1.619	4.205	1.559	4.500	1.464	4.973	1.118	5.081	0.983	4.581	1.334
Brand Trust Q7	3.923	1.628	4.395	1.779	4.154	1.641	4.389	1.225	4.892	1.100	5.054	1.079	4.323	1.423
Brand Trust Q8	4.333	1.457	4.684	1.662	4.231	1.581	4.417	1.500	4.946	1.332	4.946	1.246	3.903	1.300
<b>Brand Trust: Total</b>	<b>4.385</b>	<b>1.087</b>	<b>4.734</b>	<b>1.277</b>	<b>4.279</b>	<b>1.368</b>	<b>4.781</b>	<b>0.947</b>	<b>5.226</b>	<b>0.829</b>	<b>5.372</b>	<b>0.811</b>	<b>4.690</b>	<b>0.893</b>

Note: The scale values ranged from 1 (Strongly disagree) to 7 (Strongly agree). M = mean, SD = standard deviation.

The scale points of the BTS ranged from 1 to 7. A low response of 1 on the BTS indicates that the subjects disagreed strongly with the item wording on the scale, while a high response of 7 indicates that the subjects agreed strongly with the statement. A high score indicates a high level of trust in the brand. The mean scores for total brand trust range between the 4th and 6th scale point, thus indicating that the participants have relatively neutral levels of brand trust leaning towards the higher scale items on the scale.

The mean brand trust scores suggest that Group B, the group that viewed the independent endorsement stimuli, has the highest levels of brand trust in comparison to the mean scores of Group A and the control group. Group A shows the lowest levels of brand trust. These findings are interpreted further in the results of the hypotheses tests which compared the mean scores of each of the experimental groups.

### **5.3 INFERENCE STATISTICS**

A one-way between-groups ANOVA was conducted to explore the impact of the different forms of endorsement tested in this study on brand trust. The ANOVA was conducted three times in order to test all the hypotheses formulated in this study.

A brief explanation of one-way ANOVA and why it was used is provided below, followed by a detailed report on the results of each ANOVA test.

#### **5.3.1 A brief overview of one-way ANOVA**

In this experimental study it was necessary to compare mean brand trust scores across three experimental groups. Independent sample *T*-tests are normally used to compare mean scores between two groups. Since this study required the comparison of mean brand trust scores across three experimental groups at a time, it was not possible to carry out a *t*-test comparison unless several tests were conducted to compare each combination of groups. This may have increased the probability of Type I errors (i.e. incorrectly rejecting the null hypothesis when it should not be rejected) (Field, 2005:310).



Since ANOVA is a statistical technique used to compare the mean scores of three or more groups on the same variable (Pallant, 2005:214), a one-way between-groups ANOVA was chosen as the appropriate statistical test for this study. ANOVA is used to conduct an analysis of variances (Field, 2005:309). This means that the variability of scores is compared between the different groups with the variability of scores within each of the groups (Pallant, 2005:214). ANOVA calculates an F ratio which represents the variance between the groups, divided by the variance within the groups (Pallant, 2005:214).

In order to provide a statistically significant result, the p-value of a one-way ANOVA should be less than 0.05 (Pallant, 2005:218). A significant ANOVA result indicates that two or more of the groups being compared differ significantly on the dependent variable. The ANOVA result, however, does not indicate between which specific groups the significant differences occur. It is, therefore, necessary to conduct *post hoc* tests to systematically compare each of the pairs of groups (Pallant, 2005:214). The *post hoc* tests conducted in this study are discussed, along with each individual ANOVA test, in sections 5.3.3, 5.5.4, and 5.3.5 below.

The assumptions under which ANOVA is reliable are the same as for all parametric tests based on a normal distribution (Field, 2005:324). These assumptions include the following (Field, 2005:64):

- 1) The measurement scales used should produce data at an interval level of measurement
- 2) The observations should be independent
- 3) Data should be from one or more normally distributed populations
- 4) These populations should have equal variances

Since there are no statistical tests for the assumptions of interval data and independent measurements, the researcher needs to use common sense to ensure that these assumptions are not violated (Field, 2005:65).

This study made use of a Likert scale as a measurement scale. Likert scales such as the one used in this study are typically regarded as producing data at an interval level of measurement (Cooper & Schindler, 2006:234). The study was also done across different

experimental groups, and each participant was only part of one experimental group. As a result, the measures that were compared were indeed independent.

The assumption of homogeneity of variances is tested statistically. Levene's test for the homogeneity of variances was used in this study. Levene's test determines whether the variance in scores is the same for each of the three experimental groups (Pallant, 2005:218). The assumption of normality is also tested statistically. In this study, the Shapiro-Wilk and Kolmogorov-Smirnov (K-S) tests were used to test for normality.

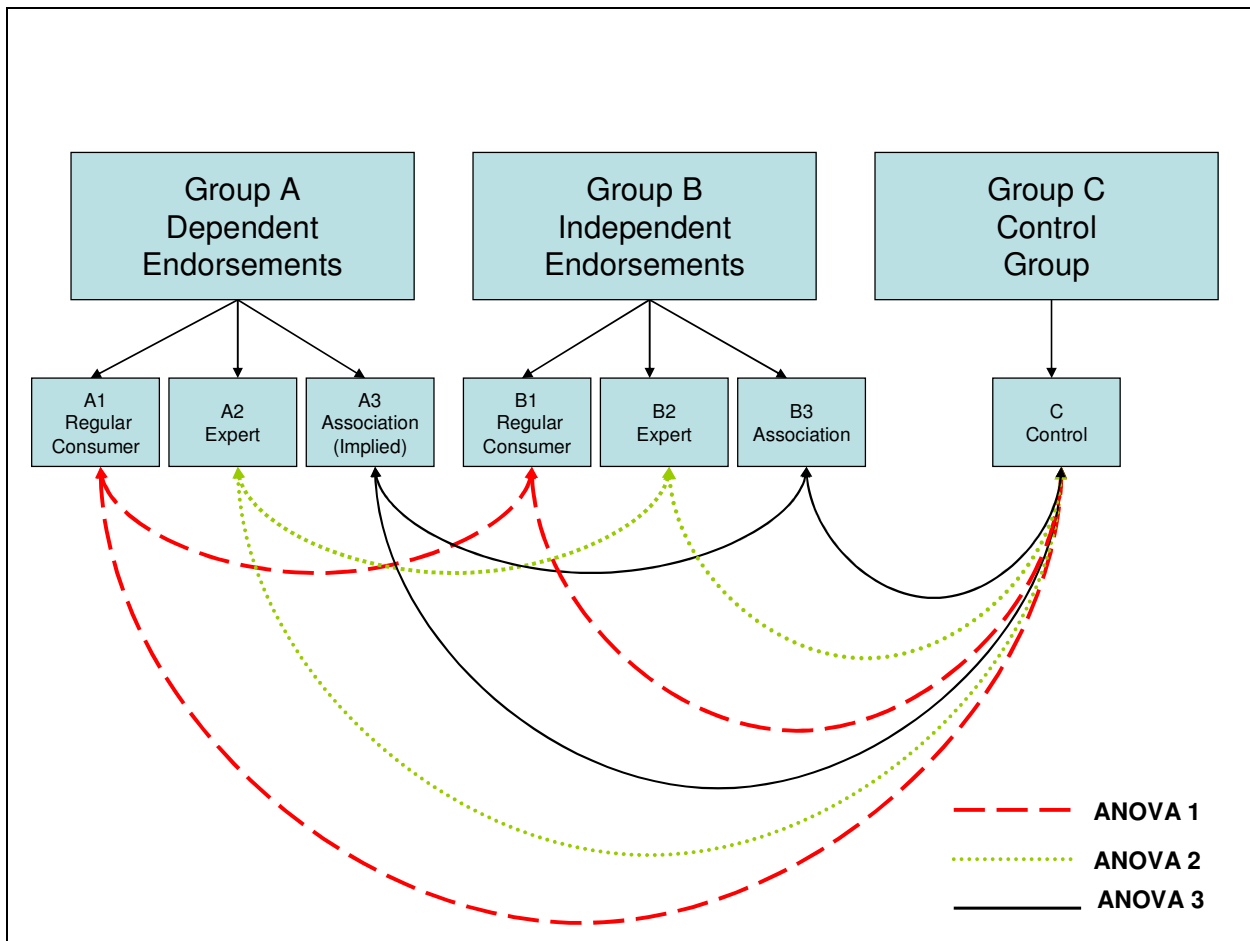
The abovementioned *post hoc* procedures and assumptions considered for each individual ANOVA test are further explained in sections 5.3.3, 5.3.4 and 5.3.5 below.

### **5.3.2 An overview of the three ANOVA tests conducted in this study**

This study compared the influence of three different forms of endorsement on brand trust. In order to test all the hypotheses in this study it was necessary to conduct three ANOVA tests, one for each of the three endorsement types. In each case, the brand trust scores of experimental group A, experimental group B, and the control group were compared.

The groups that were compared in each of the three ANOVA tests are shown in Figure 6 below.

**Figure 6: An illustration of the brand trust scores compared in each ANOVA analysis**

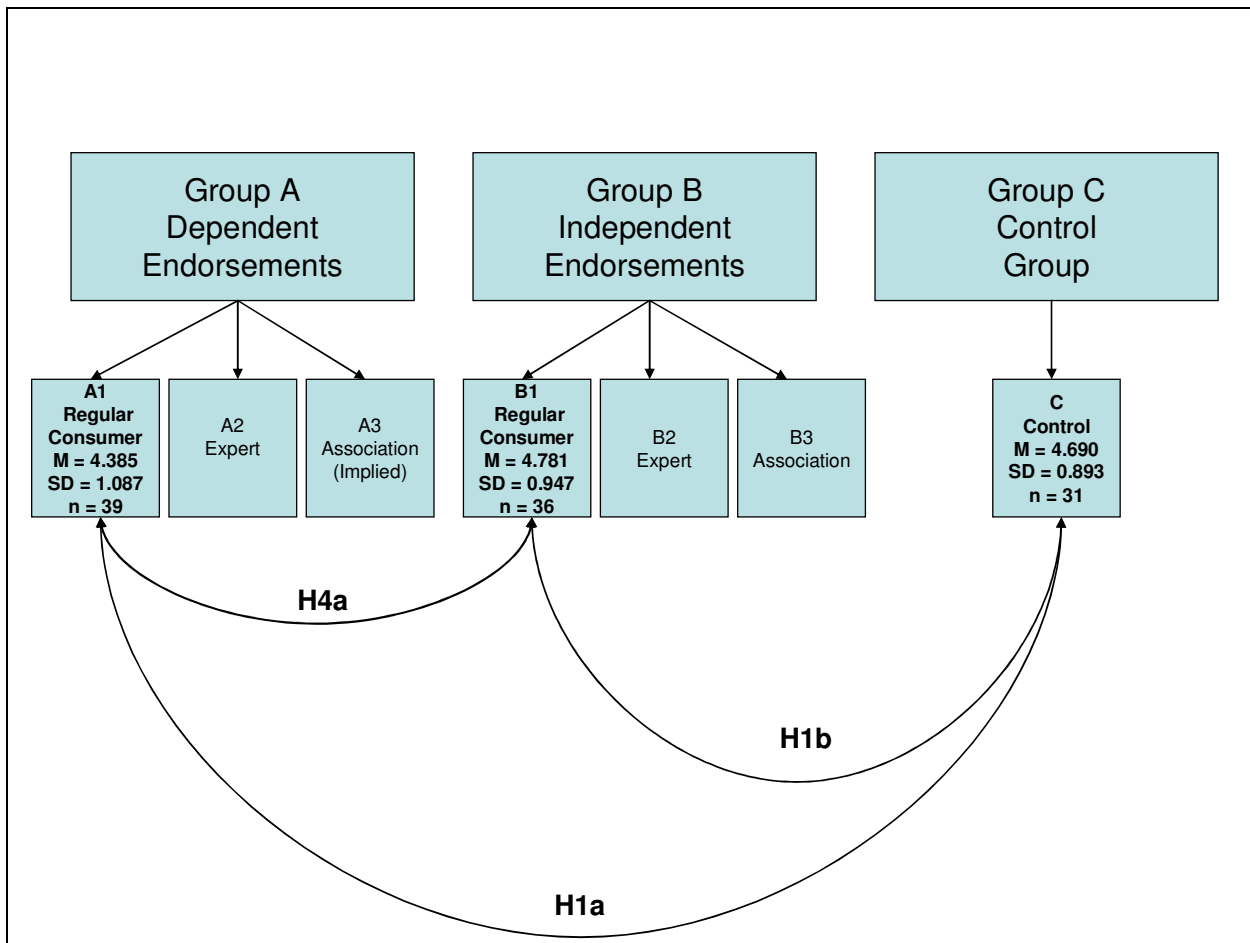


The results of each of the three ANOVA tests are presented in detail below.

### 5.3.3 **ANOVA 1: Comparing the brand trust scores of the two experimental groups exposed to different *regular* consumer endorsements and the control group**

As is indicated in Figure 6, the first ANOVA (shown in the red, hyphenated line) compared the mean brand trust scores of three experimental groups, namely the group exposed to a dependent regular endorsement (Group A1), the group exposed to an independent regular endorsement (Group B1), and the control group (Group C). The specific experimental stimuli that these three groups were exposed to are shown in Figure 5 (on p. 69). The results of ANOVA 1 were used to test hypotheses H1a, H1b and H4a. The specific comparisons involved in ANOVA 1 are presented in more detail in Figure 7 below. The mean and standard deviations of subjects' brand trust scores, as well as the number of subjects per experimental group, are also shown.

**Figure 7: The mean brand trust scores compared in ANOVA 1 to test hypotheses H1a, H1b and H4a**



Note: M = mean, SD = standard deviation, n = size of group.

The descriptive statistics in Figure 7 suggest that subjects exposed to an independent endorsement by a regular consumer (i.e. Group B1) had the highest average brand trust scores (M = 4.781, SD = 0.947) followed by subjects in the control group (i.e., Group C) (M = 4.690, SD = 0.893). The subjects exposed to a dependent endorsement by a regular consumer (i.e., Group A1) had the lowest brand trust scores (M= 4.385, SD = 1.087).

ANOVA 1 was used to determine whether the differences in the brand trust scores of the aforementioned three groups were statistically significant, and to test hypotheses H1a, H1b and H4a.

The first hypothesis (H1) focused on the effect that regular consumers' endorsement claims had on subjects' perceived levels of brand trust. The null and alternate hypotheses of H1a and H1b are stated below.

**H1a<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to a dependent regular consumer's endorsement claim about a brand (i.e., Group A1) and subjects not exposed to a dependent regular customer's endorsement claim for the same brand (i.e. Control group).

**H1a<sub>(alternative)</sub>**: Subjects exposed to a dependent regular consumer's endorsement claim about a brand (i.e., Group A1) will have higher scores on the brand trust scale compared to subjects not exposed to a dependent regular consumer's endorsement claim for the same brand (i.e. Control group).

**H1b<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to an independent regular consumer's endorsement claim about a brand (i.e., Group B1) and subjects not exposed to an independent regular consumer's endorsement claim for the same brand (i.e. Control group).

**H1b<sub>(alternative)</sub>**: Subjects exposed to an independent regular consumer's endorsement claim about a brand (i.e., Group B1) will have higher scores on the brand trust scale compared to subjects not exposed to an independent regular consumer's endorsement claim for the same brand (i.e. Control group).

Hypothesis 4a focused on the comparison of the two groups exposed to the dependent and independent regular consumer endorsement claims. The null and alternate hypotheses for H4a are stated below.

**H4a<sub>(null)</sub>**: There will be no difference in the brand trust score of subjects exposed to a dependent endorsement claim by a regular consumer (i.e. Group A1) and subjects exposed to an independent endorsement claim by a regular consumer (i.e. Group B1).

**H4a<sub>(alternative)</sub>**: Subjects exposed to an independent endorsement claim by a regular consumer (i.e. Group B1) will have higher brand trust scores compared with subjects exposed to a dependent endorsement claim by a regular consumer (i.e. Group A1).

The first step in ANOVA 1 was to test the assumption of normality and the assumption of homogeneity of variances. The assumption of normality was tested on residual values. When conducting an ANOVA it is more appropriate to use the residual scores to check normality than the raw scores. The residual value is the difference between the actual value and the mean score for the group. The residual value tells one the amount of error in the model in terms of the fitted values (Queen’s University Belfast, 2008). By checking the assumption of normality the probability of making a Type 1 or Type 11 error is decreased (Queen’s University Belfast, 2008).

Shapiro-Wilk and Kolmogorov-Smirnov (K-S) tests were conducted to test the assumption of normality. The results of these tests are presented in Table 21 below.

**Table 21: Normality tests based on the standardised residuals for ANOVA 1**

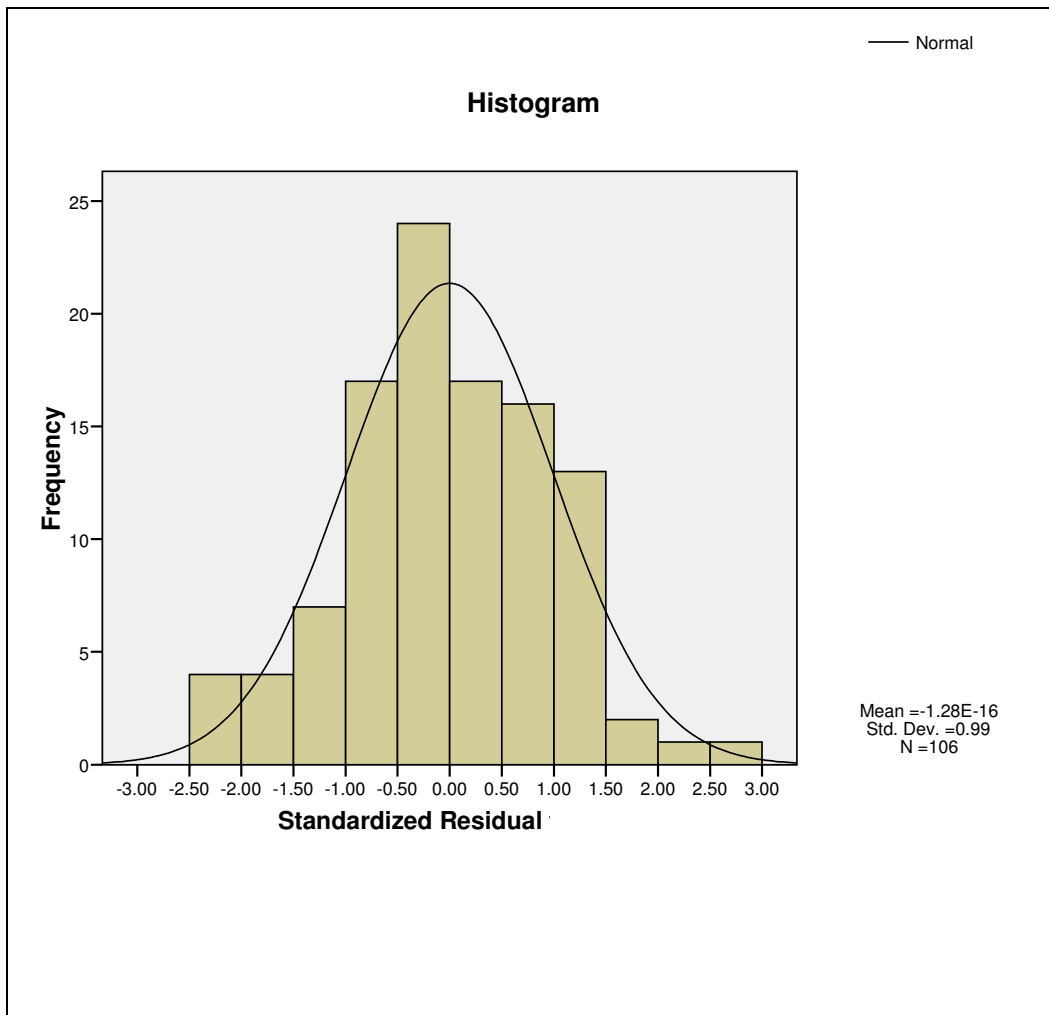
	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
Standardized Residuals for ANOVA 1	0.050	106	0.200(*)	0.990	106	0.600

\* This is the lower bound of the true significance.

Both the Shapiro-Wilk and Kolmogorov-Smirnov tests test the null hypothesis that the variables (in this case the residual values) have a normal distribution. If the p-value is smaller than the significance value of 0.05, the null hypothesis of normality is rejected and one has to conclude that the variable has a non-normal distribution.

The assumption of normality is therefore met as the Shapiro-Wilk and Kolmogorov-Smirnov test both have p-values higher than 0.05. The null hypothesis of normality can therefore not be rejected. The normality of the residuals for ANOVA 1 is also illustrated in Figure 8 below.

**Figure 8: Histogram illustrating the standardized residuals for ANOVA 1**



The second ANOVA assumption, namely the assumption of equality of variances, was tested with Levene’s test for homogeneity of variances (see Table 22 below).

**Table 22: Levene’s test for homogeneity of variances for ANOVA 1**

Levene Statistic	df1	df2	p
0.770	2	103	0.466

Levene’s test is significant if the p-value is less than 0.05. This would indicate that the variances of the brand trust scores of the three experimental groups are significantly different and that the assumption of equal variances does not hold (Field, 2005:350).

The p-value of Levene’s test is 0.466. Since this value is larger than 0.05, the assumption of homogeneity of variances holds for ANOVA 1. A one-way ANOVA test could therefore be conducted to determine whether there are statistically significant differences in the mean brand trust scores of the three experimental groups shown in Figure 7. The results of ANOVA 1 are presented in Table 23 below.

**Table 23: Output for ANOVA 1 comparing the brand trust scores of the two experimental groups exposed to regular consumer endorsements and the control group**

	Sum of Squares	df	Mean Square	F	p
Between Groups	3.233	2	1.616	1.662	0.195
Within Groups	100.176	103	0.973		
Total	103.409	105			

In order to provide a significant result, the p-value of a one-way ANOVA should be less than 0.05 (Pallant, 2005:218). The p-value for ANOVA 1 is 0.195. This value is greater than 0.05, indicating that there is no significant difference in the mean brand trust scores of the three experimental groups, namely the group exposed to a dependent regular endorsement (Group A1), the group exposed to an independent regular endorsement (Group B1), and the control group (Group C).

H1a<sub>(null)</sub>, H1b<sub>(null)</sub> and H4a<sub>(null)</sub> can, therefore, not be rejected.

This result therefore indicates that neither dependent nor independent regular consumer endorsements have a significant influence on brand trust scores. The results also indicate that there is no significant difference in the brand trust scores of the experimental group exposed to a dependent regular consumer endorsement (Group A1) and the experimental group exposed to an independent regular consumer endorsement (Group B1).

In summary, a one-way between-groups ANOVA was conducted to explore the impact of different types of regular consumer endorsements on brand trust, as measured by the BTS. Subjects were randomly divided into three groups. An ANOVA test was conducted and no statistically significant difference in brand trust scores was found, resulting in H1a<sub>(null)</sub>, H1b<sub>(null)</sub> and H4a<sub>(null)</sub> not being rejected.



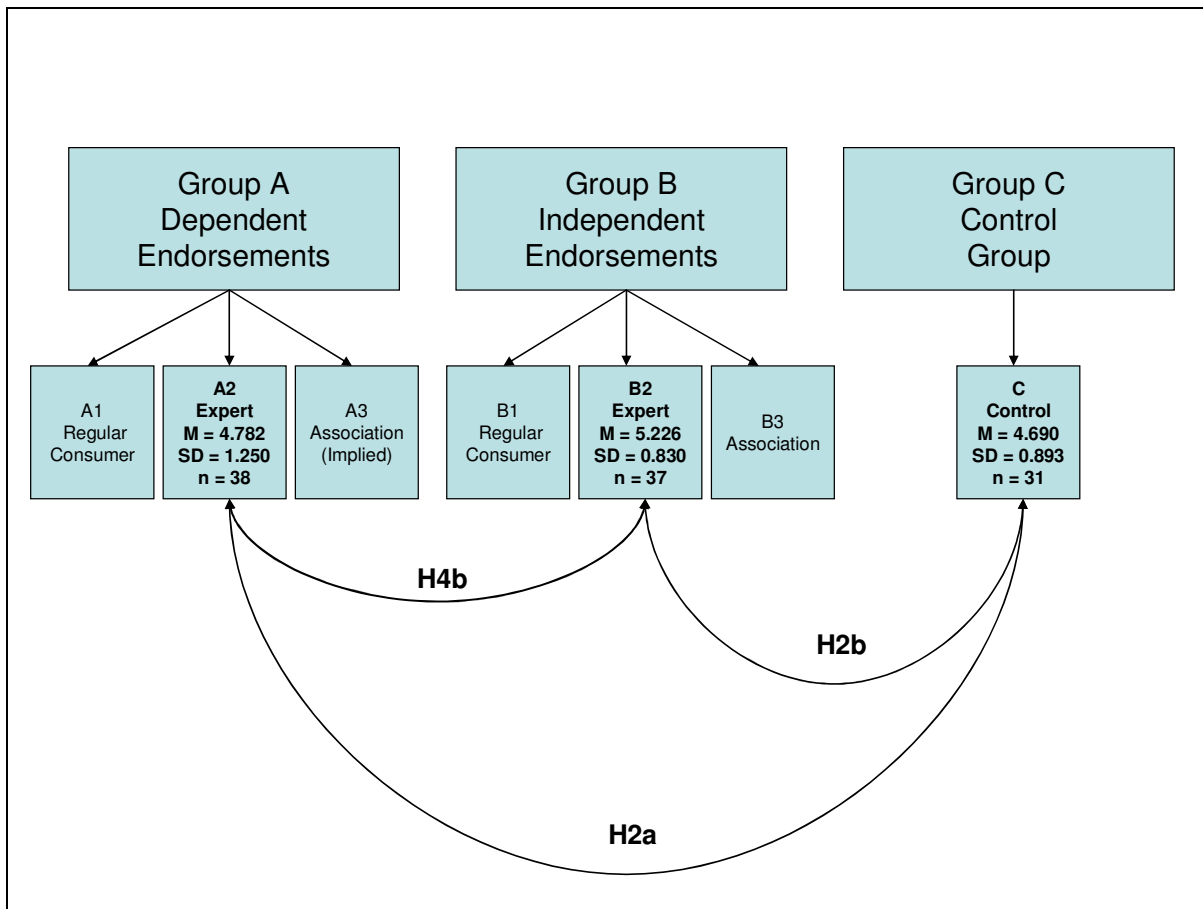
The managerial implications of these findings are discussed in section 6.6 on p. 135.

**5.3.4 ANOVA 2: Comparing the brand trust scores of the two experimental groups exposed to different expert endorsements and the control group**

As is indicated in Figure 6, the second ANOVA (shown in the green, dotted line) compared the mean brand trust scores of three experimental groups, namely the group exposed to a dependent expert endorsement (Group A2), the group exposed to an independent expert endorsement (Group B2), and the control group (Group C). The results of ANOVA 2 were used to test hypotheses H2a, H2b and H4b.

These groups and comparisons are presented in Figure 9.

**Figure 9: The mean brand trust scores compared in ANOVA 2 to test hypotheses H2a, H2b and H4b**



Note: M = mean, SD = standard deviation, n = size of group.

The descriptive statistics in Figure 9 suggest that subjects exposed to an independent endorsement by an expert (i.e. Group B2) had the highest average brand trust scores ( $M = 5.226$ ,  $SD = 0.830$ ) followed by subjects exposed to a dependent endorsement by an expert (i.e. Group A2) ( $M = 4.782$ ,  $SD = 1.250$ ). The subjects in the control group (i.e., Group C) had the lowest brand trust scores ( $M = 4.690$ ,  $SD = 0.893$ ).

ANOVA 2 was used to determine whether the differences in the brand trust scores of the aforementioned three groups were statistically significant and to test hypotheses H2a, H2b and H4b.

The second hypothesis (H2) focused on the effect that experts' endorsement claims had on subjects' perceived levels of brand trust. The null and alternate hypotheses of H2a and H2b are stated below.

**H2a<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to a dependent expert's endorsement claim about a brand (i.e., Group A2) and subjects not exposed to a dependent expert's endorsement claim for the same brand (i.e. Control group).

**H2a<sub>(alternative)</sub>**: Subjects exposed to a dependent expert's endorsement claim about a brand (i.e. Group A2) will have higher scores on the brand trust scale compared with subjects not exposed to a dependent expert's endorsement claim for the same brand (i.e. Control group).

**H2b<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to an independent expert's endorsement claim about a brand (i.e. Group B2) and subjects not exposed to an independent expert's endorsement claim for the same brand (i.e. Control group).

**H2b<sub>(alternative)</sub>**: Subjects exposed to an independent expert's endorsement claim about a brand (i.e. Group B2) will have higher scores on the brand trust scale compared with subjects not exposed to an independent expert's endorsement claim for the same brand (i.e. Control group).

Hypothesis 4b focused on the comparison of the two groups exposed to the dependent and independent expert endorsement claims. The null and alternate hypotheses for H4b are stated below.

**H4b<sub>(null)</sub>:** There will be no difference in the brand trust scores of subjects exposed to a dependent endorsement claim by an expert (i.e. Group A2) and subjects exposed to an independent endorsement claim by an expert (i.e. Group B2).

**H4b<sub>(alternative)</sub>:** Subjects exposed to an independent endorsement claim by an expert (i.e. Group B2) will have higher brand trust scores compared with subjects exposed to a dependent endorsement claim by an expert (i.e. Group A2).

The assumption of normality was once again tested on the residual values. Shapiro-Wilk and Kolmogorov-Smirnov tests were conducted to test for normality.

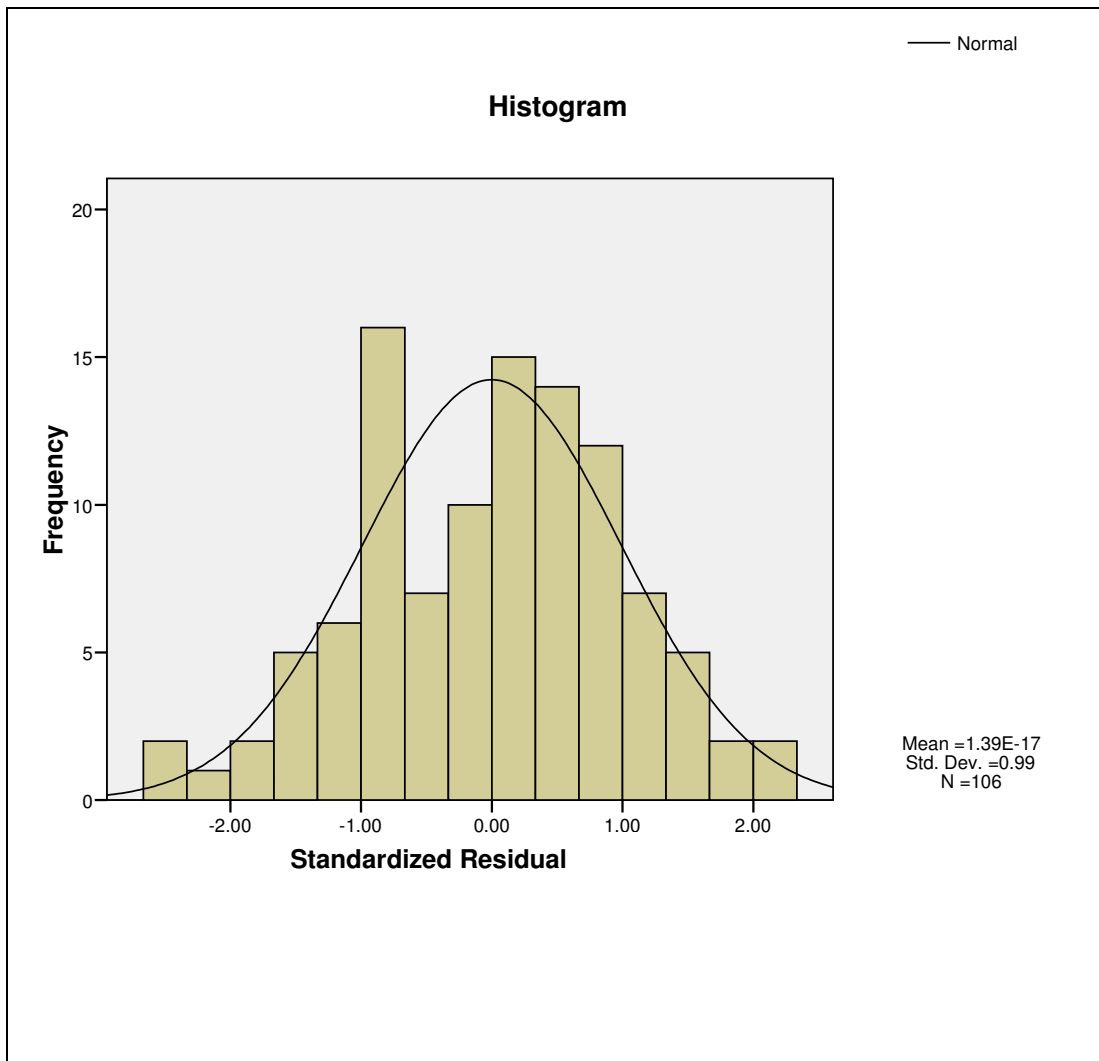
**Table 24: Normality tests based on the standardised residuals for ANOVA 2**

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
Standardized Residuals for ANOVA 2	0.055	106	0.200(*)	0.993	106	0.866

\* This is a lower bound of the true significance.

The assumption of normality is once again met as the Shapiro-Wilk and Kolmogorov-Smirnov tests both have p-values higher than 0.05, therefore the null hypothesis of normality cannot be rejected. The normality of the residuals for ANOVA 2 is also presented in Figure 10.

**Figure 10: Histogram illustrating the standardized residuals for ANOVA 2**



The second ANOVA assumption was again tested using Levene’s test for the homogeneity of variances.

**Table 25: Levene’s test for homogeneity of variances for ANOVA 2**

Levene Statistic	df1	df2	p
4.645	2	103	0.012

Levene’s test is significant if the p-value is less than 0.05. This would indicate that the variances of the brand trust scores of the three experimental groups are significantly different and that the assumption of equal variances does not hold (Field, 2005:350).

The p-value of Levene’s test for ANOVA 2 is 0.012. Since this value is smaller than 0.05, the assumption of equal variances is violated for ANOVA 2.

Due to the violation of this assumption it was necessary to make use of an alternative statistical test, namely, Welch’s ANOVA. This ANOVA is conducted to compensate for the unequal variances (Pallant, 2005:218).

The table below presents the results of Welch’s ANOVA.

**Table 26: Output for Welch’s ANOVA 2**

	Statistic(a)	df1	df2	p
Welch	3.882	2	66.712	0.025

a Asymptotically F distributed.

In order to provide a significant result, the p-value of Welch’s ANOVA should be smaller than 0.05 (Pallant, 2005:218). As is indicated in Figure 9, the p-value for Welch’s ANOVA 2 is 0.025. Since this value is smaller than 0.05, it indicates that there is a significant difference in the mean brand trust scores of at least two of the experimental groups being compared. However, these results do not indicate which groups differ significantly.

*Post hoc* tests were conducted in order to determine between which groups the significant differences occurred. *Post hoc* tests consist of pair-wise comparisons that compare all different combinations of the treatment groups (Field, 2005:339). In this specific analysis, three pair-wise comparisons were conducted (see Table 27 below).

According to Field (2005:339), there are many *post hoc* procedures available. However, it is important to choose to the most appropriate procedure applicable to a specific study. Field (2005:346) suggested that if the assumption of equal variances is not met then the Games-Howell test is preferred.

The Games-Howell test was therefore conducted in order to provide multiple comparisons amongst the three experimental groups included in this analysis. The results are presented in Table 27 below.

**Table 27: The results of the Games-Howell post hoc test for ANOVA 2**

Groups being compared	Hypothesis being tested	Mean Difference	Std. Error	p	Conclusion
Group A2 - Dependent expert endorsements vs. Group B2 - Independent expert endorsements	H4b	-0.493	0.248	0.124	H4b not accepted
Group A2 - Dependent expert endorsements vs. Control group	H2a	0.044	0.262	0.985	H2a not accepted
Group B2 - Independent expert endorsements vs. Control group	H2b	0.537	0.210	0.035	<b>H2b accepted</b>

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

If the Games-Howell test produces a significant result, in other words, if it produces a p-value smaller than 0.05, then this indicates a significant difference in the mean brand trust scores of the two groups being compared.

As indicated in Table 27, the comparison between group B2 (i.e. the group exposed to independent expert endorsement claims) and group C (the Control group) was statistically significant with a p-value of 0.035, whereas the comparisons between groups A2 and B2 as well as groups A2 and C were not statistically significant. With reference to the hypotheses tested in this analysis, these findings indicate the following:

- Since the p-value of the Games-Howell test for the comparison of groups A2 and B2 is 0.124, which is larger than the significance level of 0.05, hypothesis H4b<sub>(null)</sub> cannot be rejected. The results indicate that there is no significant difference in the brand trust scores of the experimental group exposed to a dependent expert endorsement (Group A2) and the group exposed to an independent expert endorsement (Group B2).
- Since the p-value of the Games-Howell test for the comparison of groups A2 and C is 0.985, which is larger than the significance level of 0.05, hypothesis H2a<sub>(null)</sub> cannot be rejected. The results indicate that there is no significant difference in the brand trust scores of the experimental group exposed to a dependent expert endorsement (Group A2) and the control group (Group C).

- Since the p-value of the Games-Howell test for the comparison of groups B2 and C is 0.035, which is smaller than the significance level of 0.05, the results indicate that there is a significant difference in the brand trust scores of the experimental group exposed to an independent expert endorsement (Group B2) and the control group (Group C). The mean brand trust score of the group B2 is 5.226, which is higher than the mean brand trust score of group C which is 4.690. Hypothesis  $H2b_{(alternative)}$  can therefore be accepted.

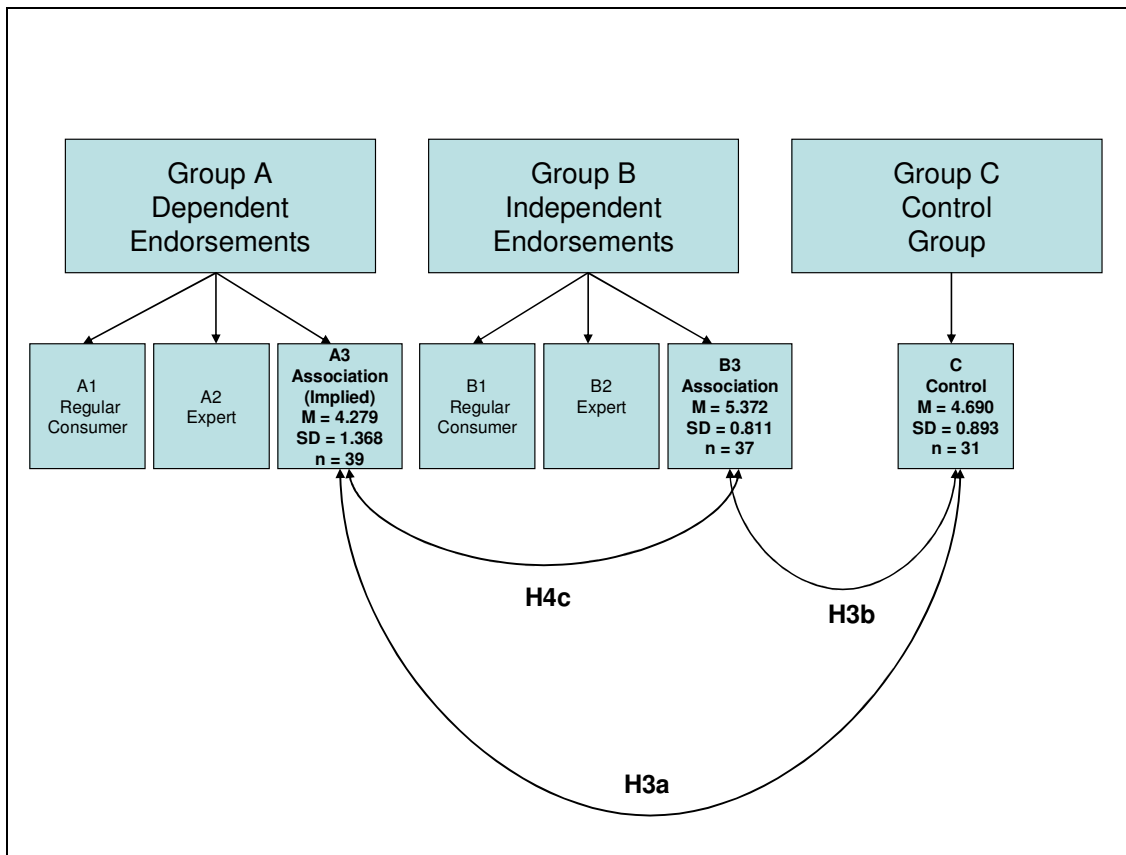
In conclusion, a one-way between-groups ANOVA was conducted to explore the impact of different types of expert endorsement on brand trust, as measured by the brand trust scale (BTS). Subjects were randomly divided into three groups. A Welch's ANOVA was conducted and a statistically significant difference in brand trust scores at the  $p < .05$  level was found.

*Post hoc* comparisons using the Games-Howell test showed that the mean score for the independent expert endorsement variable was significantly different from that of the control group. This information was related back to the hypotheses resulting in hypothesis  $H2b_{(null)}$  being rejected in favour of  $H2b_{(alternative)}$ , and hypothesis  $H2a_{(null)}$  and  $H4b_{(null)}$  not being rejected. The managerial implications of these findings are discussed in chapter 6, section 6.6.

### **5.3.5 ANOVA 3: Comparing the brand trust scores of the two experimental groups exposed to different association endorsements and the control group**

As is indicated in Figure 6, the third and last ANOVA (shown in the black, solid line) compared the mean brand trust scores of three experimental groups, namely the group exposed to a dependent (implied independent) association endorsement (Group A3), the group exposed to an independent association endorsement (Group B3) and the control group (Group C). The results of ANOVA 3 were used to test hypotheses H3a, H3b and H4c. These groups and comparisons are presented in Figure 11 below.

**Figure 11: The mean brand trust scores compared in ANOVA 3 to test hypotheses H3a, H3b and H4c**



Note: M = mean, SD = standard deviation, n = size of group.

The descriptive statistics in Figure 11 suggest that subjects exposed to an independent endorsement by an association (i.e., Group B3) had the highest average brand trust scores (M = 5.372, SD = 0.811) followed by subjects in the control group (i.e., Group C) (M = 4.690, SD = 0.893). The subjects exposed to a dependent (implied independent) endorsement by an association (i.e., Group A3) had the lowest brand trust scores (M= 4.279, SD = 1.368).

ANOVA 3 was used to determine whether the differences in the brand trust scores of the aforementioned three groups were statistically significant and to test hypotheses H3a, H3b and H4c. The third hypothesis (H3) focused on the effect that an association's endorsement claim had on subjects' perceived levels of brand trust. The null and alternate hypotheses of H3a and H3b are stated below.

**H3a<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to a dependent (implied independent) association's endorsement claim about a brand



(i.e. Group A3) and subjects not exposed to a dependent (implied independent) association's endorsement claim for the same brand (i.e. Control group).

**H3a<sub>(alternative)</sub>**: Subjects exposed to a dependent (implied independent) association's endorsement claim about a brand (i.e. Group A3) will have higher scores on the brand trust scale compared with subjects not exposed to a dependent (implied independent) association's endorsement claim for the same brand (i.e. Control group).

**H3b<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to an independent association's endorsement claim about a brand (i.e. Group B3) and subjects not exposed to an independent association's endorsement claim for the same brand (i.e. Control group).

**H3b<sub>(alternative)</sub>**: Subjects exposed to an independent association's endorsement claim about a brand (i.e. Group B3) will have higher scores on the brand trust scale compared with subjects not exposed to an independent association's endorsement claim for the same brand (i.e. Control group).

Hypothesis 4c focused on the comparison of the two groups exposed to the dependent and independent association endorsement claims. The null and alternate hypotheses for H4c are presented next.

**H4c<sub>(null)</sub>**: There will be no difference in the brand trust scores of subjects exposed to a dependent (implied independent) endorsement claim by an association (i.e. Group A3) and subjects exposed to an independent endorsement claim by an association (i.e. Group B3).

**H4c<sub>(alternative)</sub>**: Subjects exposed to an independent endorsement claim by an association (i.e. Group B3) will have higher brand trust scores compared with subjects exposed to a dependent (implied independent) endorsement claim by an association (i.e. Group A3).

The assumption of normality was once again tested on the residual values. Table 28 below presents the results of the Shapiro-Wilk and Kolmogorov-Smirnov tests for normality.

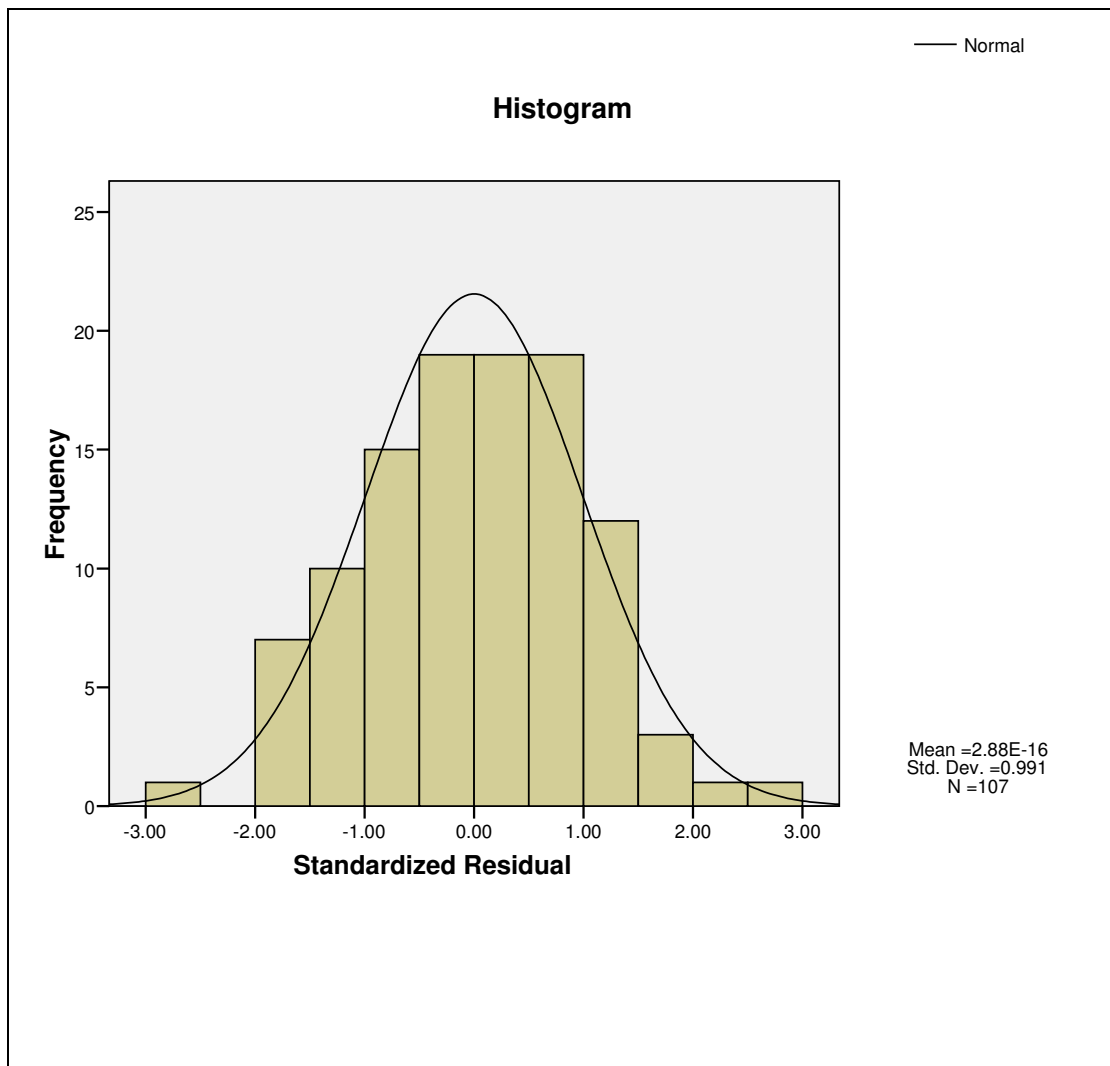
**Table 28: Normality tests based on the standardised residuals for ANOVA 3**

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
Standardized Residual for s3	0.064	107	0.200(*)	0.994	107	0.920

\* This is a lower bound of the true significance.

The assumption of normality was satisfied as the Shapiro-Wilk and Kolmogorov-Smirnov tests have p-values higher than 0.05. The null hypothesis of normality can therefore not be rejected. The normality of the residuals for ANOVA 3 is also presented in the Figure 12.

**Figure 12: Histogram illustrating the standardized residuals for ANOVA 3**



The second assumption of ANOVA 3 was tested using Levene's test for homogeneity of variances.

**Table 29: Levene's test for the homogeneity of variances for ANOVA 3**

Levene Statistic	df1	df2	p
7.827	2	104	0.001

Levene's test is significant if the p-value is less than 0.05. The p-value of Levene's test for ANOVA 3 is 0.001. Since this value is smaller than 0.05, the assumption of equal variances does not hold for ANOVA 3.

Due to the violation of this assumption, it was again necessary to use the alternative statistical test, namely, Welch's ANOVA (see Table 30).

**Table 30: Output for Welch's ANOVA 3**

	Statistic(a)	df1	df2	p
Welch	10.908	2	66.998	0.0000792

a Asymptotically F distributed.

As is indicated in Table 30, the p-value for Welch's ANOVA 3 is 0.0000792. Since this value is smaller than 0.05, it indicates that there is a significant difference in the mean brand trust scores of at least two of the experimental groups being compared. However, these results do not indicate which groups differ significantly. *Post hoc* tests were conducted in order to determine between which groups the significant differences occurred.

As mentioned in section 5.3.1, Field (2005:346) suggests that if the assumption of equal variances is not met then the Games-Howell test is the preferred *post hoc* procedure. The Games-Howell test was therefore conducted in order to provide multiple comparisons amongst the three experimental groups included in this analysis. The results are presented in the table below.

**Table 31: The results of the Games-Howell post hoc test for ANOVA 3**

Groups being compared	Hypothesis being tested	Mean Difference	Std. Error	p	Conclusion
Group A3 – Dependent (implied independent) association endorsements vs. Group B3 - Independent association endorsements	H4c	-1.093(*)	0.256	0.000203	<b>H4c accepted</b>
Group A3 - Dependent (implied independent) association endorsements vs. Control group	H3a	-0.411	0.271	0.291	H3a not accepted
Group B3 - Independent association endorsements vs. Control group	H3b	0.682(*)	0.209	0.005	<b>H3b accepted</b>

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

As is indicated in Table 31 above, the comparison between group A3 (i.e. the group exposed to a dependent (implied independent) association endorsement claim) and group B3 (i.e. the group exposed to an independent association endorsement claim) was statistically significant with a p-value of 0.000203. The comparison between group B3 (i.e. the group exposed to an independent association endorsement claim) and group C (the control group) was also statistically significant with a p-value of 0.005. The comparison of groups A3 and C was not statistically significant.

With reference to the hypotheses tested in this analysis, these findings indicate the following:

- Since the p-value of the Games-Howell test for the comparison of groups A3 and B3 is 0.000203, which is smaller than the significance level of 0.05, hypothesis  $H4c_{(null)}$  can be rejected in favour of  $H4c_{(alternative)}$ . The results indicate that there is a significant difference in the brand trust scores of the experimental group exposed to a dependent association (implied independent) endorsement claim (Group A3) and the experimental group exposed to an independent association endorsement claim (Group B3). The

mean brand trust score of the group B3 is 5.372 which is higher than the mean brand trust score of group A3, which is 4.279. Hypothesis  $H4b_{(alternative)}$  can therefore be accepted.

- Since the p-value of the Games-Howell test for the comparison of groups A3 and C is 0.291, which is larger than the significance level of 0.05, hypothesis  $H3a_{(null)}$  cannot be rejected. The results indicate that there is no significant difference in the brand trust scores of the experimental group exposed to a dependent (implied independent) association endorsement (Group A3) and the control group (Group C).
- Since the p-value of the Games-Howell test for the comparison of groups B3 and C is 0.005, which is smaller than the significance level of 0.05, hypothesis  $H3c_{(null)}$  can be rejected in favour of  $H3c_{(alternative)}$ . The results indicate that there is a significant difference in the brand trust scores of the experimental group exposed to an independent association endorsement claim (Group B3) and the control group. The mean brand trust score of the group B3 is 5.372 which is higher than the mean brand trust score of group C which is 4.690 Hypothesis  $H3b_{(alternative)}$  can therefore be accepted.

In conclusion, a one-way between-groups ANOVA was conducted to explore the impact of different types of association endorsement on brand trust, as measured by the brand trust BTS. Subjects were randomly divided into three groups. A Welch's ANOVA was conducted and a statistically significant difference in brand trust scores at the  $p < 0.05$  level was found.

*Post hoc* comparisons using the Games-Howell test showed that the mean score for the independent association endorsement variable was significantly different from that of the control group, as well as that of the dependent (implied independent) association endorsement variable. This information was related back to the hypotheses resulting in  $H3b_{(null)}$  and  $H4c_{(null)}$  being rejected and  $H3a_{(null)}$  not being rejected. The managerial implications of these findings are discussed in section 6.6 on p. 135.

Table 32 below provides a summary of all three situations where a significant difference was noticed between the brand trust scores of experimental groups.

**Table 32: The experimental groups where a significant difference existed between the brand trust scores**

Group 1	Group 2	Mean Group 1	Mean Group 2	Mean Difference	p	Conclusion
Group B2 - Independent expert endorsements	Control group	5.226	4.690	0.537	0.035	H2b accepted
Group A3 - Dependent (implied independent) association endorsements	Group B3 - Independent association endorsements	4.279	5.372	-1.093	0.000203	H4c accepted
Group B3 - Independent association endorsements	Control group	5.372	4.690	0.682	0.005	H3b accepted

### **5.3.6 Results of the ANCOVA tests conducted to include the brand trust covariate as a control variable**

A covariate is a continuous variable that is not part of the main experimental manipulation but may have an influence of the dependent variable (Field, 2005:363).

Since the subject's prior knowledge of, and familiarity with, the focal brand used in this study (i.e. Vital) may have influenced their brand trust scores, brand familiarity was included as a covariate in a second phase of data analysis using analysis of covariance (ANCOVA). ANCOVA is specifically used to statistically control for the potential confounding influence that covariates (such as brand familiarity) may have on a dependent variable (such as brand trust).

ANCOVA uses regression procedures to remove the variation in the dependent variable due to the covariate (Pallant, 2005:263). This reduces the error variance and increases the chances of detecting a significant difference between experimental groups (Pallant, 2005:264). Three one-way between-groups ANCOVAs were conducted to control for the potential influence of brand familiarity on brand trust.

The assumptions under which ANCOVA is reliable are listed below (Pallant, 2005:269):

- 1) Measurement of the covariate before experimental manipulation begins
- 2) Reliability of the covariate
- 3) Correlations among covariates
- 4) A linear relationship should exist between the dependent variables and the covariate
- 5) Homogeneity of regression slopes

Assumptions 1 and 2 were met as the brand familiarity scale was presented at the beginning of the experiment. The reliability of the scale was also tested prior to the experiment (see section 4.3.6 on p. 81). Assumption 3 was not relevant to this study as only one covariate was included.

Assumption 4 was tested by plotting the correlations between brand familiarity and brand trust scores for each group on a scatter plot. A linear relationship was found between brand familiarity and brand trust in all three experimental groups and for all experimental manipulations.

The assumption of the homogeneity of regression slopes requires that the relationship between the covariate and dependent variable for each group is the same (2005:267). The results of an ANCOVA can be misinterpreted should the assumption of the homogeneity of regression not hold (Field, 2005:381). This assumption was tested statistically by checking if there was a statistically significant interaction between the treatment and the covariate (Pallant, 2005:267).

The interaction term between the treatment and brand familiarity was not significant for the regular endorsement variable and the association endorsement variable, therefore the assumption of homogeneity of regression slopes was not violated for these two variables. However, the interaction term was significant for the expert endorsement variable; therefore it would not be appropriate to use ANCOVA in this case given the violation of this assumption (Field, 2005:381).

ANCOVA tests were conducted for the regular consumer (ANCOVA 1) and association endorsement variables (ANCOVA 3). A summary of the findings from the two ANCOVAs conducted are presented in Table 33.

**Table 33: Output for ANCOVA 1 and ANCOVA 3**

	Sum of Squares	df	Mean Square	F	p
ANCOVA 1: Familiarity	4.566	1	4.666	4.872	0.030
Between Groups	2.701	2	1.350	1.441	<b>0.242</b>
ANCOVA 3: Familiarity	3.082	1	3.082	2.747	0.100
Between Groups	22.182	2	11.091	9.885	<b>0.000118</b>

The results of the ANCOVA test are now detailed below in comparison to the ANOVA results conducted on the same experimental variables.

The p-value for ANCOVA 1 is 0.242. This indicates that there was no significant difference in the mean brand trust scores of the experimental groups being compared (i.e. Group A1, B1 and C) after controlling for the potential confounding influence of the covariate. This result is in line with the results of the ANOVA 1 test conducted on the same groups (see Table 23 on p. 108).

The p-value of 0.000118 for ANCOVA 3 indicates that there was a significant difference in the mean brand trust scores of the experimental groups being compared (i.e. Group A3, B3 and C). This is in line with the results of the ANOVA 3 test conducted on the same groups (see Table 30 on p. 119).

It was once again necessary to conduct *post hoc* tests in order to determine between which groups the significant differences occurred. The Sidak *post hoc* comparison was used as a recommended *post hoc* test (Field, 2005:374). The results of this pairwise comparison are presented in Table 34 below.



**Table 34: The results of the Sidak comparison conducted for ANCOVA 3**

Groups being compared	Hypothesis being tested	Mean Difference	Std. Error	p	Conclusion
Group A3 - Dependent (implied independent) association endorsements vs. Group B3 - Independent association endorsements	H4c	1.071	0.243	<b>0.0000792</b>	<b>H4c accepted</b>
Group A3 - Dependent (implied independent) association endorsements vs. Control group	H3a	-0.381	0.256	0.393	H3a not accepted
Group B3 - Independent association endorsements vs. Control group	H3b	0.691	0.258	<b>0.026</b>	<b>H3b accepted</b>

As seen from the table above the results of the ANCOVA tests conducted to control for the potential confounding influence of the covariate indicate that hypothesis H4c and H3b can be accepted. This confirms the results of the ANOVA 1 and ANOVA 3 tests conducted in section 5.2 (see Table 32 on p. 122).

### 5.3.7 Results of the manipulation check

A manipulation check was included at the end of the experiment to ensure that the images used to represent each form of endorsement were interpreted correctly.

Participants from Group A and B were asked whether they could identify the forms of endorsement that they were presented with in the study from a list of three possible answers:

- An endorsement provided by a regular consumer
- An endorsement provided by an expert
- An endorsement provided by an association/group of people

The table below summarises the frequency and percentage of participants per group that correctly classified the images per experimental stimuli.

**Table 35: Frequency and percentage of participants who correctly classified the manipulation check images**

	Group A		Group B		Total	
	n=41		n=37		n=78	
Images representing endorsement stimuli	Frequency correctly classified	Percentage of Group Total	Frequency correctly classified	Percentage of Group Total	Frequency correctly classified	Percentage of Total Sample
Image 1 - Regular endorsement stimuli	37	90.24%	33	89.19%	70	89.74%
Image 2 - Expert endorsement stimuli	34	82.93%	33	89.19%	67	85.90%
Image 3 - Association endorsement stimuli	39	95.12%	36	97.30%	75	96.15%

To interpret the data in the table above, 90.24% of participants in Group A classified Image 1 (the regular consumer endorsement stimuli) correctly as an example of a "Regular consumer endorsement". 82.93% of participants in Group A correctly classified Image 2 as an "Expert endorsement", while 95.12% of participants in Group A correctly classified Image 3 as an "Implied independent association endorsement".

In Group B, 89.19% of participants classified both Image 1 and Image 2 correctly. Group C did not view the experimental stimuli and therefore were not asked to complete the manipulation check questions. In total, 89.74% of participants correctly classified Image 1, whilst 85.90% and 96.15% of total participants correctly classified Image 2 and 3 respectively.

Responses of participants who misclassified the experimental stimuli were not rejected. The reason for this being that the terminology used to define each form of endorsement may also have been misunderstood by the participants. The terms used to classify each form of endorsement were classified according to marketing terminology, whereas, in a real environment consumers view endorsement stimuli via images and advertorial text and are not always able to classify what form of advertising they are exposed to, even though the advertising may have an affect. The percentage of correctly classified stimuli was thus deemed sufficient by the researcher.

## 5.4 CHAPTER SUMMARY

This chapter started with a presentation of the descriptive statistics relevant to the research objectives of this study. The inferential statistics were then shown and the results of the three ANOVA tests conducted to test the study's hypotheses were presented. The chapter ended with the presentation of the results of the ANCOVA and manipulation tests conducted.

The next chapter discusses the implications of the above findings and compares these findings to previous studies. The managerial implications and limitations of the study are also considered.

## **6 CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 INTRODUCTION**

The final chapter of this study restates the main purpose and importance of the study. The results of the research are summarised and related back to the literature presented in chapters 2 and 3. Thereafter, the managerial implications and limitations of the study are discussed. Recommendations for future research are also provided.

### **6.2 THE MAIN PURPOSE OF THE STUDY**

This study set out to investigate the effect of different forms of dependent and independent endorsement on consumers' perceptions of brand trust. The different forms of dependent and independent endorsement investigated in the study were regular consumer endorsement, expert endorsement, and association endorsement. Their effect on brand trust was measured using Delgado-Ballester's (2004:573-592) brand trust scale (BTS) in the context of the South African nutritional supplement industry.

The study's secondary aim was to determine whether there was a significant difference between the different forms of dependent and independent endorsements under investigation, with regards to their effect on consumers' brand trust, and if so, which forms of endorsement were most effective.

### **6.3 THE IMPORTANCE OF THE STUDY**

Academically, this study is important as it adds value to many endorsement-based studies which generalize the concept of endorsement. The study builds on previous endorsement based studies conducted by Delgado Ballester and Munuera-Aleman (2005), Zboja and Voorhees (2006:381-390) and Dean (1999:1-12) by differentiating between and classifying the different forms and types of endorsement investigated and providing results per endorsement category.

Secondly, the studies of Dean (1999:1-12), Wang (2005:402-412) and Zboja and Voorhees (2006:381-390) all suggest a link between endorsement and various marketing related variables which are either directly or indirectly linked to brand trust. These variables include behavioural intent, purchase intent, and perceived quality, uniqueness and esteem.

Previous studies conducted in a consumer domain indicate that brand trust has a positive influence on brand equity (Delgado-Ballester & Munuera-Aleman, 2005:187-196), brand loyalty (Chaudhuri & Holbrook, 2001:81-93), consumer loyalty (Delgado-Ballester, 2001:1240), brand extension acceptance (Reast, 2005:4) and retailer re-purchases decisions (Zboja & Voorhees, 2006:38).

However, as far as the researcher could determine, no academic previous studies have directly investigated the influence of different forms of endorsement on brand trust. This study combined evidence from the above studies, together with the concepts presented in cue utilization theory and balance theory, and hypothesised a positive casual relationship between various forms of endorsement and brand trust.

In addition, this study introduced a new form of endorsement, namely implied independent association endorsement, and tested its influence on brand trust. Practically, the study is also important as it provides results in a comparative format, allowing decision makers to differentiate between different types and forms of endorsements.

Finally, the nutritional supplement industry is a market that is showing exponential growth over the past 10 years (Unsworth, 2006). The industry also lacks regulation and control by a governing body or institution; therefore, consumers carry the liability of making the correct product choices (Kohler *et al.*, 2005).

Therefore, the results of this study may be used by South African nutritional supplement companies to help understand their consumers better and optimise their marketing spend on endorsement advertising.

## 6.4 A SUMMARY OF THE FINDINGS OF THE CURRENT STUDY

This section summarises the findings of the study according to the objectives stated and the hypothesis tests conducted to meet these objectives.

### 6.4.1 The influence of regular consumer endorsements on brand trust

ANOVA 1 was conducted to compare the brand trust scores of the two experimental groups exposed to dependent and independent regular consumer endorsements respectively and the control group in order to meet the following three research objectives:

- To determine whether a dependent regular consumer endorsement of a nutritional supplement will influence consumers' brand trust towards the endorsed product.
- To determine whether an independent regular consumer endorsement of a nutritional supplement will influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent regular consumer endorsements in terms of their relative effect on brand trust.

These three objectives are associated with the testing of hypotheses H1a, H1b and H4a respectively. The results of ANOVA 1 are summarised in Table 36 below.

**Table 36: The results of three hypotheses tested through ANOVA 1**

Wording of the alternative hypothesis	Summary of the result
H1a - Subjects exposed to a dependent regular consumer's endorsement claim about a brand will have higher scores on the brand trust scale compared to subjects not exposed to a dependent regular consumer's endorsement claim for the same brand.	H1a was not accepted
H1b - Subjects exposed to an independent regular consumer's endorsement claim about a brand will have higher scores on the brand trust scale compared to subjects not exposed to an independent regular consumer's endorsement claim for the same brand.	H1b was not accepted
H4a - Subjects exposed to an independent endorsement claim by a regular consumer will have higher brand trust scores compared to subjects exposed to a dependent endorsement claim by a regular consumer.	H4a was not accepted

According to these results, neither dependent nor independent regular consumer endorsements had a positive influence on consumers' levels of brand trust. The results also suggest that independent endorsements by a regular consumer were not significantly more influential on brand trust than dependent endorsements by a regular consumer.

#### 6.4.2 The influence of expert endorsements on brand trust

ANOVA 2 was conducted to compare the brand trust scores of the two experimental groups exposed to dependent and independent expert endorsements respectively, and the control group in order to meet the following three research objectives:

- To determine whether a dependent expert endorsement of a nutritional supplement will influence consumers' brand trust towards the endorsed product.
- To determine whether an independent expert endorsement of a nutritional supplement will influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent expert endorsements in terms of their relative effect on brand trust.

These three objectives are associated with the testing of hypotheses H2a, H2b and H4b respectively. The results of ANOVA 2 are presented in Table 37 below.

**Table 37: The results of three hypotheses tested through ANOVA 2**

<b>Wording of the alternative hypothesis</b>	<b>Summary of the result</b>
H2a - Subjects exposed to a dependent expert's endorsement claim about a brand will have higher scores on the brand trust scale compared to subjects not exposed to a dependent expert's endorsement claim for the same brand.	H2a was not accepted
H2b - Subjects exposed to an independent expert's endorsement claim about a brand will have higher scores on the brand trust scale compared to subjects not exposed to an independent expert's endorsement claim for the same brand.	<b>H2b was accepted</b>
H4b - Subjects exposed to an independent endorsement claim by an expert will have higher brand trust scores compared to subjects exposed to a dependent endorsement claim by an expert.	H4b was not accepted

These results indicate that the dependent expert endorsement of the nutritional supplement did not significantly influence brand trust when compared with the control group. However, expert endorsements from an independent source did have a statistically significant positive influence on brand trust compared with the control group. There was, however, no significant difference found between dependent and independent expert endorsements when comparing their effect on brand trust.

#### **6.4.3 The influence of association endorsements on brand trust**

ANOVA 2 was conducted to compare the brand trust scores of the two experimental groups exposed to dependent (implied independent) and independent association endorsements with each other and the control group in order to meet the following three research objectives:

- To determine whether a dependent (implied independent) association endorsement of a nutritional supplement will influence consumers' brand trust towards the endorsed product.
- To determine whether an independent association endorsement of a nutritional supplement by a third party association will influence consumers' brand trust towards the endorsed product.
- To compare the independent and dependent (implied independent) association endorsements in terms of their relative effect on brand trust.

These three objectives are associated with the testing of hypothesis H3a, H3b and H4c respectively. These results are presented in Table 38 below.



**Table 38: The results of three hypotheses tested through ANOVA 3**

Wording of the alternative hypotheses	Summary of the result
H3a - Subjects exposed to a dependent (implied independent) association's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to a dependent (implied independent) association's endorsement claim for the same brand.	H3a was not accepted
H3b - Subjects exposed to an independent association's endorsement claim about a brand will have higher scores on the brand trust scale compared with subjects not exposed to an independent association's endorsement claim for the same brand.	<b>H3b was accepted</b>
H4c - Subjects exposed to an independent endorsement claim by an association will have higher brand trust scores compared with subjects exposed to a dependent (implied independent) endorsement claim by an association.	<b>H4c was accepted</b>

These results found that independent association endorsements had a statistically significant positive influence on consumers' perceived level of brand trust, whilst dependent (implied independent) association endorsements did not have the same effect. The results also indicated that independent association endorsements had a significantly stronger influence on brand trust than dependent (implied independent) association endorsements.

## 6.5 A DISCUSSION OF THE FINDINGS OF THE CURRENT STUDY

This section relates the above mentioned findings back to the literature and also provides possible explanations for unexpected results.

Where ANOVA 1 was conducted on the regular consumer endorsement variable, all three results are counter to the research hypothesis. The finding that neither dependent nor independent regular consumer endorsements have a statistically significant influence on brand trust was somewhat surprising, as the studies of Dean (1999:1-12), Wang (2005:402-412) and Zboja and Voorhees (2006:381-390) all suggest a causal relationship between endorsement and various marketing-related variables which are either directly or indirectly linked to brand trust.

Delgado Ballester and Munuera-Aleman (2005:188b) classified brand trust as a consumer belief about a brand, and balance theory envisions a relationship between endorsement

and consumer beliefs. However, none of the above studies directly measured the effect of a regular consumer's endorsement on brand trust.

Wang (2005:402) was specific about the form of endorsement investigated and concluded that a regular consumer's positive endorsement enhanced the audiences' attitude toward the endorsed product. Once again, Wang's (2004:402) conclusion was not specifically based on the effect of the endorsement on brand trust; therefore, although the results are contrary to the hypothesized effects expected, they cannot be directly related to these previous studies.

The ANOVA 2 conducted on the expert endorsement variable produced contradictory results. Expert endorsement by an independent source did have a statistically significant influence on brand trust whereas expert endorsement by a dependent source did not. Expert endorsements in general were proposed by Wang (2005:403) to persuade consumers through a credibility dimension where the endorser is perceived to have credible information that may help the consumer make a more informed decision. Reast (2005:5) defined brand trust as a credibility-based construct; therefore it was assumed that the credibility dimension provided by expert endorsements would positively influence the consumers' brand trust.

A possible explanation for the different results is that Wang's study (2005:403) did not differentiate between different forms of endorsement and he did not measure experts' endorsements effect on brand trust directly.

The results of the last ANOVA conducted on the association endorsement variable were in line with previous endorsement literature. The results found that an association endorsement by an independent source did influence brand trust. Daneshvary and Schwer's (2000:204) study claims that endorsements by an association have led to the successful selling of products. The study bases its conclusions on the identification process of social influence proposed by Kelman (in Daneshvary & Schwer, 2000:204).

The results also found that independent association endorsement had a higher affect on brand trust than implied independent association endorsement.

No studies have previously investigated implied independent endorsements. The results of the current study suggest that this new form of endorsement may not be as effective as an association endorsement provided by a truly independent source.

## 6.6 MANAGERIAL IMPLICATIONS

The first implication for managers is that different forms of endorsement exist that could influence brand trust differently. Managers should therefore be able to distinguish between different forms of both dependent and independent endorsement available to them in their marketing communications mix.

To help managers clarify the distinction between dependent and independent endorsement further, one can also label dependent endorsements as paid-for endorsements, and independent endorsements, provided for free by external parties, as non-paid-for endorsements.

The study found that all three dependent endorsement scenarios, namely regular consumer, expert, and association endorsements, did not have a positive influence on brand trust scores when compared with a control group scenario. These paid-for forms of endorsement advertising may need to be investigated further to give managers a more accurate indication of their benefits as part of the marketing communications mix, and to test if they truly provide a return on investment.

The results also indicate that independent regular consumer endorsement did not have a statistically significant influence on brand trust scores when compared with a control group scenario. This form of endorsement is closely related to word-of-mouth and is on the rise with the increase in Internet usage and social networking platforms. This is also an area where further research would be beneficial for managers to determine whether this form of regular consumer communication can influence consumers' perceptions of their brands.

The study did, however, find that independent expert and independent association endorsements had a statistically significant positive influence on brand trust scores when compared with a control group scenario.

These two forms of endorsement cannot be bought or “paid-for”, therefore, managers should start finding methods of monitoring and influencing independent expert and association endorsements to benefit from their positive influence on brand trust. Examples of independent expert endorsers include movie critics, webmavens and online health experts or doctors. With the advent of advanced communication technologies, these product mavens or experts now have access to an extensive platform to share their expertise and endorsements. Examples of independent association endorsers include the Heart Foundation and the South African Dental Association.

Marketers need to carefully monitor the activities of these “influential infomediaries” in order to capitalise on them and make use of the information shared to their advantage (Davidson & Copulsky, 2006:1087).

Managers can try to influence these endorsers by opening lines of communication between themselves and the endorsers. With the advent of Internet-based technology these communications channels can be activated online via the use of blogs and social networking platforms.

If managers succeed in positively influencing the endorsements provided by independent experts and independent associations this may in turn affect brand trust, which has a positive affect on brand equity, consumer loyalty, brand extension acceptance, and retailer re-purchases decisions, which may increase the prospect of future sales.

## **6.7 LIMITATIONS OF THE STUDY**

This section lists a number of limitations that should be considered:

- The study was limited to South African nutritional supplement users who made use of the Internet to gather product information. The study can therefore not be generalised to all South African nutritional supplement users or to all South African consumers.
- The snowball sampling method used is a non-probability sampling method and may have negatively influenced the generalizability of the findings.

- Some of the external variables could not be controlled. The three extraneous variables most likely to have influenced the results of the survey were the maturation effect, testing effect and mortality effect (see Table 14 on p. 87).
- Measures could not be implemented to combat selective drop out, although duplicates were accounted for and removed. The sample size was relatively small after all duplicates were eliminated.
- The subjects that did not correctly respond to the manipulation checks were not removed from the sample as this would have diminished the sample size further.
- The study was limited to a single brand, namely Vital.

## **6.8 RECOMMENDATIONS FOR FUTURE RESEARCH**

This section contains a number of suggestions for future research. Some of these recommendations relate directly to the findings of the current study, while a number of them have also been identified as gaps discovered in the literature review.

The results of this study were limited to the specific target group investigated. The current study can therefore be replicated using a larger sample size and using better sampling method amongst different target groups.

This study could also be replicated in order to investigate if various forms of endorsement affect other market related variables, such as buyer behaviour, perceived value, manufacturer esteem, and brand loyalty.

The current study revealed that dependent regular and expert endorsements did not affect brand trust. This result was slightly contradictory to the endorsement-based studies of Dean (1992:1) and Wang (2005:407) which found these forms of endorsements to have a positive affect on various consumer beliefs. The basis for the discrepancy between these finding justifies further investigation.

The current study revealed that independent expert and association endorsements did affect brand trust, whilst independent regular consumer endorsement did not. The reasons for the difference in these results can be further investigated. Future researchers could

also investigate the extent to which independent expert and association endorsements affect brand trust and how these forms of endorsement can be monitored.

New and emerging independent regular consumer endorsements platforms (i.e. blogs, Facebook, Twitter) have received very little academic investigation due to the fast emergence of these platforms. Further investigation into these platforms is a viable arena for future research. Researchers can investigate how these platforms can be used to provide independent endorsements, how to use these platforms to provide endorsements, and how managers can influence or manage the endorsement of their products on such platforms.

The topic of implied independent endorsement (e.g. Brand Power) has also received very little academic attention and this type of advertising can be investigated further as a qualitative study.

## **6.9 CHAPTER SUMMARY**

This final chapter of this study restated the main purpose of this study. The results of the research were summarized and related back to the literature. The study found that only independent expert and independent association endorsements have an affect on brand trust. The managerial implications of these findings were discussed, and the limitations of the study were presented. The chapter concluded with recommendations for future research.

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# **APPENDIX A**

## **VISUAL PRESENTATION OF DEPENDENT ENDORSEMENT FORMS**

Figure 13: Example of a typical dependent celebrity endorsement



Source: Nike (2007).

Figure 14: Example of a typical dependent sponsorship endorsement



Source: Vodacom Bulls (2007).

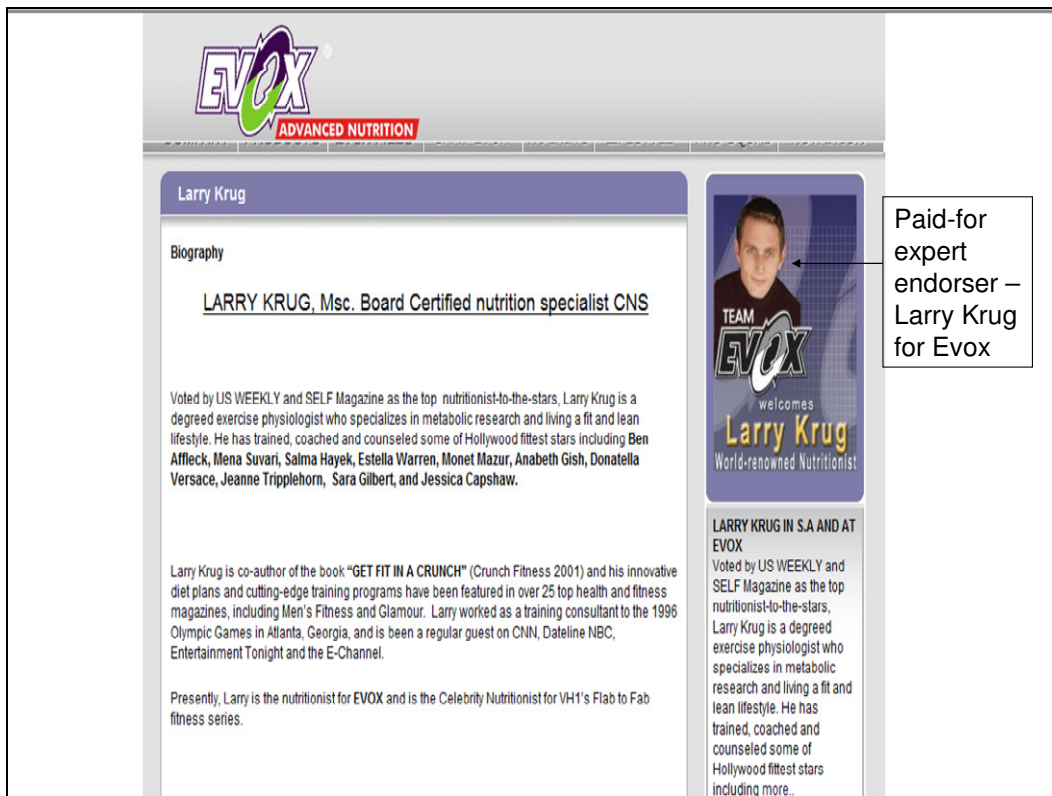


**Figure 15: Example of a typical dependent regular consumer endorsement**



Source: Unilever (2007).

**Figure 16: Example of a typical dependent expert endorsement**



Source: Evox Advanced Nutrition (2007).



Figure 17: Example of a typical dependent association endorsement

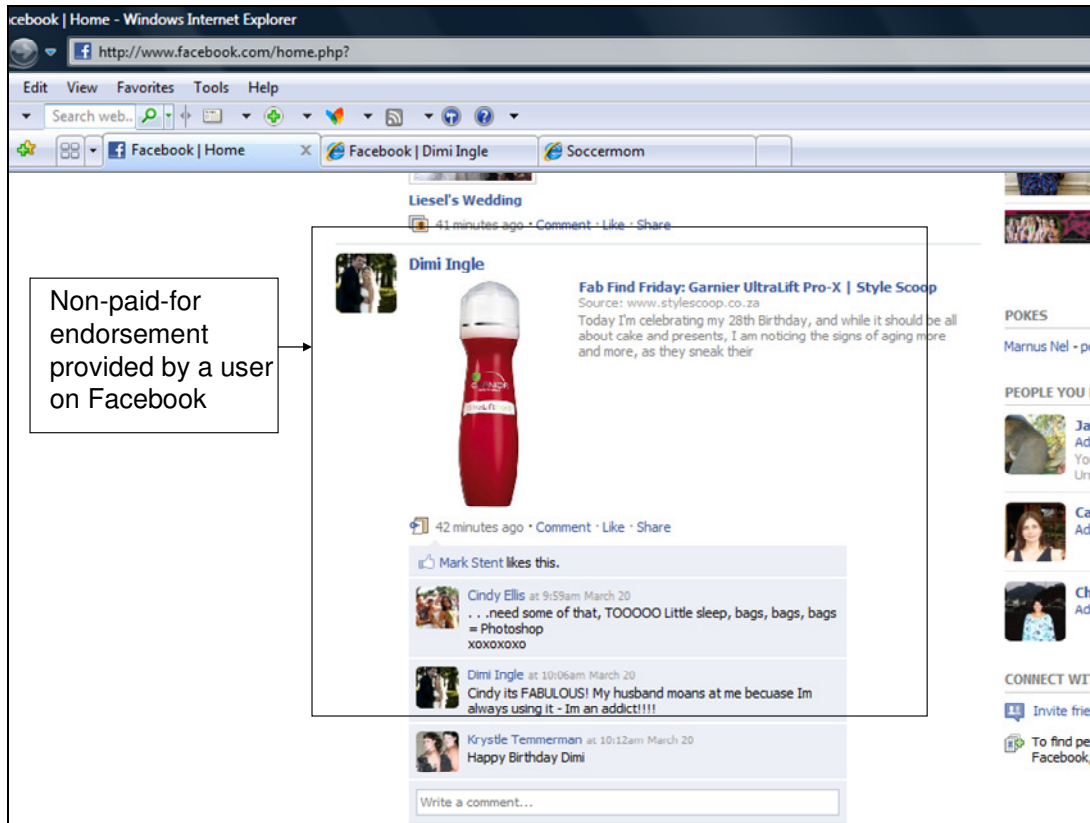


Source: Proudly South African (2007).

# **APPENDIX B**

## **VISUAL PRESENTATION OF INDEPENDENT ENDORSEMENT FORMS**

**Figure 18: Example of a typical independent regular consumer endorsement**



Source: Facebook (2009).

**Figure 19: Example of a typical independent expert endorsement**



Source: Rather Ronge (2007).

**Figure 20: Example of a typical independent association endorsement**



Non-paid-for association endorser – Members must qualify to receive The Heart Mark

Source: The heart and stroke foundation South Africa (2007).

**Figure 21: Example of a typical implied independent association endorsement**



Source: Brand Power (2007).

## **APPENDIX C**

# **QUESTIONNAIRE 1 INCLUDING VISUAL PRESENTATION OF THE VITAL BRAND AND SIMULATED WEB PAGES REPRESENTING THE DEPENDENT ENDORSEMENT FORMS**

## RESEARCH QUESTIONNAIRE

### AN EXPERIMENTAL INVESTIGATION OF THE RELATIVE EFFECTS OF DIFFERENT FORMS OF ENDORSEMENT ON BRAND TRUST

**Please read before completing the questionnaire.**

RESEARCH PARTICIPANT CONSENT FORM (1)

Dept. of Marketing and Communication Management  
University of Pretoria

Student: Ms. H.M. Saar (20038306)  
Cell: 082 303 1158

Dear respondent

You are invited to participate in an academic research study conducted by Honorata Saar, a Masters student from the Department of Marketing and Communication Management at the University of Pretoria. The purpose of the study is to determine the effects that different types of endorsements have on brand trust.



Please note the following:

- This study is targeted at South African nutritional supplement users. In order to participate in this survey you must be a South African citizen above the age of 18 who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi- vitamin, a meal replacement shake, energy boosters etc.)
- This study involves an online experiment and an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to me. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer all the questions in the survey as completely and honestly as possible. There are no wrong or right answers. Your opinions are highly valued. This should not take more than 15 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. I will provide you with a summary of my findings on request.
- Please contact my study leader, Mr. T.G. Kotzé, on tel. (012) 420-4844 (e-mail: [theuns.kotze@up.ac.za](mailto:theuns.kotze@up.ac.za)) if you have any questions or comments regarding the study

*I am a South African citizen, above the age of 18, who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi-vitamin, a meal replacement shake, energy boosters etc.)\**

*I have read and understand the information provided above and give consent to participate in the study on a voluntary basis.\**

**1. The logo of the brand Vital is presented below.**



Please indicate how knowledgeable, experienced and familiar you are with the Vital brand by completing the scale provided below. Please choose a point on the scale by choosing a number between the two descriptive words provided. E.g. The number 1 will indicate that you are very unfamiliar with the brand and the number 7 will indicate

that you are very familiar with the brand. Any number between these two points can also be chosen.

1.1                    1 Unfamiliar                    2                    3                    4                    5                    6                    7 Familiar  
                                                                                                                       

1.2                    1 Inexperienced                    2                    3                    4                    5                    6                    7 Experienced  
                                                                                                                       

1.3                    1 Not knowledgeable                    2                    3                    4                    5                    6                    7 Knowledgeable  
                                                                                                                       

**2. Please study the information provided on the web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
2.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.8 Vital brand would compensate me in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



some way for a problem with the product.

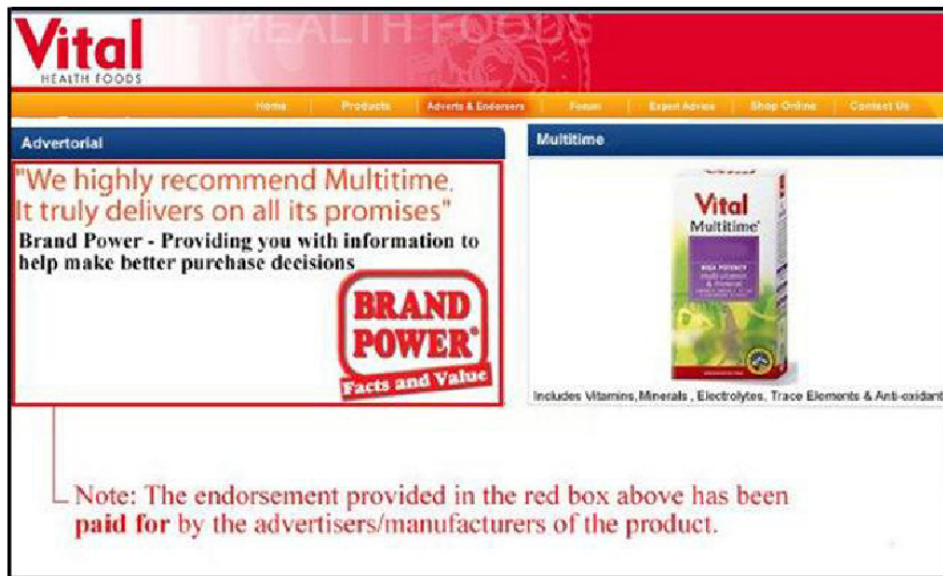
**3. Please study the information provided on the second web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know" option only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
3.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.8 Vital brand would compensate me in some way for a problem with the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Please study the information provided on the third and final web page presented below carefully.**



Using the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement (even if it is a neutral opinion), or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
4.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.8 Vital brand would compensate me in some way for a problem with the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Please indicate your gender.**

- Male  
 Female

**6. How old are you? (Please enter your date of birth -yyyy/mm/dd)**

6.

**7. Please indicate which suburb you currently live in.**

7.

Throughout the survey you were presented with three different web pages. Each web page contained a different form of endorsement of the Vital brand. You will now be presented with each web page one more time. After viewing each image you will be asked to indicate which form of endorsement you think is being presented on the web page. A list of possible answers will be provided.

Please view the image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

**Image 1**



8. I think the endorsement presented above is: **1. An endorsement provided by a regular consumer**

Please view the second image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

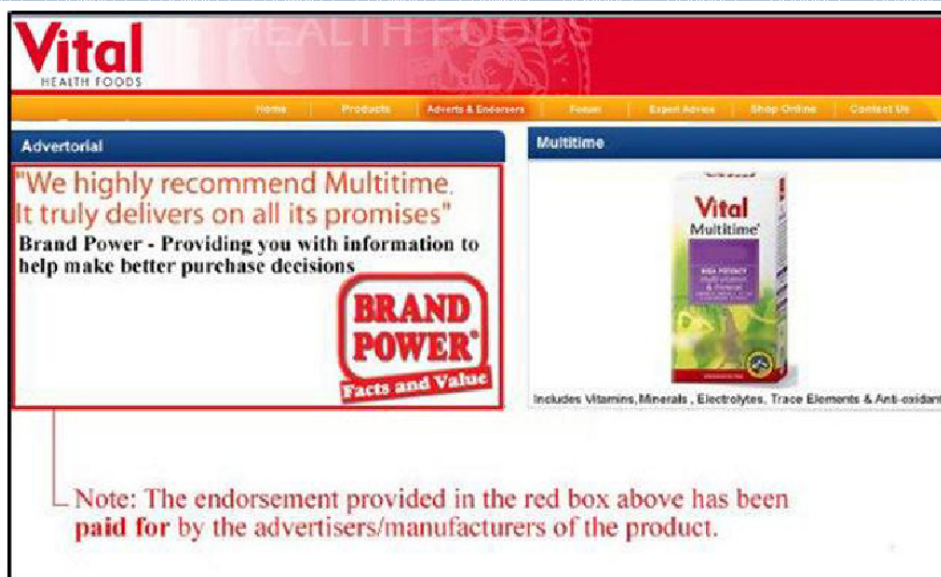
**Image 2**



9. I think the endorsement presented above is:

Please view the third image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

**Image 3**



10. I think the endorsement presented above is:

Please leave us your current telephone number in the event that we may need to contact you regarding clarification on your responses to this questionnaire. (Please note: This information will be kept confidential and will not be used for any marketing purposes or provided to any other party)



RESEARCH QUESTIONNAIRE

Telephone number

Thank you for your time. We appreciate your assistance.

Created by web questionnaire.

## **APPENDIX D**

# **QUESTIONNAIRE 2 INCLUDING VISUAL PRESENTATION OF THE VITAL BRAND AND SIMULATED WEB PAGES REPRESENTING THE INDEPENDENT ENDORSEMENT FORMS**

## RESEARCH QUESTIONNAIRE

### AN EXPERIMENTAL INVESTIGATION OF THE RELATIVE EFFECTS OF DIFFERENT FORMS OF ENDORSEMENT ON BRAND TRUST

**Please read before completing the questionnaire.**

RESEARCH PARTICIPANT CONSENT FORM (2)

Dept. of Marketing and Communication Management  
University of Pretoria

Student: Ms. H.M. Saar (20038306)  
Cell: 082 303 1158

Dear respondent

You are invited to participate in an academic research study conducted by Honorata Saar, a Masters student from the Department of Marketing and Communication Management at the University of Pretoria. The purpose of the study is to determine the effects that different types of endorsements have on brand trust.



Please note the following:

- This study is targeted at South African nutritional supplement users. In order to participate in this survey you must be a South African citizen above the age of 18 who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi- vitamin, a meal replacement shake, energy boosters etc.)
- This study involves an online experiment and an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to me. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer all the questions in the survey as completely and honestly as possible. There are no wrong or right answers. Your opinions are highly valued. This should not take more than 15 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. I will provide you with a summary of my findings on request.
- Please contact my study leader, Mr. T.G. Kotzé, on tel. (012) 420-4844 (e-mail: [theuns.kotze@up.ac.za](mailto:theuns.kotze@up.ac.za)) if you have any questions or comments regarding the study

- I am a South African citizen, above the age of 18, who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi-vitamin, a meal replacement shake, energy boosters etc.)\**
- I have read and understand the information provided above and give consent to participate in the study on a voluntary basis.\**

**1. The logo of the brand Vital is presented below.**



Please indicate how knowledgeable, experienced and familiar you are with the Vital brand by completing the scale provided below. Please choose a point on the scale by choosing a number between the two descriptive words provided. E.g. The number 1 will indicate that you are very unfamiliar with the brand and the number 7 will indicate

that you are very familiar with the brand. Any number between these two points can also be chosen.

1.1                    1 Unfamiliar                    2                    3                    4                    5                    6                    7 Familiar  
                                                                                                                       

1.2                    1 Inexperienced                    2                    3                    4                    5                    6                    7 Experienced  
                                                                                                                       

1.3                    1 Not knowledgeable                    2                    3                    4                    5                    6                    7 Knowledgeable  
                                                                                                                       

**2. Please study the information provided on the web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
2.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



2.8 Vital brand would compensate me in some way for a problem with the product.

**3. Please study the information provided on the second web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
3.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.8 Vital brand would compensate me in some way for a problem with the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**4. Please study the information provided on the third and final web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
4.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.8 Vital brand would compensate me in some way for a problem with the product.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**5. Please indicate your gender.**

- Male  
 Female

**6. How old are you? (Please enter your date of birth -yyyy/mm/dd)**

6.

**7. Please indicate which suburb you currently live in.**

7.

Throughout the survey you were presented with three different web pages. Each web page contained a different form of endorsement of the Vital brand. You will now be presented with each web page one more time. After viewing each image you will be asked to indicate which form of endorsement you think is being presented on the web page. A list of possible answers will be provided.

Please view the image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

**Image 1**



8. I think the endorsement presented above is:

Please view the second image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

**Image 2**



9. I think the endorsement presented above is:

Please view the third image below again carefully. Please indicate which type of endorsement you think is being used in this image from the list of possible answers provided.

**Image 3**



10. I think the endorsement presented above is:

Please leave us your current telephone number in the event that we may need to contact you regarding clarification on your responses to this questionnaire. (Please note: This information will be kept confidential and will not be used for any marketing purposes or provided to any other party)



RESEARCH QUESTIONNAIRE

Telephone number

Thank you for your time. We appreciate your assistance.

Created by web questionnaire.

## **APPENDIX E**

# **QUESTIONNAIRE 3 INCLUDING VISUAL PRESENTATION OF THE VITAL BRAND AND SIMULATED WEB PAGES USED FOR THE CONTROL GROUP**

## RESEARCH QUESTIONNAIRE

### AN EXPERIMENTAL INVESTIGATION OF THE RELATIVE EFFECTS OF DIFFERENT FORMS OF ENDORSEMENT ON BRAND TRUST

**Please read before completing the questionnaire.**

RESEARCH PARTICIPANT CONSENT FORM (3)

Dept. of Marketing and Communication Management  
University of Pretoria

Student: Ms. H.M. Saar (20038306)  
Cell: 082 303 1158

Dear respondent

You are invited to participate in an academic research study conducted by Honorata Saar, a Masters student from the Department of Marketing and Communication Management at the University of Pretoria. The purpose of the study is to determine the effects that different types of endorsements have on brand trust.



Please note the following:

- This study is targeted at South African nutritional supplement users. In order to participate in this survey you must be a South African citizen above the age of 18 who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi- vitamin, a meal replacement shake, energy boosters etc.)
- This study involves an online experiment and an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
- Your participation in this study is very important to me. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- Please answer all the questions in the survey as completely and honestly as possible. There are no wrong or right answers. Your opinions are highly valued. This should not take more than 15 minutes of your time
- The results of the study will be used for academic purposes only and may be published in an academic journal. I will provide you with a summary of my findings on request.
- Please contact my study leader, Mr. T.G. Kotzé, on tel. (012) 420-4844 (e-mail: [theuns.kotze@up.ac.za](mailto:theuns.kotze@up.ac.za)) if you have any questions or comments regarding the study

- I am a South African citizen, above the age of 18, who currently makes use of some form of nutritional supplement. (A nutritional supplement is classified as any additional supplementation to your normal food intake e.g. a multi-vitamin, a meal replacement shake, energy boosters etc.)\**
- I have read and understand the information provided above and give consent to participate in the study on a voluntary basis.\**

**1. The logo of the brand Vital is presented below.**



Please indicate how knowledgeable, experienced and familiar you are with the Vital brand by completing the scale provided below. Please choose a point on the scale by choosing a number between the two descriptive words provided. E.g. The number 1 will indicate that you are very unfamiliar with the brand and the number 7 will indicate

that you are very familiar with the brand. Any number between these two points can also be chosen.

1.1                    1 Unfamiliar                    2                    3                    4                    5                    6                    7 Familiar  
                                                                                                                       

1.2                    1 Inexperienced                    2                    3                    4                    5                    6                    7 Experienced  
                                                                                                                       

1.3                    1 Not knowledgeable                    2                    3                    4                    5                    6                    7 Knowledgeable  
                                                                                                                       

**2. Please study the information provided on the web page presented below carefully.**



Using only the information provided on the web page above, please indicate your level of agreement with the following statements. Choose one point for each question on the scale below which corresponds the most with your level of agreement or disagreement with the statement. Please choose the "I don't know option" only if you are unable to form an opinion on the statement, or if you do not understand the statement.

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	I don't know
2.1 Vital is a brand that would meet my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2 I feel confident in the Vital brand name.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3 Vital is a brand that would never disappoint me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4 Vital brand name guarantees satisfaction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5 Vital brand would be honest and sincere in addressing any concerns I may have regarding their products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.6 I could rely on the Vital brand to solve a problem should I have one.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.7 Vital brand would make any effort to satisfy me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.8 Vital brand would compensate me in	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>





some way for a problem with the product.

**3. Please indicate your gender.**

- Male  
 Female

**4. How old are you? (Please enter your date of birth -yyyy/mm/dd)**

4.

**5. Please indicate which suburb you currently live in.**

5.

Thank you for your time. We appreciate your assistance.

Created by web questionnaire.

## **APPENDIX F**

# **A FULL REPORT OF THE PRE-TESTS CONDUCTED**

## **Pre-test 1 – To determine whether an actual or fictitious nutritional supplement brand should be used in the experiment**

Ten nutritional supplement users were approached at the University of Pretoria's LC de Villiers sports grounds and at Global House Office Park. The ten participants were presented with two hard copy examples (print outs) of the web pages to be used in the experiment.

One of the print outs made use of a fictitious brand called VIT which was created for the purpose of the experiment. The other print out made use of the brand USN, which is an established South African brand manufacturing nutritional supplements.

One slogan representing one of the independent variable was present on both of the simulated web pages. The slogan was the same on both print outs. The print outs were identical except for the brand name (VIT or USN) used. The participants were then asked complete the brand trust scale for both examples.

Five of the participants were presented with the fictitious brand first and then the real brand, the other five participants were presented with the real brand first and then the fictitious brand.

The results were compared and a discussion followed as to whether the participants had made any associations from previous experience with the real brand, and whether the fictitious brand was unrealistic to score with regards to brand trust.

### **▪ Results of Pre-test 1**

There was no significant difference in the mean scores of each BTS item when comparing the results of the real brand versus the fictitious brand. The mean for the total of the USN results was 3.4 and the mean on the total of the VIT results was 3.3.

It was, however, noted by the researcher that the range of numbers varied significantly between the results of the two brands. See Table 39 below.

**Table 39: Range of BTS scores recorded in pre-test 1**

	Number of 1's	Number of 2's	Number of 3's	Number of 4's	Number of 5's
<b>Real brand (USN)</b>	2	14	18	40	6
<b>Fictitious brand (VIT)</b>	0	11	34	35	0

The table indicates that the mean score of 3.4 obtained for the USN brand was as a result of varying opinions across the scale. However, the mean score of 3.3 for the fictitious brand was obtained as a result of a high number of neutral responses where the participant neither agreed nor disagreed with the statement presented.

In order to obtain further clarity a discussion was conducted with the participants of the pre-test after they had completed the BTS for both print outs.

▪ **Discussion following completion of pre-test 1**

**Question 1:** When you answered the questions on the USN web page did you make use of previous experiences/knowledge of the USN brand in order to form your opinions?

**Result:** All participants answered yes except for 1 who had no previous experience with the USN brand. The 9 participants that answered yes confirmed that their answers were based on their actual brand knowledge and experiences the brand and not on what they saw on the simulated web page.

Most participants with a positive opinion of USN scored the brand by agreeing with the statements presented. Participants with a negative opinion of the brand disagreed with the statements by making use of 2's and 1's.

It was therefore concluded that the participants believed that they were supposed to score the brand USN when completing the scale and not the information on the web page presented.

**Question 2:** When you answered the questions on the VIT web page was it difficult to form an opinion on a brand that does not exist?

**Result:** All participants answered yes except for 1. The 9 participants that answered yes confirmed that the statements were difficult to agree or disagree with as they were worded in such a way that the statements assumed that the user had made use of the product or knew the brand.

**Question 3:** If you were not familiar with the brand VIT then what information was used in order to form your opinion and complete the scale?

**Result:** The participants answered that they either did not form an opinion (answered with a 3), or they made use of information they had gathered from looking at the simulated web page or from similar brands.

#### ▪ **Conclusion**

The results of pre-test 1 indicated that if a real brand was to be used in order to conduct the online experiment then the participants would be influenced by their previous experiences and opinions on the brand when completing the scale. However, the results also indicated that if a fictitious brand was to be used in order to conduct the experiment the results may not be significant as subjects may find the experiment unrealistic.

It was, therefore, concluded by the researcher that in order to achieve the objectives of the study a real brand should be used, however, a brand familiarity covariant would be incorporated into the study as a control variable. This would ensure the results of the study were accurately regressed and that previous brand knowledge would be calculated into the responses of each participant. Secondly, further tests were needed to find an alternate brand to USN which was not a market leader in the product category (see pre-test 4).

#### **Pre-test 2 – To determine the applicability of the brand trust scale to the current experiment**

The brand trust scale was then presented to the same ten nutritional supplement users. Each item of the BTS was discussed with the nutritional supplement users with regards to their understanding of the individual statement and the terminology used.

The fictitious brand was used in the wording of each line item as this pre-test was conducted in conjunction with pre-test 1 before the decision was made to make use of a real brand.

This qualitative test was conducted to test the structure of the wording and understanding of each item in the scale in a South African context, as well as to determine the tense in which the scale should be presented in order to gain the correct opinions from the participants.

- **Results of pre-test 2**

Each item on the BTS scale was not clear to at least one of the participants. Based on the amount of varying opinions received on each item of the scale, the results clearly indicate that the statements in the BTS scale are not 100% clear for the purpose of this experiment.

- **Conclusion**

The BTS was designed for the brand trust scoring of real brands (Delgado-Ballester, 2004:573-592). This study however makes use of the BTS in order to measure how brand trust is affected by varying independent variables, regardless of knowledge and experiences the participants had with the brand.

The results of the pre-test indicated that adjustments needed to be made to the scale in order to allow participants to respond to the cues presented to them in the experiment, and not from previous experiences with the brand. The statements in the scale, therefore, needed to be worded in the future tense in order to make the experiment more realistic. This would allow the participants to form realistic opinions about the brand making use of the cues presented to them on the web page.

The BTS was also designed by a Spanish researcher (Delgado-Ballester, 2004:573-592), and may not have been correctly translated into the English language.

Delgado-Ballester (2004:574) designed the BTS by defining brand trust as a two-dimensional construct consisting of “brand reliability” and “brand intention”. Brand reliability

is based on the extent of the consumer’s belief that the brand will fulfil its value promises and brand intention is based on the extent of the consumer’s belief that the brand will put the consumer’s interests ahead of its own self-interest.

The researcher, therefore, saw it fit to adjust the language and wording of the line items slightly for the purpose of the experiment, as long as the two constructs of brand reliability and brand intention did not lose their original meaning.

The items on the BTS were, therefore, adjusted as follows (see Table 40 below).

**Table 40: Adjusted BTS items for the purpose of the current experiment**

<b><i>Brand reliability</i></b>
1: VIT is a brand that would meet my expectations
2: I feel confident in the VIT brand
3: VIT is a brand that would never disappoint me
4: VIT brand name guarantees satisfaction
<b><i>Brand intention</i></b>
5: VIT brand would be honest and sincere in addressing any concerns I may have regarding their products
6: I could rely on VIT brand to solve a problem should I have one
7: VIT brand will make any effort to satisfy me
8: VIT brand would compensate me in some way for a problem with the product

**Pre-test 3 – To determine whether the independent variable simulations accurately represented the independent variables under investigation**

The ten nutritional supplement users were then presented with a print out of the six different web pages that were presented for each independent variable. The subjects were then asked if they could determine the type of endorsement that was being presented to them, as well as if the endorsement had been paid for or not.

▪ **Results of Pre-test 3**

The results of pre-test 3 indicate that participants were able to distinguish between the three different forms of endorsement, namely regular consumer, expert and association endorsement, with an overall overage of 93% correct answers given.

However, the overall average of participants able to distinguish between the paid-for and non-paid-for endorsements was only 53%.

#### ▪ **Conclusion**

It was therefore concluded by the researcher that the participants were successful in distinguishing between the three different forms of endorsement, namely regular consumer, expert and association endorsements and the simulations were accurate enough to be used in the actual experiment.

Subjects were however not able to distinguish whether the simulated endorsements had been paid for or not. It is essential that subjects can classify whether the endorsement they are presented with is paid-for or not in order for the results of the experiment to be valid.

Adjustments were therefore made to the simulated web pages in order to ensure that participants would be able to distinguish between these two forms. Further pre-test were then conducted (see pre-test 6).

#### **Pre-test 4 – To determine which brand to use in the experiment**

Due to the varying responses recorded in pre-test 1 when the USN brand name was used, it was necessary to conduct further tests in order to find a less controversial brand to use throughout the experiment.

In order to conduct further pre-tests it was, however, necessary to approach five new nutritional supplement users to participate in pre-test four to seven. Eight new subjects were therefore approached at the University of Pretoria's LC de Villiers sports grounds and at Global House Office Park.

The four new subjects were presented with three brand logos representing three different nutritional supplement manufacturers. The three manufacturers presented were EVOX, Vital and Biogen.

The subjects were then asked how familiar, experienced and knowledgeable they were about each brand. The subjects were then asked if their knowledge or experience with



each brand had resulted in a strong negative or positive opinion about the brand or the products they produced.

- **Results of Pre-test 4**

The results of pre-test 4 showed that Vital was perceived as the brand name that the participants were most familiar with. The discussions surrounding the EVOX and Biogen brands were opinionated and controversial whereas the Vital brand elicited the most neutral responses.

- **Conclusion**

Due to the stability, familiarity and neutrality of the Vital brand it was decided that Vital would be the brand name used throughout the experiment.

### **Pre-test 5 – To test the brand familiarity scale**

The four nutritional supplement users that were not used to in pre-test 4 were then presented with a print out of the Vital logo. They were then asked to complete the brand familiarity scale.

- **Results of Pre-test 5**

The results of pre-test 5 indicated that there were no problems presented with the brand familiarity measure used by Kent and Allen (1994:98).

- **Conclusion**

It was therefore concluded by the researcher that the unadjusted brand familiarity scale borrowed from Kent and Allen (1994:98) could be used in the research experiment to measure the covariate of brand trust.

### **Pre-test 6 – To test the adjusted BTS scales in the South African context using the chosen brand from pre-test 4**

The eight nutritional supplement users were then presented with a print out of one of the web pages designed using the Vital brand name. The subjects were then asked to complete the BTS after accessing all the information presented on the web page.

Four of the subjects were presented with the adjusted scale that contained a neutral point and four were presented with a scale that did not contain a neutral point. Both scales contained a “don’t know” option.

Once the scales were completed the subjects the results were gathered. The neutral points and “don’t know” options were then discussed with subjects.

Each item of the adjusted BTS was then discussed with the nutritional supplement users with regards to their understanding of the individual statement and the terminology used.

#### **▪ Results of Pre-test 6**

The results of pre-test 6 indicated that the adjusted wording on the BTS was now clearer to most participants.

The pre-test also indicated that when the neutral point of the scale was removed the subjects made use of the “I don’t know option” as an alternative to the neutral option.

#### **▪ Conclusion**

It was therefore decided to keep the scale as a 7 point scale that contained a neutral point as well as an “I don’t know” option.

### **Pre-test 7 – To re-test the adjusted independent variable simulations**

The eight nutritional supplement users were then presented with a print out of the six different web pages that were presented for each independent variable. The subjects were then asked if they could determine the type of endorsement that was being presented to them, as well as if the endorsement had been paid for or not.

## ▪ **Results of Pre-test 7**

The results of pre-test 7 indicate that participants were able to distinguish between the three different forms of endorsement, namely regular consumer, expert and association endorsement, with an overall overage of 93% correct answers given.

However, the overall average of participants able to distinguish between the paid-for and non-paid-for endorsements was only 53%.

## ▪ **Conclusion**

It was concluded by the researcher that the participants were successful in distinguishing between the three different forms of endorsement, namely regular consumer, expert and association endorsements and the simulations were accurate enough to be used in the actual experiment.

Subjects were however not able to distinguish whether the simulated endorsements had been paid for or not.

It is essential that subjects can classify whether the endorsement they are presented with is paid-for or not in order for the results of the experiment to be valid.

It would, therefore, be necessary to inform participants as to whether the endorsements were paid for or not. A note was, therefore, added to each simulated web page providing the participant with this information.

## **Pre-test 8 – To access the functionality and ease of use of the website and online experiment**

Once the final web experiment was designed, the original ten subjects used in pre-test 1 – 3 were approached in order to complete the online experiment with the researcher present. This test was conducted to determine whether the website and links are easy to follow and are functioning properly. A few technical and functional errors were located and fixed before the experiment went live.

## **APPENDIX G**

# **CD ATTACHED INCLUDING VIDEO EXAMPLES OF IMPLIED INDEPENDENT ASSOCIATION ENDORSEMENTS PROVIDED BY THE BUCHANAN GROUP**