

MASTER THESIS

NIKKI PUT

DECEMBER 2015

**FROM VISITOR TO CUSTOMER:
PERSUASION IN ONLINE STORES**

UNIVERSITY OF TWENTE.

University of Twente
Master Communication Studies
Track: Marketing Communication
Faculty of Behavioural, Management and Social sciences

From visitor to customer: Persuasion in online stores

Student:

N. (Nikki) Put – s1126970

Supervisors:

Dr. A. (Anna) Fenko

Dr. J. (Joyce) Karreman

December 2015

Abstract

Persuasion can be found anywhere. Especially in the marketing sector, where an organization wants their customers to behave in a certain way. For example: a store who wants his customers to buy their products. Since there is a huge shift from shopping in physical stores to shopping in the online environment, people have to be persuaded in a different way. This study investigated how people can be persuaded to buy products from a sports nutrition web shop. The persuasion techniques used for this research, are the authority technique and the social proof technique. The purpose of the present research is to measure if the authority technique and the social proof technique, as well as the level of involvement, have an impact on the attitude towards the product and the website, and on the purchase intention. The theoretical framework was designed based on the literature. The following important issues were established: attitude towards online shopping, attitude towards working out, involvement with sports nutrition, attitude towards the product, attitude towards the website, purchase intention, and persuasion knowledge. Based on these issues, a questionnaire was created. 216 Respondents completed the questionnaire, from which 111 can be considered not involved with the product, and 105 are involved. The results indicated that the presence of an authority technique did have a negative effect on attitude towards the product and the website, as well as the purchase intention. The social proof technique did not have an effect on those three variables. The level of involvement, on the other hand, had an effect on attitude towards the product and towards the website, and on the purchase intention. Hence, the use of authority is not recommended. However, the persuasion techniques should be further examined in a real web shop.

Keywords: persuasion, authority, social proof, involvement, e-commerce, marketing communication.

Acknowledgement

Here it is. My master thesis for the conclusion of my master program Communication Studies, and with that, six years of college at the University of Twente. It also is a conclusion of my graduate internship at ConversionMob. Of course, I would not have been able to finish this project on my own.

Firstly, I would like to express my gratitude to my advisor Dr. Anna Fenko for the support of my research, for her motivation, and her patience. Her guidance helped me writing my thesis. Next, I would like to thank Dr. Joyce Karreman, my second advisor, for helping me finish my thesis by giving helpful advice and guidance throughout the last months of my research.

Next, I would like to thank everyone at ConversionMob for creating the opportunity to graduate at this company. They gave me all the time I needed to complete my research. Despite their busy schedule, I have been learning a lot about online marketing.

Of course, without all 216 respondents, this research could not have been conducted. Even though it only took about five minutes to fill in my questionnaire; I really appreciate everyone – friends, relatives and strangers – who helped me with my data collection.

A special thanks goes out to my parents, sister, and Jeroen. They were the people who had to deal with me when I was complaining about my thesis and when I had a bad night's sleep because of the thesis. Nevertheless, they always kept supporting and motivating me.

Also, I would like to thank all my friends who I have been studying in the library with, for making these long days fun and full of fresh cappuccinos, and good talks during the breaks.

Since this master thesis is the conclusion of my student life as well, I would like to take this opportunity to thank all the people I have met during my university time. To my sorority Damesdispuut Nefertiti, my friends from Communication Studies, my roommates, and all other people: **thank you for making my student life so amazing!**

Nikki Put,
Utrecht, December 2015

It always seems impossible until it's done.

- Nelson Mandela

Samenvatting

Overall om ons heen worden we beïnvloed, soms zijn we onszelf er niet eens van bewust. Beïnvloeding vindt ook in de online wereld plaats. Eigenaren van een website willen bijvoorbeeld dat jij bepaalde acties op hun website onderneemt. Ze willen niet dat je alleen maar rondkijkt om vervolgens weer weg te gaan, nee, ze willen dat je informatie leest, een artikel koopt of een informatiebrochure downloadt. Waarom? Omdat ze je op deze manier proberen te binden. Dit zijn voorbeelden van conversiedoelen.

Cialdini heeft zich verdiept in de wereld van beïnvloeding en heeft zes beïnvloedingstechnieken onderscheiden. Twee daarvan worden in dit onderzoek gebruikt: autoriteit en social proof. In dit onderzoek is er gekeken naar het effect van deze twee beïnvloedingstechnieken in een sportsupplementen-webshop. Daarnaast werd er een verschil in respondenten gemaakt qua betrokkenheid: hoe betrokken zijn zij bij sportsupplementen en is dit van invloed op de attitude ten opzichte van het product en de website, en de aankoopintentie?

Met behulp van online enquêtes is data van 216 respondenten verzameld. Alle respondenten werden random toegewezen aan één van de vier stimulusmaterialen: een stimulus met de autoriteit techniek, een stimulus met de social proof techniek, een stimulus met beide technieken of een stimulus zonder enige technieken. Het onderzoek richtte zich enerzijds op mensen die zelf sportsupplementen gebruiken, anderzijds op mensen die niet betrokken zijn bij sportsupplementen. De verwachting vooraf van dit onderzoek, was dat de beïnvloedingstechnieken effect zouden hebben op de attitude van de respondenten ten opzichte van het product en de website, en daardoor op de aankoopintentie van de respondenten.

Uit de resultaten bleek dat de autoriteit techniek een groot effect had op de attitude ten opzichte van het product en de website. Het effect werkte echter averechts: wanneer er een autoriteit techniek gebruikt werd, werd het product en de website slechter beoordeeld. De social proof techniek had in dit onderzoek geen effect: niet negatief en niet positief. De hoogte van de betrokkenheid speelde echter wel een rol. Wanneer de participanten betrokken waren bij de product categorie, hadden zij een hogere attitude ten opzichte van het product, de website en de aankoopintentie dan de respondenten die niet betrokken waren bij de product categorie.

De voornaamste conclusies die uit het onderzoek kunnen worden getrokken, zijn dat de autoriteit techniek een negatief effect had op de beoordeling van het product en de website, waarschijnlijk omdat de autoriteit moeilijk was om mee te identificeren. Social proof had geen effect. Tot slot waarden mensen die betrokken zijn bij de product categorie het product en de website hoger dan mensen die niet betrokken zijn bij het product.

Management summary

Everywhere around us, we are being influenced; sometimes we are not even aware of it. Persuasion does not only happen around us, it also happens in the online environment. Website owners for example, want us to complete certain tasks on their website. They do not want you to come and leave after you were looking around. No, they want you to read their information, to buy a product or to download an information brochure. Why? Because, in that way, they try to connect with you. These are examples of conversion goals.

Cialdini has researched the world of persuasion, and he has distinguished six principles of persuasion. Two of them are used in this research: the principles of authority and social proof. In this research, we looked at the effect of these two influence techniques in an online shop for sport supplements. In addition, there were two kinds of respondents: people who were involved with sport supplements and people who were not involved. This research also took involvement into account: how involved are the respondents with sports nutrition, and does this have an effect on their attitude towards the product and the website, and towards the purchase intention?

Through an online questionnaire, data of 216 respondents was collected. All respondents were randomly assigned to one of the four stimulus materials: a stimulus with the authority technique, a stimulus with the social proof technique, a stimulus with both the authority and the social proof technique, and a stimulus without any persuasion techniques. This research focused on people who use sport supplements themselves on the one hand, and on the other hand on people who are not involved with sport supplements. The expectation was that persuasion principles would have effect on respondents' attitude towards the product and the website, and through that, on the purchase intention.

The results showed that authority technique had a large effect on the attitude towards the product and the website. However, the effect was counterproductive: when an authority technique was present, the product and the website was rated worse. The social proof technique did not have any effect in this research. The level of involvement did have an important role. When people were involved with the product category, they had a higher attitude towards the product and the website, and a higher purchase intention, than respondents who were not involved with the product category.

The main conclusions that can be drawn from this research, are that people who are involved with the product category do not need persuasion principles to increase the attitude towards the website or towards the product, or to increase the purchase intention. With people who are not involved with the product, the authority technique had a counterproductive effect. This can be explained by the fact that those people could not identify themselves with the authority at all.

Table of content

| | |
|---|-----------|
| 1. Introduction | 9 |
| Focus of the research | 9 |
| Gymspot.nl | 11 |
| 2. Theoretical Framework | 12 |
| In-store shopping versus online shopping | 12 |
| Persuasion..... | 12 |
| Knowledge of persuasion techniques | 17 |
| Elaboration Likelihood Model..... | 15 |
| Attitudes and purchase intention | 17 |
| Research model | 18 |
| 3. Method | 19 |
| Participants | 19 |
| Stimulus material..... | 20 |
| Measurements..... | 26 |
| Procedure..... | 27 |
| 4. Results | 29 |
| Product attitude | 29 |
| Website attitude | 30 |
| Purchase intention | 30 |
| Self-knowledge of persuasion on product attitude..... | 31 |
| Self-knowledge of persuasion on website attitude | 32 |
| Product attitude and website attitude on purchase intention | 33 |
| Attitude towards online shopping on purchase intention | 33 |
| 5. Discussion | 34 |
| Hypothesis | 34 |
| Self-knowledge of persuasion on product attitude..... | 36 |
| Self-knowledge of persuasion on website attitude | 37 |
| Purchase intention | 37 |
| Limitations | 37 |
| Suggestions for future research | 38 |
| Implications | 39 |
| 6. Conclusions..... | 40 |
| 7. References | 41 |
| Appendix I – Questionnaire | 45 |

Figures and tables

| | |
|---|----|
| Figure 2.1. Research model..... | 18 |
| Table 3.1: 2x2 Design | 19 |
| Table 3.2: Demographics of respondents, sorted on questionnaire | 19 |
| Figure 3.1: Stimulus material with authority technique..... | 22 |
| Figure 3.2: Stimulus material with social proof technique | 23 |
| Figure 3.3: Stimulus material with authority and social proof technique..... | 24 |
| Figure 3.4: Stimulus material without persuasion techniques | 25 |
| Table 3.3: Reliability analysis | 27 |
| Table 4.1: Average product attitude per stimulus..... | 29 |
| Table 4.2: Average website attitude per stimulus..... | 30 |
| Table 4.3: Average purchase intention per stimulus..... | 31 |
| Table 4.4: Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting product attitude | 32 |
| Table 4.5: Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting website attitude | 33 |
| Table 4.6: Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting purchase intention | 33 |

1. Introduction

It is undeniable that the Internet has conquered a huge position in our society. Nowadays, there are uncountable web shops worldwide. Fashion, kitchens, food; it can all be bought online. The Internet has become a global market place to exchange goods and services (Ketabi, Ranjbarian & Ansari, 2014). Between 2005 and 2014, the percentage of Internet users who shop online, has been increased from 50 to 77 percent (CBS, 2015).

Online, it is very common people visit web shops and leave without buying a product. This can have several reasons: people might not like the (design of the) website or they might not be satisfied with the offered products. However, it can also have more technical reasons for people to leave the web shop: if the page speed is very slow (and 'very slow' can mean a few seconds loading time), people are likely to leave the website even before buying something.

If a website fails in one of the things above, it is very easy for them to go to another website. Since there are so many websites and, in this case, web shops which sell food supplements, people are likely to go to another website if your site does not fulfill their expectations. Thereby, it is very easy to surf from one website to another, since it costs barely any effort. Especially compared to when people have to go to physical stores to shop. There, if they did not like a product or a shop, they needed to go to another shop, perhaps even in another city. Online, people just type in another URL to go to the next website. It will only cost a few seconds.

Besides the examples above, people also must be willing to buy your product. It is also possible the visitors on the website are only gaining information. These people are important for this research. We want to find out how we those people can be influenced to buy one of the products. In physical stores, there always is a salesperson trained to selling the products to the clients. Obviously, there is no such person in an online shop. However, there are ways to still persuade the customers to buy the products. This research will use Cialdini's (2009) persuasion techniques of authority and social proof.

Focus of the research

The goal of this research is to find out how two of Cialdini's (2009) principles of persuasion, namely authority and social proof, can be implemented in an online shop for sports nutrition. Prior research found Cialdini's (2009) principles often successful on the World Wide Web. Many websites already use Cialdini's (2009) principles, but, according to Ibrahim, Shiratuddin and Wong (2013), these principles are still under-utilized. However, this research focuses on a specific website, therefore a specific research is necessary.

With this research, we want to figure out if visitors of a sports nutrition web shop can be persuaded to purchase an item with the use of the social proof and authority principle, and if so, which of these principles works best.

This study will be a guideline for how authority and social proof can be implemented in web shops for sport nutrition, in order to get more people buying products and therefore, creating a higher conversion rate. We want to find a way to trigger visitors of sports nutrition web shops, so they will transform from visitors to customers.

This research focuses on the potential customers of a web shop and on how their purchase intention can be influenced. For this research, two of Cialdini's (2009) persuasion techniques will be used: authority and social proof. Four web pages are created, and participants were randomly assigned to one of the four screenshots of the web pages. Each web page had a different stimulus. One group will see the stimulus material with both authority and social proof techniques, the next group will see the stimulus material with only the authority technique, the third group will see the stimulus material with only the social proof technique and the last group will be exposed to the stimulus material without any techniques. The screenshots can be found in chapter 3. The main research question during this research is:

RQ: To what extent do Cialdini's principles authority and social proof, and the level of involvement, influence people's product evaluation and purchase intention in a web shop?

To answer this question, we have to ask some sub questions as well. The ultimate goal for a web shop, of course, is to get as many buying customers as possible. Therefore, it is important people will evaluate the product positively; otherwise there is no reason for them to buy the product. So, sub question 1 is:

Q1: To what extent do the authority and social proof techniques influence a person's product evaluation?

To find out whether the level of involvement plays a role in the product evaluation, we need to ask the following question:

Q2: To what extent does level of involvement influence a person's product evaluation?

Besides the product evaluation, it is expected that attitude towards the website will have an effect on purchase intention as well. Therefore, sub question 3 is:

Q3: To what extent do the authority and social proof techniques influence a person's attitude towards the website?

The effect of involvement level on website attitude is of importance, too. Thus:

Q4: To what extent does level of involvement influence a person's attitude towards the website?

Lastly, it is good to know if product evaluation has an effect on purchase intention. Therefore, sub question 3 is created:

Q5: What is the effect of a positive product evaluation on purchase intention?

Gymspot.nl

This research has been conducted in the sport nutrition and supplement branch. To provide answers to the research question and the sub questions, this research was conducted for Gymspot.nl, a web shop that sells food supplements, mainly meant for people who want to make a body transformation. Bodybuilders, gym-goers and people conscious of their body are the people who buy products from this web shop. The offered products range from whey powders and pre-workout supplements to vitamins and so-called 'super foods'.

Gymspot.nl was founded in early 2014 and was definitely not the first web shop of his kind. This means, Gymspot.nl has to work extra hard to reach new customers and to keep these customers. Therefore, it is important that Gymspot.nl has to make sure there are people buying their products and when they do, the customers have to be satisfied with their order and the products. Firstly, people have to know about Gymspot.nl. That is mainly done by advertising on social media such as Twitter and Facebook, and interacting with people through those same social media. So, the whole brand awareness campaign is done online. But how do you make sure people who visit the website are really going to buy products? In other words, how can you make the conversion rate of a web shop as high as possible?

2. Theoretical Framework

In-store shopping versus online shopping

Since the coming of the Internet, many things have changed. Electronic commerce has become a new way for businesses on online markets, according to Ketabi, Ranjbarian and Ansari (2014). People can now shop online twenty-four/seven, from wherever they are as long as they got an Internet connection and a device suitable for an Internet connection. The Internet has developed into a global market place to exchange goods and services (Ketabi, Ranjbarian & Ansari, 2014).

On average, Dutch people spend 3.7 hours per day on the Internet through a laptop or desktop. The smartphone and tablet are used 1.4 hours a day to go online (Internetkassa, 2014). Most used devices used in The Netherlands for online shopping, are laptop/desktop (2013: 65%), tablet (2013: 25%) and smartphone (2013: 10%). When orientating for buying products, people use their laptop/desktop (2013: 65%), tablet (2013: 50%) and smartphone (2013: 25%) (Oosterveer, 2013).

As Mummaleleni (2005) already noticed ten years ago, online retailing is rapidly emerging as an alternative shopping mode. The volume of online business-to-consumer transactions is increasing annually at a very high rate (George, 2002). Electronic commerce has become one of the most important issues in business (Ketabi, Ranjbarian & Ansari, 2014). Since the coming of the Internet, people do not necessarily have to go to physical stores anymore. On the couch, on their way to work or behind their desk: people can shop online from wherever they are. Shopping has even become one of the most popular applications on the Internet (Wang, Yang, Liu, Cao Ma, 2014). Nine out of ten Dutch people is buying products online every now and then (Oosterveer, 2013). Online shopping now becomes a routine way of shopping (Alhammad & Gulliver, 2014).

Because in online shops, there are no direct sales people present who can advice the client, web shops have to come with other ways to persuade their visitors. Research indicates that 81% of people who browse for goods and services do not actually make an online purchase (Gupta, 1996; Klein, 1998; Westland & Clark, 1999; Shim, et al., 2001, as cited in Delafrooz, Paim & Kathibi, 2009).

Persuasion

Persuasion is the communication process in which a persuader sends a message to the recipient with the intention of influencing attitude and/or behavior. However, the power of decision is still with the recipient (Biñol & Petty, 2009, as cited in Alhammad & Gulliver, 2014). Since there are no sales people available in online shops, persuasive technologies have to be used in order to try persuading people in buying the product. According to Amblee and Bui (2011), “buyers have migrated from the in-store shopping experience to online shopping engagement through a variety of means ranging from friends’ recommendations, customer reviews, and ratings [...]”. Persuasive technologies are designed to attempt to change or shape a person’s attitude and/or behavior concerning an issue,

object, or action without using coercion or deception (Fogg, 2003, as cited in Alhammad & Gulliver, 2014).

Cialdini (2009) discovered there are different ways to persuade people. He found out that in making decisions, people often are influenced by their surroundings. The human brain cannot handle a complete decision making process for every action. First of all, this would require a lot of effort from the human brain, since we live in an era where we have to make many decisions. Secondly, consciously decision making about all action would take too much time. "This automatic, stereotyped behavior is prevalent in much of human action, because in many cases it is the most efficient form of behaving, and in other cases it is simple necessary" (Cialdini, 2009).

Cialdini (2009) distinguished six principles of persuasion: reciprocity, consistency, liking, scarcity, authority, and social proof. There are thousands of persuasion techniques, however, most of them are in the fields of these six principles (Cialdini, 2009).

Cialdini's (2009) persuasion techniques are especially important when people make decisions unconsciously. According to Cialdini (2009), the current society and the amount of information we are provided to, requires people to react more automatic than ever. With certain decisions, it is easier for people to not think about it and hold on to a routine. This automated decision-making is necessary because people have to make too many decisions in a day. Therefore, some decisions have to follow an automated routine. For example: you know if you do not eat dinner, you will get hungry. Thus, you are not going to decide every day again whether you are going to eat dinner or not, you just eat dinner every day, because it is a routine and you know what consequences it will have when you are not having dinner. In order to be persuaded, there have to be three conditions, according to Fogg (2009, as cited in Alhammad & Gulliver, 2014): people must be highly motivated, users must have the ability to perform the behavior, and users must receive a trigger at the right time to perform the targeted behavior.

Although this research will use only the authority and social proof principle, first, the other four principles will be explained briefly.

According to the reciprocity principle, people feel in debt to another person. A great example is store employees supplying free samples. Because you got something for free, you feel like now you have to buy the product, because you want to give something in return (which is, in this case, money).

The consistency principle explains the human desire to be, and to appear, consistent with what we have already done. Once we have made a choice, we will behave consistently with that commitment.

People are more likely to say yes when they like the other person. Think about your friends or family members. However, store employees can easily make them like you. For example, they find some similarities between the two of you ("I'm from *this city* as well!") or they act super-friendly. That is how the liking principle works.

Lastly, people are very scared of losing their freedom to decide which products we buy or not. So, if people know there are only four items of a product left, there is a chance they will buy all four of them. Simply because they are afraid of losing the freedom to decide whether they want to buy the product or not. This is how people are persuaded according to the scarcity principle.

In this research, we will focus on the authority and social proof principles. The reasons we focus on those techniques, is because Gymspot.nl is a very specific web shop with a specific group of customers. The majority of Gymspot.nl's customers are, generally, people who workout to gain more mass and therefore need sports nutrition. Most people, who admire to become a bodybuilder, see bodybuilders as authorities and experts in their field (Brown, 1999). Also, in the bodybuilding environment, many people are sensitive for the opinion of others, especially when these people are very aware of their own appearances (Brown, 1999).

Cialdini's authority principle

Individuals are influenced by experts, according to Cialdini (2009). An expert is someone who achieved a high level of competence, and who works (or has been working) within a certain domain (Reilly, 2008). According to Huang, Cai, Tsang and Zhou (2011), authority positively influences people's acceptance towards someone's opinion.

For people who just started training, "viewing well developed bodybuilders for the first time in the gym had a dramatic effect on their weigh training aspirations" (Brown, 1999). Those people train to look good and therefore, they would like their appearance to be noticed. Bodybuilders use their physical appearance, dress, posture and presence to communicate bodybuilding meanings, according to Brown (1999).

According to the authority principle, it is expected people will make a decision based on the expert's opinion.

Hypothesis 1: The presence of an authority increases product evaluation, website attitude, and purchase intention.

That authority plays a big role in persuasion has been known for a long time. People's obedience to an authority became clear in Milgram's (1963) experiments. In this study, 65% of a sample of average American adult men were willing to punish another person with electric shocks, which were increasing to the maximum (450 Volts), only because the experiment leader – the authority – told them to do so (Blass, 1991).

Cialdini's social proof principle

The social proof principle states people can be persuaded to buy a product, when they see many others have bought the product as well, or have recommended the product. People are very

susceptible when it comes to opinions of others. Online, it is very easy for people to see what others think about a product. Electronic Word of Mouth (eWOM) allows consumers to obtain information from the people they know, but also from a geographically dispersed group of people who have experience with the relevant products (Jalilvand, Esfahani & Samiei, 2011). “eWOM refers to any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau et al., as cited in Lee, Rodgers and Kim, 2012), and is available in different types of online consumer reviews (Fan & Miao, 2012). Those reviews can be used to help people make e-commerce purchasing decisions. Since the people who visit Gymspot.nl value their physical appearances, it is expected they will value their peers’ opinions.

Based on Cialdini’s (2009) social proof principle, it is expected that people will follow the opinions of prior customers:

Hypothesis 2: The presence of social proof increases product evaluation, website attitude, and purchase intention.

Online social proof or eWOM can occur in different ways. One way is to insert social media into a webpage, where one can see how many people have liked this website. Another example is to give people the option to leave a review about the product or service. In that way, potential buyers can read reviews to see if the product is good or the service is reliable.

According to Kaptein (2012), the reach of a message through online channels is enormous. In the last years, the reach of an online message has been increased, while the impact of an online message has decreased (Kaptein, 2012).

Elaboration Likelihood Model

The Elaboration Likelihood Model (ELM) relates directly to influence processes and their impact on human perceptions and behavior (Bhattacharjee & Sanford, 2006). Petty and Cacioppo (1986) proposed there are two distinct routes to attitude change: the central route and the peripheral route. The ELM also explains why a given influence process can lead to different outcomes across different users.

The central route

The central route states that attitude change results from a person’s careful consideration of information (Petty & Cacioppo, 1986). If the arguments are found to be weak, the message will be resisted. Individuals, who are able and willing to process a message, are more likely to follow the central route to consider persuasive information (Fan & Miao, 2012). In some situations, attitude change results from a person’s careful attempts to comprehend and evaluate the content of a

message. This new information will be combined with his prior knowledge, so that a reasoned opinion about a brand or product is formed. (MacKenzie & Spreng, 1992). These people are more likely to generate their own thoughts in response to persuasive information.

The peripheral route

On the other hand, people do not always think about the information to which they are exposed, because they might not have the time or ability to do so. People who are not able or willing to process a message are more likely to follow the peripheral route to consider persuasive information (Fan & Miao, 2012). People are then more likely to generate mental shortcuts in response to persuasive information. Here, attitude changes occur because the person associates the attitude issue with positive or negative cues. These cues can be peripheral factors such as their feelings about the quality of the advertisement, their current mood state or their feelings about the source of the ad (MacKenzie & Spreng, 1992), endorsements from experts or number of prior users (Bhattacharjee & Sanford, 2006). Here, there is no careful consideration of pros and cons, but an attitude change based on cues.

Involvement

Involvement plays an important role in processing information. Involvement is associated with willingness or motivation to process information (Petty, Cacioppo & Schumann, 1983). The quality of the arguments used in a message has a greater impact on persuasions under conditions of high involvement than of low involvement (Petty & Cacioppo, 1979; Petty, Cacioppo & Heesacker, 1981; as cited in Petty, Cacioppo & Schumann, 1983). On the contrary, peripheral cues such as the expertise or attractiveness of a message source have a greater impact on persuasion under conditions of low involvement, rather than high involvement (Petty, Cacioppo & Schumann, 1983).

So, according to Petty, Cacioppo and Schumann (1983), under high involvement conditions, people appear to exert the cognitive effort that is required to evaluate the presented arguments. Their attitudes, then, are a function of this information-processing activity, which is ELM's central route. Under low involvement, on the other hand, attitudes appear to be affected by simple acceptance and rejection cues in the persuasion context – the peripheral route. Those cues are less affected by argument quality.

Based on the literature, the following hypothesis were developed:

Hypothesis 3: The level of product involvement influences the product evaluation, website attitude, and purchase intention.

Knowledge of persuasion techniques

Persuasion knowledge includes ideas about persuasion motives and about persuasion tactics (Campbell & Kimani, 2000). In other words, what someone is attempting to achieve and how he tries to achieve it. Persuasion Knowledge Model (Friestad & Wright, 1994) presumes that consumers develop knowledge about persuasion. Thereafter, they will use this knowledge to cope with persuasion. According to the Persuasion Knowledge Model, a consumer is able to use his persuasion knowledge to identify when he is being influenced (Campbell & Kimani, 2000). People's persuasion knowledge is an important determinant of how they cope with persuasion attempts (Friestad & Wright, 1995). The amount of persuasion knowledge a person has, is of influence on the ability to be persuaded.

Attitudes and purchase intention

For web shops, it is important to know whether people intend to purchase their products or not. The most favorable situation for a web shop, of course, is when the purchase intentions of a person are high. Therefore, a person's attitude towards the brand, the web shop or the product has to be positive, because purchase intentions distinct from attitudes. Purchase intentions are a function of brand attitudes (MacKenzie & Sprung, 1992).

The attitude towards the product as well as the attitude towards the website, are of influence on one's purchase intention. These attitudes derive from a person's evaluations about a product or a brand (Spears & Surendra, 2012). The attitudes influence one's likability of purchasing a product, since the purchase intentions represent "the person's motivation in the sense of his [...] conscious plan to exert effort to carry out a behavior" (Eagly & Chaiken, 1993, as cited in Spears & Surendra, 2012). That behavior, in this case, is the process of purchasing the product. However, in some situations attitudes might have a direct effect on behaviors, while in other cases they do not (Bagozzi & Warshaw, 1992, as cited in Spears & Surendra, 2012). In this study, it is expected that attitudes do have a direct effect on behaviors.

Research model

Based on the findings in the literature, an experimental design was created (see figure 2.1.).

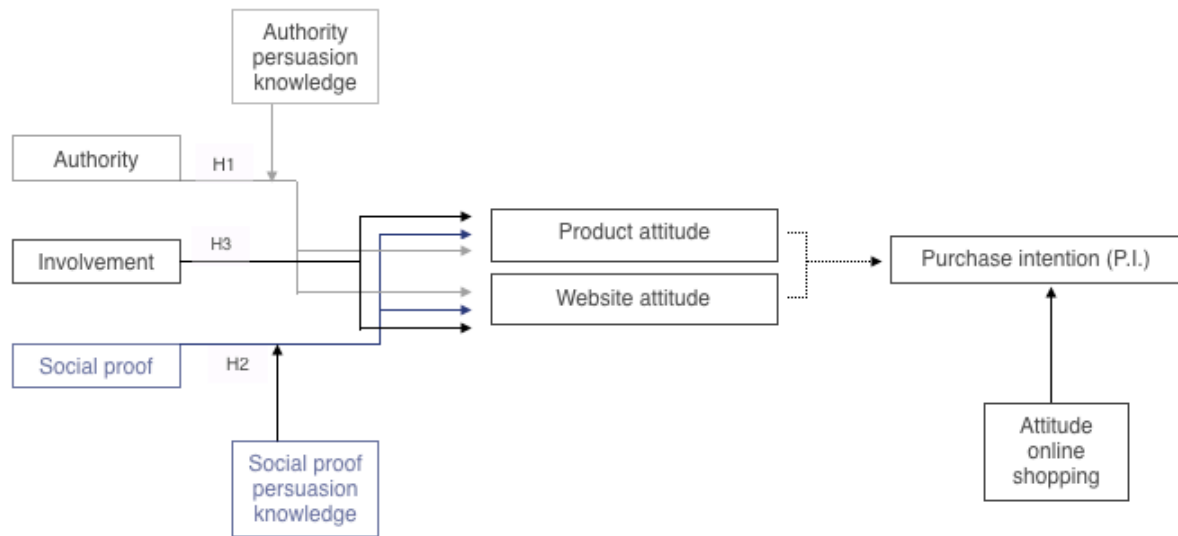


Figure 2.1. Research model

In this model, the independent variables are authority, social proof and involvement. The dependent variables are the product attitude, the website attitude and the purchase intention. The moderators in this model are the two persuasion knowledge moderators (for authority and social proof), and a person's attitude towards online shopping.

This research will test whether persuasion techniques – authority and social proof – influence the attitude towards the product and the attitude towards the website. Next, the effect of persuasion techniques on purchase intention will be measured. Then, the effect of involvement will be tested on product attitude and website attitude, as well as on purchase intention. Thereafter, the moderation effect of persuasion knowledge will be tested of the persuasion techniques on attitude towards the website and attitude towards the product. Finally, effect of general attitude towards online shopping on purchase intention will be tested.

3. Method

Participants

The main study was based on a 2 (authority: yes vs. no) x 2 (social proof: yes vs. no) between subject designs. In this design, involvement (high vs. low) served as the moderating factor. This design resulted in four questionnaires with each another stimulus material. The only thing changing in the questionnaire was the stimulus material; all questions and statements were identical in all questionnaires.

Table 3.1: 2x2 Design

| | | Authority | |
|--------------|-----|-----------|-----|
| | | Yes | No |
| Social proof | Yes | 1 1 | 1 0 |
| | No | 0 1 | 0 0 |

In this research, a total of 242 respondents (n=242) participated. From these 242 respondents, 26 (n=26) did not complete the questionnaire and therefore were not workable. This resulted in 216 respondents who completed the questionnaire (n=216). The biggest part of the respondents was women (64.5%). The total age range was between 11 and 68 (M=27.6 and SD=8.9). The highest level of education of the respondents was primary education (0.5%), high school (6.9%), MBO (13.4%), HBO (39.2%), WO (37.8%) and postdoctoral (1.8%).

Table 3.2: Demographics of respondents, sorted on questionnaire

| | | Authority: yes Social proof: no | Authority: no Social proof: yes | Authority: yes Social proof: yes | Authority: no Social proof: no |
|-----------------------|-------------------|------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|
| Number of respondents | | 55 | 53 | 53 | 55 |
| Gender | Male | 43.6% | 32.1% | 37.7% | 21.8% |
| | Female | 54.5% | 66.0% | 62.3% | 76.4% |
| Age | Mean | 26.8 | 28.5 | 28.3 | 27.1 |
| | SD | 7.8 | 9.2 | 9.6 | 9.1 |
| Education | Primary education | 1.8% | 0% | 0% | 0% |
| | High school | 9.1% | 7.5% | 9.4% | 1.8% |
| | MBO | 14.5% | 17.0% | 11.3% | 10.9% |
| | HBO | 36.4% | 37.7% | 32.1% | 50.9% |
| | WO | 36.4% | 37.7% | 45.3% | 32.7% |
| | Postdoctoral | 1.8% | 0% | 1.9% | 3.6% |

A one-way between groups analysis of variance (ANOVA) was used to investigate the difference in age between the four different groups. The ANOVA was statistically non-significant, indicating that there was no significant difference in age between the groups, $F(3, 207) = .428, p = .733$.

A Pearson's chi-square test of contingencies (with $\alpha = .05$) was used to evaluate whether there is a difference in gender distribution in the four groups. The chi-square test was statistically non-significant, $\chi^2(3, N = 216) = 5.904, p = .116$. Thus, there was no significant difference in gender between the groups.

The Pearson's chi-square test with $\alpha = .05$ was also used to evaluate whether there is a difference in education distribution in the four groups. The chi-square test was statistically non-significant, $\chi^2(15, N = 213) = 13.494, P = .564$. Thus, there was no significant difference in education level between the four groups.

Stimulus material

This research was done to measure the effect of an authority and / or social proof technique on one's product attitude. Therefore, respondents were randomly assigned to one of the four stimulus materials. Before they got to see the stimulus material, all respondents, irrespectively of the stimulus material, they had to read a scenario. This scenario was created to make sure that even people who are not involved with sports nutrition, had to imagine they were interested in sports nutrition. Next, the scenario is given.

“ Since a while, you're doing a lot of fitness and therefore, you are in the gym very often. From one of the other people at the gym, you've heard protein powder ('whey') is good for the growth of your muscles. You decided you want to give it a try as well. On the Internet, you found the following product. Please look at the screenshot carefully. ”

The stimulus material was a screen shot from a product page of Gymspot.nl. A basic product was shown, with the price, taste and volume of the product. This was the same for all stimulus material. However, each screenshot was manipulated. The different stimulus materials had different persuasion techniques: authority, social proof, both authority and social proof, and no persuasion technique.

In figure 3.1, the stimulus material for the authority principle is shown. Here, an expert in bodybuilding and sports nutrition gives a positive review about the product. This expert is Phil Heath, the winner of the world's biggest bodybuilding contest (Mr. Olympia). Also, to make the screenshot more realistic, there is a 4.5 star rating from 7 reviewers for this product.

In figure 3.2, the stimulus material for the social proof condition is shown. There is no expert in this screenshot. Instead, there is a guy in the gym who gives a review. The review is the same as

the review given by the expert, however, the person is someone people can better identify themselves with him. The name (Oscar Freriks), age (23) and hometown (Amsterdam) were made up. Also, to support the social proof, there is a 4.5 star rating from 189 reviewers.

In the condition with both authority and social proof, as seen in figure 3.3, Phil Heath's (the expert) review is shown, together with the 4.5 star rating from 189 reviewers. The star rating from 189 reviewers is the social proof stimulus, while Phil Heath's recommendation is the authority stimulus.

The stimulus material without any persuasion techniques is shown in figure 3.4. Here, only the product and basic characteristics is visible.

The choice for an unknown, made up product was deliberately. To make sure no one was familiar with the product, a fake product was created. There is no (existing) brand name, and the design of the product was plain and basic.

Figure 3.1: Stimulus material with authority technique.

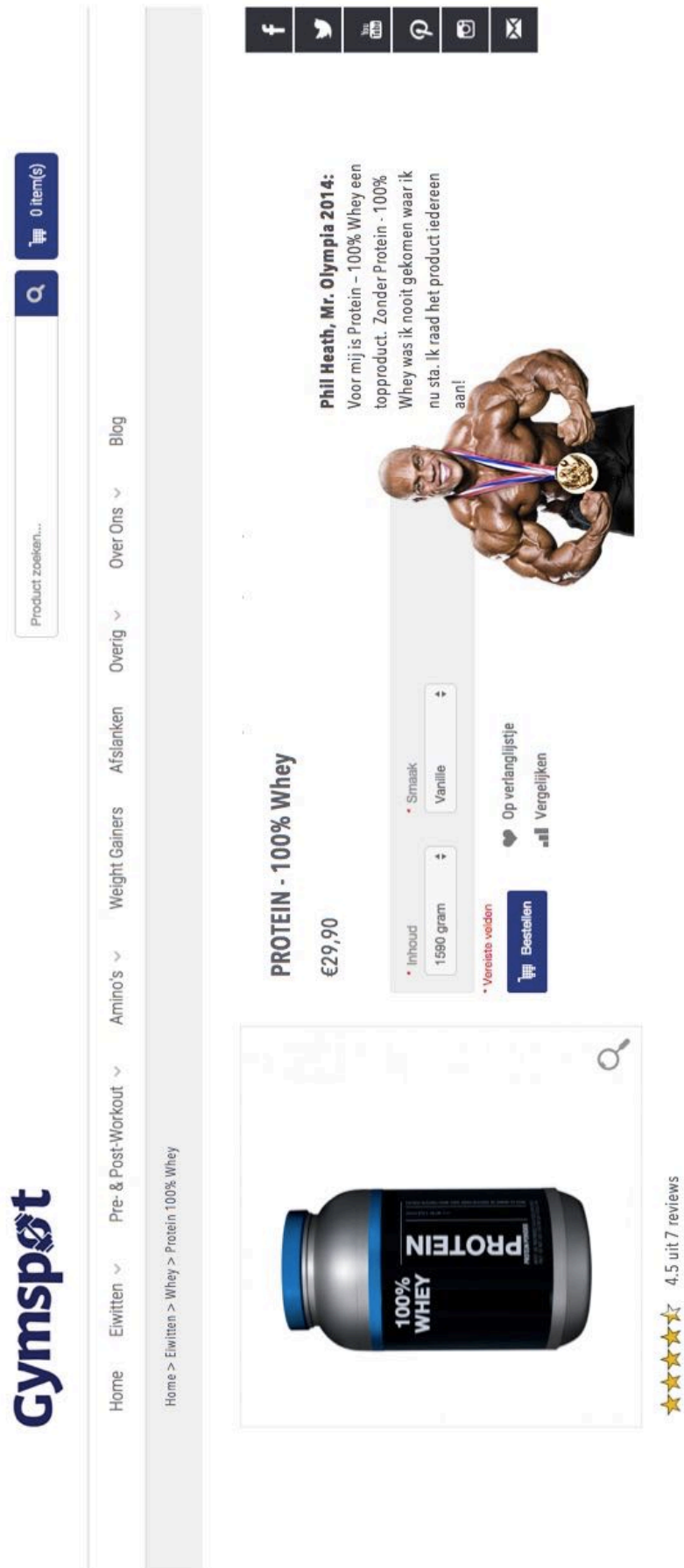


Figure 3.2: Stimulus material with social proof technique

Product zoeken...

0 item(s)

[Home](#)
[Eiwitten](#)
[Pre- & Post-Workout](#)
[Amino's](#)
[Weight Gainers](#)
[Afslanken](#)
[Overig](#)
[Over Ons](#)
[Blog](#)

PROTEIN - 100% Whey

€29,90

Inhoud
1590 gram

Smaak
Vanille

Vereiste velden

Bestellen

Op verlanglijstje

Vergelijken

Aanbevolen door: **Oscar Freriks (23), Amsterdam.**

Voor mij is Protein - 100% Whey een top-product. Zonder Protein - 100% Whey was ik nooit gekomen waar ik nu sta. Ik raad het product iedereen aan!

★★★★★

4.5 uit 189 reviews

Figure 3.3: Stimulus material with authority and social proof technique

Product zoeken...

0 item(s)

[Home](#)
[Eiwitten >](#)
[Pre- & Post-Workout >](#)
[Amino's >](#)
[Weight Gainers](#)
[Afslanken](#)
[Overig >](#)
[Over Ons](#)
[Blog](#)

PROTEIN - 100% Whey

€29,90

Inhoud
1590 gram

Smaak
Vanille

Vereiste velden

Bestellen

Op verlanglijstje

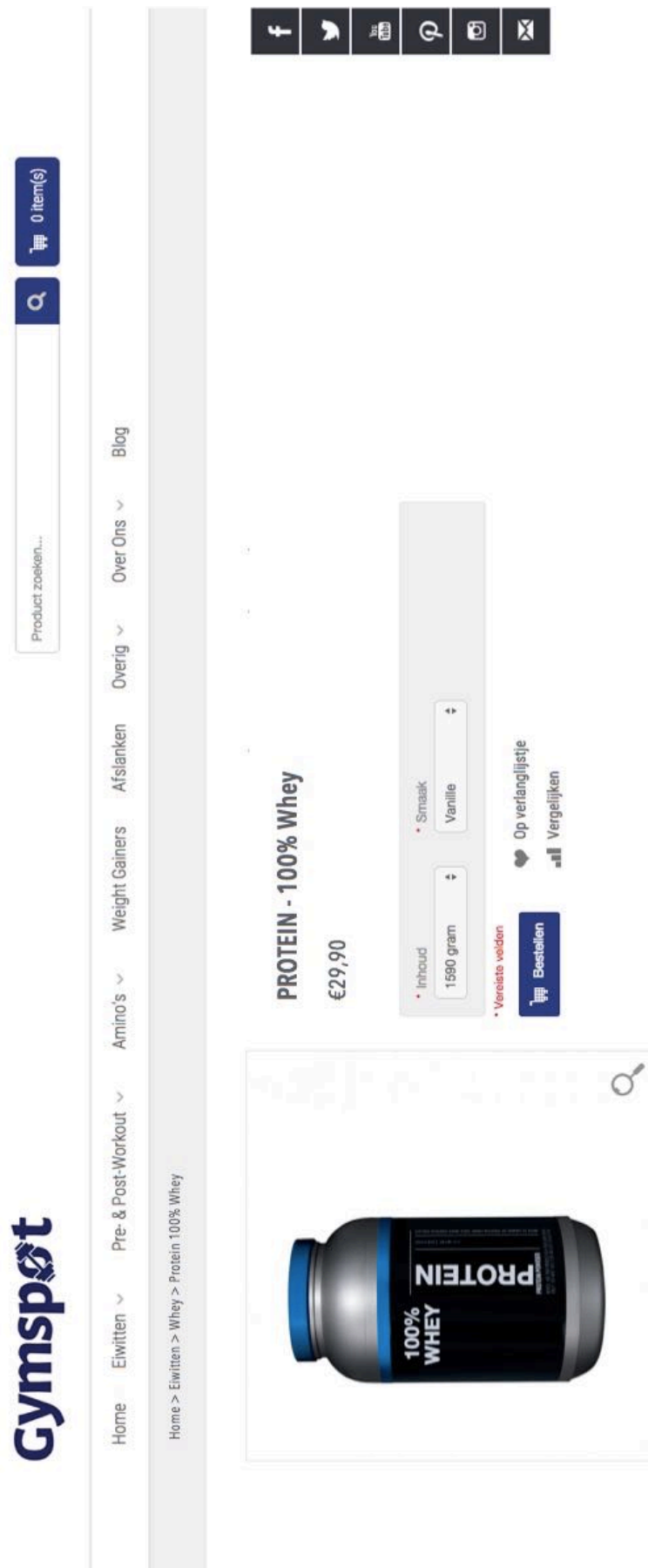
Vergelijken

Phil Heath, Mr. Olympia 2014:
Voor mij is Protein – 100% Whey een topproduct. Zonder Protein - 100% Whey was ik nooit gekomen waar ik nu sta. Ik raad het product iedereen aan!

★★★★★

4.5 uit 189 reviews

Figure 3.4: Stimulus material without persuasion techniques



Measurements

The questionnaire used for this study, consisted of eight scales: attitude towards online shopping, attitude towards working out, level of sports nutrition involvement, attitude towards product, purchase intention, attitude towards website, self-knowledge social proof, and self-knowledge authority. Next, an explanation of these topics is given. Also, in table 3.3, there is an overview of the reliability of the scales.

Attitude towards online shopping

The first scale in this research is attitude towards online shopping. This scale contained three statements where respondents could completely disagree, disagree, neither disagree nor agree, agree or completely agree (based on a five-point Likert scale) with the statement. This scale was implemented to measure people's opinion towards online shopping, and whether they thought it was an easy way of shopping or not ($\alpha = .780$).

Attitude towards working out

To measure respondent's attitude towards working out, five statements were provided, such as 'working out is fun', 'working out is important' and 'working out is necessary' ($\alpha = .863$). This scale was implemented to measure people's overall working out experience and how important they thought it is to workout.

Involvement sports nutrition

Since this research also measures the effect of involvement with the product on the effect of the persuasion techniques on product attitude, the involvement of sports nutrition had to be measured. This scale contained four items, such as 'I think sports nutrition is important' and 'without sports nutrition I would not be able to get the same sports results'. The reliability of this scale was $\alpha = .915$.

Attitude towards the product

After the respondents saw the stimulus material and read the scenario, they had to indicate to what extent they thought the product was a good product. To measure the attitude towards the product, eight items ($\alpha = .891$) such as 'I think this product is useful' and 'this product does what it promises' were provided. This scale was created based on topics made by Spears and Sing (2004).

Purchase intention

The next step was to measure the purchase intention of the respondents. This was measured through four items ($\alpha = .843$), such as 'there is a big chance I would buy this product' and 'I am interested in this product'.

Attitude towards the website

To measure whether a respondent's website towards the website influences the purchase intention, two statements were made about the website: 'I would recommend this website to a friend or family member' and 'this website is trustworthy' ($\alpha = .726$). This topic was created based on a scale of Huh and Shin, 2014 and Bart, Shankar, Sultan & Urban, 2005).

Self-knowledge authority

As an extra dimension in this research, it was measured to what extent respondents thought they would base their opinion on peers. Therefore, six statements such as 'I value the opinion of others' and 'when many people buy a product, the product is probably good' were given. Here, the reliability was $\alpha = .665$.

Self-knowledge social proof

Also, it would be interesting to measure to what extent people thought they would value the opinion of an expert. Therefore, five statements ($\alpha = .847$) were provided, such as 'I tend to buy a product when an expert recommends this product' and 'the opinion of an expert has additional value'. Two of the topics were derived from Bambauer-Sachse and Mangold, (2011) as cited in Jalilvand, and Samiei (2012).

Table 3.3: Reliability analysis

| | Cronbach's alpha (α) | Number of items | Deleted items |
|----------------------------------|-------------------------------|-----------------|---------------|
| Attitude towards online shopping | .78 | 3 | 0 |
| Attitude towards working out | .85 | 5 | 0 |
| Involvement sports nutrition | .92 | 4 | 0 |
| Attitude towards product | .89 | 8 | 0 |
| Purchase intention | .84 | 4 | 0 |
| Attitude towards website | .73 | 2 | 0 |
| Self-knowledge social proof | .67 | 6 | 0 |
| Self-knowledge authority | .85 | 5 | 0 |

Procedure

The questionnaire was made within Qualtrics, an online research software. The benefit of this program is that respondents can fill in the questionnaire by clicking on a link. Also, the questionnaire can be completed on a computer, but also on a smartphone with Internet access. An online questionnaire was preferred, because in that way respondents could be randomly assigned to a stimulus condition. Also, because the questionnaire contained screenshots, it would be more realistic

to show it on the Internet. Lastly, the distribution of an online questionnaire is easier than a printed questionnaire.

Before the questionnaire was distributed to the main respondents, the questionnaire was pre-tested. A total of eight ($n=8$) people pre-tested the questionnaire. This was done by completing the questionnaire, while the researcher sat next to the respondent. The respondents of the pre-test had to think out loud and tell all ambiguities and ask questions. The researcher took note of the comments of the respondents and took them into account with creating the final questionnaire. This resulted in changing an answer model for three questions and change the way two questions were asked.

A part of the respondents were recruited within the personal network of the researcher. To recruit as many as possible people who would fit in the 'involved' target group, the questionnaire was also distributed on fitness- and bodybuilding forums. In addition, fitness bloggers were approached by e-mail and different bodybuilding groups, amongst others the Dutch Bodybuilding Federation, were approached. Lastly, the researcher in the gym approached athletes personally, where they could complete the questionnaire on an iPad.

People who filled in the questionnaire first got to see a welcome-text, where the questionnaire was explained. The average duration of the questionnaire was given, as well as the fact that they participated on a voluntary basis and therefore could quit whenever they wanted.

The questionnaire was distributed from September 16th until October 11th.

Preliminary data-analysis

After downloading all data from Qualtrics to SPSS (version 22), incomplete questionnaires were removed from the database. From 242 ($n=242$) started questionnaires, 216 ($n=216$) were complete. The first action was checking the ratio of involved / not involved respondents. A median split showed that the median was 2.75. Thus, respondents with an involvement level of 2.75 or lower were considered as not involved. People with an involvement level higher than 2.75 were considered as involved. An independent samples t test was used to compare the average involvement level for participants in the involved group ($n = 105$) to the average involvement level for participants in the not involved group ($n = 111$). The t test was statistically significant, with the not involved group ($M = 1.98$, $SD = .583$) being 1.73, on a scale of five, less involved with the product category than people in the involved group ($M = 3.71$, $SD = .572$), $t(214) = -22.012$, $p < .001$, two-tailed, $d = -2.99$. Involvement was made as a third factor, next to social proof and authority.

Next, an extra variable was made to indicate which respondent saw what stimulus material. After that, negatively scaled questionnaire items were reversed. Then, the scale reliability was measured. Since Cronbach's Alpha (α) was high enough for all scales, the different items in one scale could be computed into an average score (see table 3.3).

4. Results

A three-way ANOVA was performed for every dependent variable in the model, that is attitude towards the product, attitude towards the website and purchase intention. Authority, social proof and involvement were the three factors in this ANOVA.

Product attitude

Three-way ANOVA

A three-way between groups analysis of variance (ANOVA) was performed with authority, social proof and involvement level as independent variables, and product attitude as dependent variable. Inspection of the Shapiro-Wilk statistics indicated that the assumption of normality was supported for each of the three independent variables. Levene's statistic was non-significant, $F(7, 204) = 1.084$, $p = .375$, and thus the assumption of homogeneity of variance was not violated.

The ANOVA was statistically significant for authority, indicating that the participants' attitudes towards the product were influenced by the presence of an authority, $F(1, 212) = 7.397$, $p = .007$, $\eta^2 = .035$.

Pairwise comparisons revealed that the difference in product attitude between participants who saw a stimulus material with an authority technique, and participants who saw a stimulus material without an authority technique, was .241. Participants who saw the authority technique ($M = 2.70$, $SD = .693$), evaluated the product .241 lower than participants who did not see an authority technique in the stimulus material ($M = 2.94$, $SD = .619$).

Also, the ANOVA was statistically significant for involvement level, indicating that the involvement level of participants have an effect on the attitude towards the product, $F(1, 212) = 12.159$, $p = .001$. Partial eta-squared (η^2) for this effect was .056.

Pairwise comparisons for involvement level, indicated that participants who were not involved with sport supplements ($M = 2.67$, $SD = .652$), evaluated the product .309 lower than participants who were involved with sport supplements ($M = 2.98$, $SD = .641$).

However, there was no significant difference for social proof, $F(1, 212) = .529$, $p = .468$, nor for authority and social proof interaction, $F(1, 212) = 1.343$, $p = .248$. There was no significant effect for authority and involvement level interaction either, $F(1, 212) = 2.175$, $p = .142$, or social proof and involvement level interaction, $F(1, 212) = .739$, $p = .391$. Lastly, there was no significant three-way interaction for authority, social proof and involvement level, $F(1, 212) = 1.74$, $p = .189$.

Table 4.1: Average product attitude per stimulus

| Authority | Social proof | Involvement | <i>n</i> | <i>M</i> | <i>SD</i> |
|-----------|--------------|-------------|----------|----------|-----------|
| Yes | Yes | Low | 28 | 2.44 | .745 |
| | | High | 24 | 2.92 | .617 |
| | No | Low | 24 | 2.52 | .609 |
| | | High | 31 | 2.91 | .667 |
| No | Yes | Low | 23 | 3.03 | .633 |
| | | High | 28 | 3.01 | .526 |
| | No | Low | 34 | 2.67 | .511 |
| | | High | 20 | 3.04 | .792 |

Website attitude

Three-way ANOVA

To see if authority, social proof and level of involvement influence the website attitude, a three-way analysis of variance was performed with authority, social proof and involvement level as independent variables, and attitude towards the website as dependent variable. Inspection of the Skewness and Kurtosis statistics indicated that the assumption of normality was supported for all three independent variables. A non-significant Levene's statistic, $F(7, 206) = 4.12, p = .894$, indicated the assumption of homogeneity of variances was not violated.

The ANOVA was statistically significant for involvement level, indicating that the attitude of participants towards the website was influenced by their level of involvement, $F(1, 214) = 6.691, p = .010$, partial eta-squared (η^2) = .031.

Pairwise comparisons showed that participants who were not involved with sport supplements ($M = 2.524, SD = .741$), averagedly evaluated the website .261 lower than participants who were involved with the products ($M = 2.785, SD = .727$).

There was no significant effect of authority on website attitude, $F(1, 214) = 3.806, p = .052$, or social proof on attitude towards the website, $F(1, 214) = 3.806, p = .170$. Also, there was no significant interaction effect for authority and social proof on attitude towards the website, $F(1, 214) = .026, p = .873$. The interaction effect for authority and involvement level was non-significant, $F(1, 214) = .048, p = .827$, as was the interaction effect for social proof and involvement level, $F(1, 214) = .056, p = .812$. There also was no three-way interaction effect for authority, social proof and level of involvement for attitude towards the product, $F(1, 214) = .538, p = .464$.

Table 4.2: Average website attitude per stimulus

| Authority | Social proof | Involvement | <i>n</i> | <i>M</i> | <i>SD</i> |
|-----------|--------------|-------------|----------|----------|-----------|
| Yes | Yes | Low | 29 | 2.52 | .773 |
| | | High | 24 | 2.75 | .751 |
| | No | Low | 24 | 2.31 | .622 |
| | | High | 31 | 2.65 | .766 |
| No | Yes | Low | 24 | 2.65 | .744 |
| | | High | 28 | 2.98 | .739 |
| | No | Low | 33 | 2.62 | .662 |
| | | High | 21 | 2.76 | .768 |

Purchase intention

Three-way ANOVA

A three-way between groups analysis of variance (ANOVA) was performed with authority, social proof and involvement level as independent variables, and purchase intention as dependent variable. Examination of the Skewness and Kurtosis statistics indicated that the assumption of normality was not violated for all three independent variables. Levene's statistic was significant, $F(7, 206) = 3.442, p = .002$, so the assumption of homogeneity of variance was violated. Since the four groups were not equally distributed, this is no surprise. The sample groups are moderate to large, so ANOVA is not sensitive to violations of the equal variances assumption.

The ANOVA was statistically significant for authority, indicating that the participants' purchase intention was influenced by the presence of an authority in the stimulus material, $F(1, 214) = 4.144$, $p = .043$, $\eta^2 = .020$. Pairwise comparisons showed that participants who saw the stimulus material with an authority technique ($M = 2.085$, $SD = .819$) had a lower purchase intention than participants who saw a stimulus material without an authority technique ($M = 2.315$, $SD = .879$). The difference was, averagely, .230.

The level of involvement was also statistically significant, based on the ANOVA output. This indicates that the level of involvement of participants affects the purchase intention, $F(1, 214) = 18.057$, $p < .001$. Partial eta-squared for this effect (η^2) was .081. Pairwise comparisons showed that participants who were not involved with sport supplements ($M = 1.95$, $SD = .709$) had a lower purchase intention than participants who were involved with the product ($M = 2.44$, $SD = .918$). The difference was .481.

There was no significant effect for social proof on purchase intention, $F(1, 214) = .139$, $p = .710$, nor was there an interaction effect for authority and social proof, $F(1, 214) = 1.830$, $p = .178$. Also, there was no interaction effect for authority and the level of involvement, $F(1, 214) = .104$, $p = .747$, or social proof and level of involvement, $F(1, 214) = .157$, $p = .692$. There also was no three-way effect of authority, social proof and involvement level, $F(1, 214) = .213$, $p = .645$.

Table 4.3: Average purchase intention per stimulus

| Authority | Social proof | Involvement | <i>n</i> | <i>M</i> | <i>SD</i> |
|-----------|--------------|-------------|----------|----------|-----------|
| Yes | Yes | Low | 29 | 1.77 | .623 |
| | | High | 24 | 2.29 | .874 |
| | No | Low | 24 | 1.89 | .466 |
| | | High | 31 | 2.39 | 1.01 |
| No | Yes | Low | 23 | 2.24 | .881 |
| | | High | 29 | 2.59 | .825 |
| | No | Low | 33 | 1.95 | .759 |
| | | High | 21 | 2.49 | .979 |

Self-knowledge of persuasion on product attitude

Multiple Regression Analysis

A standard multiple regression analysis (MRA) was performed to estimate the proportion of variance in product attitude that can be accounted for by self-knowledge of the authority persuasion and self-knowledge of social proof persuasion.

Prior to interpreting the results of the MRA, several assumptions were evaluated. First, stem-and-leaf plots indicated that there was one outlier. When this outlier was deleted, stem-and-leaf plots and boxplots indicated that each variable in the regression was normally distributed, and free from further outliers. Second, inspection of the normal probability plot of standardised residuals as well as the scatterplot of standardised residuals against standardised predicted values indicated that the assumptions of normality, linearity and homoscedasticity of residuals were met. Third, Mahalanobis distance did not exceed the critical χ^2 for $df = 2$ (at $\alpha = .001$) of 13.816 for any cases in the data file,

indicating that multivariate outliers were not of concern. Fourth, relatively high tolerances for both predictors in the regression model indicated that multicollinearity would not interfere with our ability to interpret the outcome of the MRA.

In combination, self-knowledge of authority and self-knowledge of social proof accounted for a significant 4.5% of the variability in attitude towards the product, $R^2 = .045$, adjusted $R^2 = .036$, $F(2, 209) = 4.864$, $p = .009$. Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in the regression model are reported in table 4.4.

Table 4.4: Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting product attitude

| Variable | B [95% CI] | β | sr^2 |
|-----------------------------|--------------------|---------|--------|
| Self-knowledge social proof | .147 [-.033, .327] | .111 | .012 |
| Self-knowledge authority | .212 [.035, .390]* | .163 | .026 |

Note. $N = 208$. CI = confidence interval.

* $p < .05$.

Self-knowledge of persuasion on website attitude

Multiple Regression Analysis

To estimate the proportion of variance in attitude towards the website that can be accounted for by self-knowledge of authority persuasion and self-knowledge of social proof persuasion, a standard multiple regression analysis (MRA) was performed.

Prior to interpreting the results of MRA, stem-and-leaf plots and boxplots indicated that there was a single outlier. When this outlier was deleted, stem-and-leaf plots and boxplots indicated that each variable in the regression was normally distributed, and free from univariate outliers. After that, inspection of the normal probability plot of standardised residuals and the scatterplot of standardised residuals against standardised predicted values indicated the assumptions of normality, linearity and homoscedasticity of residuals were met. Next, Mahalanobis distance did not exceed the critical χ^2 for $df = 2$ (at $\alpha = .001$) of 13.816 for any cases in the data file, meaning that multivariate outliers were no concern. Lastly, high tolerances for both predictors in the regression model indicated that multicollinearity would not interfere with our ability to interpret the outcome of the MRA.

Self-knowledge of authority persuasion and self-knowledge of social proof persuasion accounted for a non-significant 2.5% of the variability in attitude towards the website, $R^2 = .025$, adjusted $R^2 = .025$, $F(2, 211) = 2.679$, $p = .071$. Unstandardized (B) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in the regression model are reported in table 4.5.

Table 4.5: Unstandardized (*B*) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting website attitude

| Variable | <i>B</i> [95% CI] | β | sr^2 |
|-----------------------------|--------------------|---------|--------|
| Self-knowledge social proof | .222 [.023, .422]* | .152 | .002 |
| Self-knowledge authority | .212 [-.160, .234] | .026 | .000 |

Note: *N* = 208. CI = confidence interval.

* $p < .05$.

Product attitude and website attitude on purchase intention

Multiple Regression Analysis

To estimate the proportion of variance in purchase intention that can be accounted for by attitude towards the website and attitude towards the product, a standard multiple regression analysis (MRA) was performed.

Before interpreting the results of the MRA, several assumptions were evaluated. According to stem-and-leaf plots and boxplots, there were two outliers. After they were deleted, the stem-and-leaf plots and boxplots indicated that each variable regression was normally distributed, and free from any further outliers. Then, inspection of the normal probability plot of standardised residuals as well as the scatterplot of standardised residuals against standardised predicted values indicated that the assumptions of normality, linearity and homoscedasticity of residuals were met. Next, Mahalanobis distance did not exceed the critical χ^2 for $df = 2$ (at $\alpha = .001$) of 13.816 for any cases in the data file, meaning that multivariate outliers were not of concern. Relatively high tolerances for both predictors in the regression model indicated that multicollinearity would not interfere with our ability to interpret the outcome of the MRA.

The combination of attitude towards the product and attitude towards the website accounted for a significant 47.7% of variability in purchase intention, $R^2 = .477$, $F(2, 206) = 93.196$, $p < .001$. Unstandardized (*B*) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in the regression model are reported in table 4.6.

Table 4.6: Unstandardized (*B*) and standardised (β) regression coefficients, and squared semi-partial correlations (sr^2) for each predictor in a regression model predicting purchase intention

| Variable | <i>B</i> [95% CI] | β | sr^2 |
|------------------|--------------------|---------|--------|
| Product attitude | .743 [.557, .910]* | .578 | .198 |
| Website attitude | .189 [.037, .342]* | .160 | .015 |

Note: *N* = 207. CI = confidence interval.

* $p < .05$.

Attitude towards online shopping on purchase intention

Non-parametric correlation

Kendall's tau-b indicated that there was no significant correlation between attitude towards online shopping and purchase intention, $\tau = .075$, $p = .144$, two-tailed, $N = 214$.

5. Discussion

The goal of this research was to provide more insight into the effects of the authority and social proof persuasion techniques in online selling environments. Many websites use one of Cialdini's (2009) persuasion techniques already. A great example of a website that uses the social proof technique is Booking.com, an online hotel booking system, when it is saying that people in a person's (social) network have been at the hotel before. Also, every hotel you look for has a star rating, where one star is poor and five stars are excellent. One can also see when the latest reservation for a hotel room has been made, and how often this hotel was booked today. These are all examples of the social proof technique: many people have booked the hotel and rated the hotel highly, so it must be a good hotel. A good example of the authority technique in the online world is goSupermodel.nl. This website focuses on Dutch teen girls, where they can ask all questions about their menstruation. An expert will answer their questions. However, this expert is someone from Libresse, a sanitary napkin and tampon brand. In this way, brand awareness is created with teen girls already.

In order to test the effectiveness of authority and social proof techniques in a web shop for sport supplements, this research was conducted. An experiment was created to test participants' response to the authority and social proof techniques. The research question which was used during this study, is:

To what extent do Cialdini's principles authority and social proof influence people's product evaluation and purchase intention in a web shop?

Hypothesis

Authority technique

The hypotheses made for the authority technique, and used for this research, is:

H1: The presence of an authority increases product evaluation and purchase intention.

This research showed that the presence of an authority had an effect on the product attitude. It was expected that the authority technique would have a positive effect on the attitude towards the product, but, remarkably, the opposite was true. People who saw a stimulus material with authority technique evaluated the product lower than people who saw a stimulus material that did not contain an authority technique.

The purchase intention was, according to this research, influenced by the authority technique as well. However, the purchase intention was significantly lower when there was an authority technique present in the stimulus material. People who saw a stimulus material with an authority, had

a purchase intention of, averagely, .230 lower than people who saw a stimulus material without an authority.

Based on the findings of this study, hypothesis 1 is being rejected. The authority technique did have an effect on attitude towards the website and purchase intention, however, it was the opposite effect of what was expected. A possible explanation for this effect is that people, either involved or not, can not identify themselves with Phil Heath, the authority used in this research. This authority is a professional American bodybuilder, which might be to extreme for participants of this research.

Thereby, prior research suggests that participants, who believe they are being tricked by the experimenter, are more likely to respond contrary to the experimenter's wishes (Christensen, 1977; Goldberg, 1965; Masling, 1966). Since this research worked with screenshots of a web page, it was not very realistic. Therefore, participants might have been behaved differently than when they were in a real web shop. Also, in marketing contexts, it is found that persuasive impact is undermined when participants think manipulative tactics are used (Campbell, 1995; Ellen, Mohr & Webb, 2000; Lutz, 1985; MacKenzie & Lutz, 1989, as cited in Sagarin, Cialdini, Rice & Serna, 2002).

Also, people resist the influence of information that conflicts with strongly held beliefs or attitudes (Petty & Krosnick, 1996; Visser & Krosnick, 1998). So, people who are not interested in sports nutrition or who have a strong, negative attitude towards sports nutrition will resist the influence of the persuasion technique.

Social proof technique

The hypothesis used for this research to find out what the effect of a social proof technique is, was:

H2: The presence of social proof increases product evaluation, attitude towards the website, and purchase intention.

Based on the findings of this research, social proof did not have a significant effect on product evaluation. There was no difference in participants' attitudes towards the product between when there was a social proof technique in the stimulus material and when there was not.

For purchase intention, there was no significant effect of social proof either. Whether participants saw a stimulus material with social proof technique or without, there was no significant differ in purchase intention.

Based on the outcomes of this study, hypothesis 2 is being rejected. Social proof did not have a significant effect on either product evaluation or purchase intention. A possible explanation for the fact that social proof did not have a significant effect on product evaluation and purchase intention, might be that the person for social proof is someone people can identify themselves with. However, they might not see him as an example.

Also, as explained for the authority technique, people might behave contrary to the experimenter's wishes (Christensen, 1977; Goldberg, 1965; Masling, 1966). For participants, it is likely that they knew the researcher wanted to test if they would buy the product or not.

Next, if the participants already had a strong opinion against the product, the social proof technique might not have been enough to persuade the participants, since people resist the influence of information when it conflicts strongly with their attitudes (Petty & Krosnick, 1966; Visser & Krosnick, 1998).

Thereby, the social proof manipulation in the condition with both social proof and authority might have been too subtle, especially compared to the authority technique. The authority technique probably claimed more attention than the social proof technique, causing the authority technique to have more impact than the social proof technique.

Level of involvement

To find out whether the level of involvement does have an effect on product evaluation, website attitude and purchase intention, the following hypothesis was used:

H3: The level of product involvement influences the product evaluation, website attitude, and purchase intention.

The attitude towards the product was significantly influenced by the level of involvement. Overall, participants who are involved with sport supplements, evaluate the product higher than people who are not involved with the product. The difference in attitude towards product was averagely .309 on a scale of one to five.

The attitude towards the website was also higher when a participant was involved with the product category. The difference here was averagely .261 on a five-point scale.

Based on the findings of this research, the purchase intention is significantly higher when people are involved with the product than when they are not. The purchase intention differed averagely .481 between the involved group and not involved group.

The difference between the involved and not involved group can be explained by the fact that people who are involved, are familiar with the product category. Those respondents probably know what to expect when ordering sports nutrition online, while respondents who are not involved with the product, do not know what to expect. Also, they do not know where to focus on, or what other products there are in this category and therefore, when a product is good and when it is not.

Self-knowledge of persuasion on product attitude

Self-knowledge of authority and self-knowledge of social proof only accounted for 4.5% of variability in attitude towards the product. Hence, the attitude towards the product can only be explained by

self-knowledge of persuasion for 4.5%. Self-knowledge of persuasion does have an effect, however, it is not a very big effect.

The reason that persuasion knowledge on product attitude only has a small effect, is that when people have persuasion knowledge, they raise suspicion that the salesperson, or in this case, the online sales technique, is motivated by the intent to persuade (Cambell & Kimani, 2000).

Self-knowledge of persuasion on website attitude

The effect of self-knowledge of authority and self-knowledge of social proof on attitude towards the website was a non-significant 2.5%. Therefore, self-knowledge of persuasion does not influence the attitude towards the website.

The persuasion techniques were about the product, and not about the website. Therefore, it is not surprising that persuasion knowledge has no effect on website attitude.

Purchase intention

According to the literature, the attitude a person has towards a website and towards a product, influences the purchase intention. Based on the findings in this research, the combination of attitude towards the product and attitude towards the website accounted for 47.7% of variability in purchase intention. In other words, 47.7% of the variance in purchase intention can be explained by attitude towards the website and attitude towards the product.

People are not likely to spend their money on a product they do not like. Therefore, if the attitude towards the product is low, people will not spend their money on the product. Also, if people do not like, or trust, the website, they are not likely to buy the product either.

There was no correlation between people's attitude towards online shopping and the purchase intention. Hence, the purchase intention is influenced by other factors.

Limitations

Even though this research has been considerably developed and had some strengths, it also had some limitations. The limitations are explained below.

Although this study was meant to be conducted with real customers and site visitors of Gymspot.nl, it was in the end conducted with participants who were not real customers. This was caused by the fact that Gymspot.nl was too new and therefore, it did not have a customer base that was big enough for this research. Hence, it was decided to create an experimental design with people in the target group of Gymspot.nl – that is, people who work out a lot and use sport supplements.

The respondents were invited to participate in this research through, amongst others, social media, bodybuilding forums, and in real life by letting people at the gym completing the questionnaire

on an iPad. In this study, respondents did not get to see the real website, instead they saw a screenshot of the website. This was done because a fake product was created with different persuasion techniques. In a screenshot, these techniques could be manipulated.

The second limitation is the stimulus material. The authority might be a real authority in his profession; however, it is hard to identify with this authority. Besides, the amount of female respondents was higher than the amount of male respondents, while the stimulus material contained pictures of men. For the female respondents, it might be even harder to identify themselves with both the authority and the social proof person.

This brings us directly to the third limitation. Because this study also wanted to clarify the differences between people who are involved and people who are not involved in the purchase intention and product evaluation process, people who have never used sport supplements were used for the not involved group. However, sport supplements are a relatively unknown product group for most people. Therefore, even though a part of the respondents should be not involved, this product might have been too difficult to relate to for them.

Suggestions for future research

This research was conducted to study the effects of Cialdini's (2009) persuasion techniques. In this research, two of the six persuasion techniques were used: social proof and authority. The research was conducted in an online shop for sport supplements and food nutrition. Since e-commerce is becoming bigger every year, it is important to study the effects of persuasion techniques in the online environment.

In future research, it would be interesting to test the effect of Cialdini's (2009) authority and social proof in a real web shop, instead of in screenshots. Then, a better attitude can be formed towards the website, because respondents can click on anything and behave in the same way as they would normally behave on a website. Authority and social proof are very interesting persuasion techniques for this target group, because the target group values their appearance and the opinions of others. Also, it is expected that many people in the target group are familiar with the experts in bodybuilding.

The involved respondents in this research might workout a lot and use sport nutrition on a regular basis; however, it does not automatically mean they want to become a bodybuilder as the expert. To see how people, who are within the target group of the web shop, are influenced, another expert should be used. Not an enormous bodybuilder, but perhaps a fit and toned icon instead.

Since this research was only focused on two of the six persuasion techniques, it would be interesting for future research to expand the persuasion techniques to four or all six persuasion techniques. In

that way, a clear result can show which of the persuasion techniques works best for this target group. It was expected that social proof and authority would work best, however, this does not mean other persuasion techniques will not work.

This research made a distinction between people who were involved with the product and people who were not involved. Although this is a very interesting distinction, looking back it might not have been very easy to manipulate respondents to act as if they wanted to buy a supplement product. Since food supplements and sport nutrition are rather controversial products, people often have strong opinions for or against the product. For future research where Cialdini's (2009) persuasion techniques will be studied, and where a distinction will be made based on the level of involvement, a less controversial product should be used.

Implications

This research into the authority and social proof techniques as persuasion principles is the first step in understanding the effects of these principles. The fact that the authority technique had a counterproductive effect on people's attitude towards the product, is striking. Many of the sports nutrition brands use a bodybuilder as icon. For example, Arnold Schwarzenegger for the Schwarzenegger Series of MusclePharm, and bodybuilder Ronnie Coleman even has his own supplement brand.

Furthermore, this research showed that social proof did not influence people's attitude towards the product or their purchase intention. The fact that social proof had no significant effect on attitude or purchase intention was surprising. It was expected people would be influenced by social proof when it comes to attitude towards the product. Clearly, there are other factors involved, which play an important role in creating an attitude.

This research has made it clear that the level of involvement is an important factor in the attitude towards the product and the purchase intention. While it is expected that most customers of the web shop are to some extent involved with the product, otherwise they would not visit the web shop. However, of course, there will be a difference in involvement level between people who just start working out and people who have been working out for years.

To conclude, this research has shown that attitude change and purchase intention cannot solely be influenced by persuasion techniques. More factors are of influence in this process. Possible – expected – examples of those factors are people's arguments why they are or are not involved with the product, people's health, people's financial situation and the type of workout people prefer. This implies that much more research is needed in order to state which of the persuasion principles work, and which not, and why they work or why not.

6. Conclusions

- Authority does not have a positive effect on attitude towards the product. Instead, the presence of an authority has a negative effect on product attitude.
- Authority does not have an effect on attitude towards the website.
- Authority has an effect on purchase intention. This is a negative effect: the presence of an authority causes a lower purchase intention than when there is no authority present.

- Social proof does not have an effect on product attitude.
- There was no effect for social proof on website attitude.
- The presence of a social proof technique does not influence the purchase intention.

- The level of involvement influences the attitude towards the product. People, who are involved with the product category, have a higher attitude towards the product than people who are not involved.
- The involvement level has an effect on attitude towards the website. People who are not involved have a lower attitude towards the website than people who are involved with the product category.
- The level of involvement influences the purchase intention. People who are involved with the product category have a higher purchase intention than people who are not involved with the product category.

- Knowledge of persuasion has an effect on product attitude.
- Knowledge of persuasion does not have an effect on attitude towards the website.
- The purchase intention is influenced by the attitude towards the product and the attitude towards the website.

- There was no correlation between attitude towards online shopping and purchase intention.

7. References

- Alhammad, M. and Gulliver, S. (2014). Online persuasion for e-commerce websites.
- Amblee, N. and Bui, T. (2011). Harnessing the influence of social proof in online shopping: the effect of electronic word of mouth on sales of digital microproducts. *International Journal of Electronic Commerce*, (16) 91-113. DOI: 10.2753/23106395.
- Awad, N. and Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth: An examination across genders. *Journal of Management Information Systems*, 24(2), 101-121.
- Bart, Y., Shankar, V., Sultan, F. and Urban, G. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69, 133-152.
- Bhattacharjee, A. and Sanford, C. (2006). Influence processes for information technology acceptance: an elaboration likelihood model. *MIS Quarterly*, 30(4), 805-825.
- Blass, T. (1991). Understanding behaviour in the Milgram obedience experiment: The role of personality, situations, and their interactions. *Journal of Personality and Social Psychology* (60), 398-413. DOI: <http://dx.doi.org/10.1037/0022-3514.60.3.398>
- Brown, D. (1999). Male bodybuilders and the social meaning of muscle. *Auto/Biography* (1&2), 83-90.
- Campbell, M. and Kirmani, A. (2000). Consumers' use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent. *Journal of Consumer Research*, 27, 29-63. DOI: 10.1086/314309.
- CBS (2015). *CBS: Tablet verdringt bord van schoot*. Retrieved at 05-06-2015, from <http://www.cbs.nl/nl-NL/menu/themas/vrije-tijd-cultuur/publicaties/artikelen/archief/2015/tablet-verdringt-bord-van-schoot.htm>
- Cialdini, R. (2006). *Influence: The psychology of persuasion*. New York: HarperCollins Business.
- Cialdini, R. (2009). *Influence: Science and practice*. Boston: Pearson Education.
- Christensen, L. (1977). The negative subject: Myth, reality, or a prior experimental experience effect? *Journal of Personality and Social Psychology*, 35, 392-400.

- Cyr, D. and Bonanni, C. (2005). Gender and website design in e-business. *International Journal of Electronic Business* 3(6), 565-582.
- Delafrooz, N., Paim, L. and Kathibi, A. (2009). Developing an instrument for measurement of attitude toward online shopping. *European Journal of Social Sciences* (7), 166-177.
- Dittmar, H., Long, K. and Meek, R. (2004). Buying on the Internet: Gender differences in online and conventional buying motivations. *Sex Roles*, 50(5), 423-444.
- Fan, Y. and Miao, Y. (2012). Effect of electronic word-of-mouth on consumer purchase intention: The perspective of gender differences. *International Journal of Electronic Business Management*, 10(3), 175-181.
- Friestand, M. and Wright, P. (1994). The Persuasion Knowledge Model: How people cope with persuasion attempts. *Journal of Consumer Research*, 21(1), 1-31.
- Friestad, M. and Wright, P. (1995). Persuasion knowledge: Lay people's and researchers' beliefs about the psychology of advertising. *Journal of Consumer Research*, 22(1), 62-74.
- Gefen, D. and Ridings, C. (2005). If you spoke as she does, sir, instead of the way you do: A sociolinguistics perspective of gender differences in virtual communities. *The Data Base for Advances in Information Systems*, 36(2), 78-92.
- George, J. (2002). Influences on the intent to make Internet purchases. *Internet Research: Electronic Networking Applications and Policy*, 12(2), 165-180. DOI: 10.1180/10662240210422521
- Huang, M., Cai, F., Tsang, A. and Zhou, N. (2011). Making your online voice loud: the critical role of WOM information. *European Journal of Marketing* (45), 513-526.
- Huh, J. and Shin, W. (2014). Trust in prescription drug brand websites: website trust cues, attitude towards the website, and behavioral intentions. *Journal of Health Communication*, 19, 170-191. DOI: 10.1080/10810730.2013.798386
- Ibrahim, N., Shiratuddin, M. And Wong, K. (2013). Persuasion techniques for tourism website design. Paper presented at Proceedings of the International Conference on E-Technologies and Business on the Web (EBW2013), Bangkok
- Internetkassa, 2014. *Podiumplaats voor Nederland bij Europees internetgebruik*. Retrieved at 18-06-

2015, from: <http://www.internetkassa.nu/podiumplaats-voor-nederland-bij-europees-internetgebruik/>

Jalilvand, M., Esfahani, S. and Samiei, N. (2011). Electronic word-of-mouth: challenges and opportunities. *Procedia Computer Science* (3), 42-46.

Jalilvand, M. and Samiei, N. (2012). The effect of electronic word of mouth on brand image and purchase intention: An empirical study in the automobile industry in Iran. *Marketing Intelligence & Planning*, 30(4), 460-476. DOI: 10.1180/02634501211231946

Ketabi, S., Ranjbarian, B. and Ansari, A. (2014). Analysis of the effective factors on online purchase intention through theory of planned behavior. *International Journal of Academic Research in Business and Social Sciences*, 4(4), 374-382. DOI: <http://dx.doi.org/10.6007/IJARBS/v4-i4/808>.

Kaptein, M. (2012). *Digitale verleiding*. Amsterdam: Business Contact.

Lee, M., Rodgers, S. and Kim, M. (2012). Effects of valence and extremity of eWOM on attitude toward the brand and website. *Journal of Current Issues & Research in Advertising*, 31(2), 1-11. DOI: <http://dx.doi.org/10.1080/10641734.2009.10505262>

Masling, J. (1966). Role-related behavior and the subject and psychologist and its effect upon psychological data. *Nebraska Symposium on Motivation*, 14, 67-103.

MacKenzie, S. and Spreng, R. (1992). How does motivation moderate the impact of central and peripheral processing on brand attitudes and intentions? *Journal of Consumer Research*, 18(4), 519-529.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology* (67), 371-378. DOI: <http://dx.doi.org/10.1037/h0040525>

Mummalaneni, V. (2005). An empirical investigation of Web site characteristics, consumer emotional states and on-line shopping behaviors. *Journal of Business Research* (58), 526-532.

Oosterveer, D. (2013). *Onderzoek: social media, mobile en online shopping in Nederland*. Retrieved at 24-02-2015, from <http://www.marketingfacts.nl/berichten/whats-happening-online-2013>

Petty, R. and Cacioppo, J. (1986). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology* (19), 123-162.

- Petty, R., Cacioppo, J. and Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, 10(2), 135-146. DOI: 10.1086/208954
- Reilly, R. (2008). Is expertise a necessary precondition for creativity? A case of four novice learning group facilitators. *Thinking Skills and Creativity*, 3(1), 59-76.
- Sagarin, B., Cialdini, R., Rice, W., and Serna, S. (2002). Dispelling the illusion of invulnerability: The motivations and mechanisms of resistance to persuasion. *The American Psychological Association, Inc*, 83(3), 526-541. DOI: 10.1037//0022-3514.83.3.526
- Spears, N. and Surendra, S. (2012). Measuring attitude toward the brand and purchase intentions. *Journal of Current Issues & Research in Advertising*, 26(2), 53-66. DOI: <http://dx.doi.org/10.1080/10641734.2004.10505164>
- Ulbrich, F., Christensen, T. and Stankus, L. (2011). Gender-specific on-line shopping preferences. *Electronic Commerce Research*, 11(2), 181-199.
- Van Slyke, S., Comunale, C. and Belanger, F. (2002). Gender differences in perceptions of web-based shopping. *Communications of the ACM*, 45(7).
- Wang, Q., Yang, S., Liu, M., Cao, Z. and Ma, Q. (2014). An eye-tracking study of website complexity from cognitive load perspective. *Decision Support Systems*, 62, 1-10. DOI: <http://dx.doi.org/10.1016/j.dss.2014.02.007>
- Yates, S. (2001). Gender, language and CMC for education. *Learning and Instruction*, 11(1), 21-34.

Appendix I – Questionnaire

Welkom bij deze online enquête. Door deze enquête in te vullen helpt u mij af te studeren aan de Universiteit Twente.

In deze enquête wordt voornamelijk naar uw mening gevraagd. Geeft u alstublieft een zo eerlijk en zorgvuldig mogelijk antwoord.

Het invullen van deze enquête zal ongeveer vijf minuten duren. De resultaten van deze enquête worden volledig anoniem verwerkt. Er worden dan ook geen persoonlijke vragen gesteld die uw identiteit kenbaar maken. Tot slot is uw deelname volledig vrijwillig en kunt u ieder ogenblik stoppen door deze website te verlaten.

Als u vragen of opmerkingen heeft kunt u contact opnemen met n.put@student.utwente.nl.

Bedankt voor uw tijd!
Nikki Put

Geslacht:

- 0 Man
- 0 Vrouw

Leeftijd: _____

Wat is uw hoogst genoten opleiding?

- 0 Basisonderwijs / lagere school
- 0 Middelbare school
- 0 MBO
- 0 HBO
- 0 WO
- 0 Post doctoraal

Hoeveel uren brengt u gemiddeld per dag door op het internet, niet beroepshalve?

- 0 Minder dan 1 uur
- 0 1 tot 3 uur
- 0 1 tot 5 uur
- 0 5 tot 7 uur
- 0 Meer dan 7 uur

Hoe vaak zoekt u online naar producten zonder dat u direct de intentie hebt om een aankoop te doen?

- 0 Dagelijks
- 0 Wekelijks
- 0 Maandelijks
- 0 Jaarlijks
- 0 Nooit

Hoe vaak koopt u producten via het internet?

- 0 Dagelijks
- 0 Wekelijks
- 0 Maandelijks
- 0 Jaarlijks
- 0 Nooit

Hoe vaak zoekt u online naar producten, om het product vervolgens in een fysieke winkel te kopen?

- 0 Dagelijks
- 0 Wekelijks

- 0 Maandelijks
 0 Jaarlijks
 0 Nooit

Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|----------------------------------|---------------------------|---------------|---|-------------|----------------------|
| Ik vind online shoppen plezierig | 0 | 0 | 0 | 0 | 0 |
| Ik vind online shoppen makkelijk | 0 | 0 | 0 | 0 | 0 |
| Ik word blij van online shoppen | 0 | 0 | 0 | 0 | 0 |

Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|---------------------------------|---------------------------|---------------|---|-------------|----------------------|
| Voor mij is sporten nodig | 0 | 0 | 0 | 0 | 0 |
| Ik vind sporten oninteressant | 0 | 0 | 0 | 0 | 0 |
| Sporten is belangrijk voor mij | 0 | 0 | 0 | 0 | 0 |
| Ik vind sporten plezierig | 0 | 0 | 0 | 0 | 0 |
| Sporten is voor mij ontspannend | 0 | 0 | 0 | 0 | 0 |

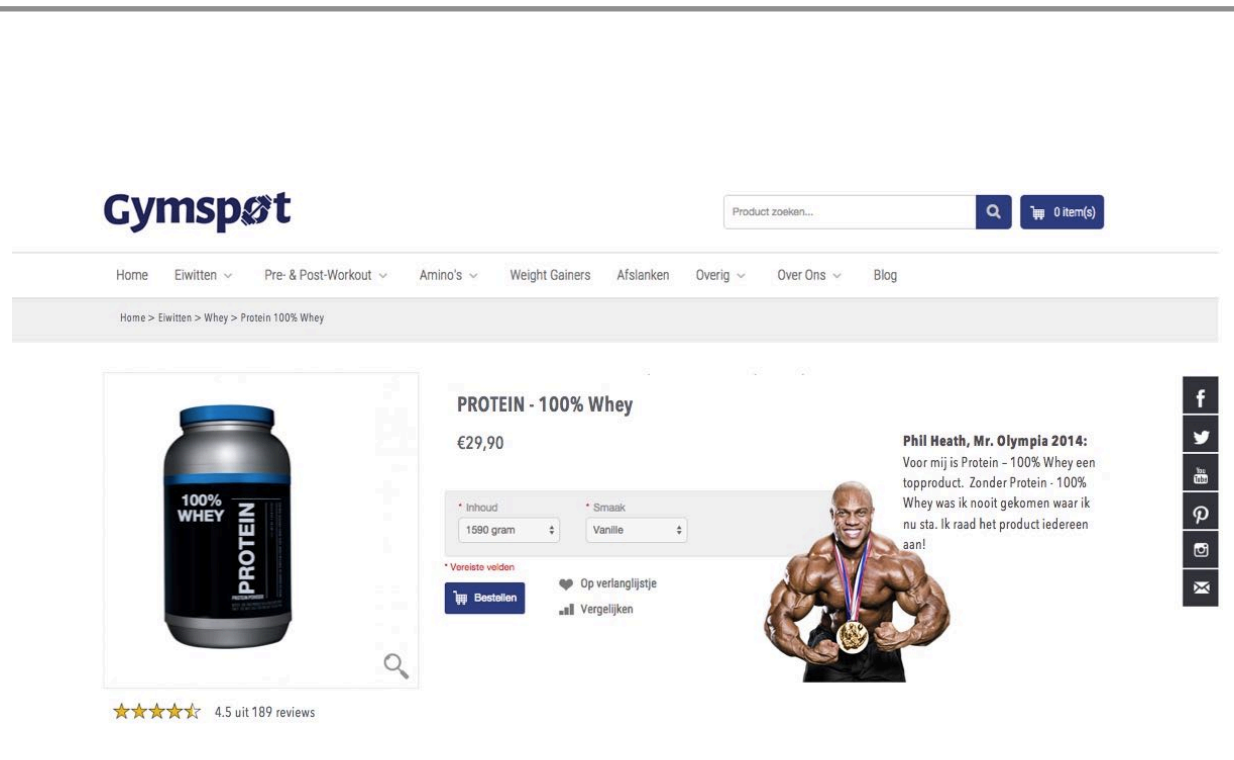
Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|---|---------------------------|---------------|---|-------------|----------------------|
| Ik vind sportvoeding belangrijk | 0 | 0 | 0 | 0 | 0 |
| Ik vind sportvoeding interessant | 0 | 0 | 0 | 0 | 0 |
| Voor mij is sportvoeding nodig | 0 | 0 | 0 | 0 | 0 |
| Zonder sportvoeding zou ik minder goede resultaten halen | 0 | 0 | 0 | 0 | 0 |

Stelt u zich het volgende voor:

U bent de laatste tijd veel bezig met fitness en u bent daarom ook veel in de sportschool te vinden. Van medesporters heeft u gehoord dat proteïne poeder kan bijdragen aan een beter fitness resultaat. Daarom heeft u besloten het ook eens te proberen. Op het internet kwam u het volgende product

tegen. Bekijk het screenshot zorgvuldig. Daarna krijgt u een aantal stellingen over dit screenshot te zien.



Stelt u zich het volgende voor:

U bent de laatste tijd veel bezig met fitness en u bent daarom ook veel in de sportschool te vinden. Van medesporters heeft u gehoord dat proteïnepoeder kan bijdragen aan een beter fitness resultaat. Daarom heeft u besloten het ook eens te proberen. Op het internet kwam u het product tegen dat u zojuist heeft gezien.

De onderstaande stellingen gaan over het product dat u net heeft gezien. Geef hieronder aan in hoeverre u het met de stellingen eens bent.

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|---|---------------------------|---------------|---|-------------|----------------------|
| Dit is een goed product | 0 | 0 | 0 | 0 | 0 |
| Ik vind dit product leuk | 0 | 0 | 0 | 0 | 0 |
| Dit product is nuttig | 0 | 0 | 0 | 0 | 0 |
| Dit product is geloofwaardig | 0 | 0 | 0 | 0 | 0 |
| Dit product is van goede kwaliteit | 0 | 0 | 0 | 0 | 0 |
| Dit product is veilig om te gebruiken | 0 | 0 | 0 | 0 | 0 |
| Dit product doet niet wat het belooft | 0 | 0 | 0 | 0 | 0 |
| Mijn mening ten opzichte van dit product is positief | 0 | 0 | 0 | 0 | 0 |

Stelt u zich het volgende voor:

U bent de laatste tijd veel bezig met fitness en u bent daarom ook veel in de sportschool te vinden. Van medesporters heeft u gehoord dat proteïnepoeder kan bijdragen aan een beter fitness resultaat. Daarom heeft u besloten het ook eens te proberen. Op het internet kwam u het product tegen dat u zojuist heeft gezien.

De onderstaande stellingen gaan over het product dat u net heeft gezien. Geef hieronder aan in hoeverre u het met de stellingen eens bent.

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|--|---------------------------|---------------|---|-------------|----------------------|
| Ik zou dit product kopen | 0 | 0 | 0 | 0 | 0 |
| Ik ben niet geïnteresseerd in dit product | 0 | 0 | 0 | 0 | 0 |
| De kans is groot dat ik dit product koop | 0 | 0 | 0 | 0 | 0 |
| Ik zou dit product eerder kopen dan soortgelijke producten van andere merken | 0 | 0 | 0 | 0 | 0 |

Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|--|---------------------------|---------------|---|-------------|----------------------|
| Ik zou deze website aanraden aan een vriend of familielid | 0 | 0 | 0 | 0 | 0 |
| Deze website is betrouwbaar | 0 | 0 | 0 | 0 | 0 |

Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|---|---------------------------|---------------|---|-------------|----------------------|
| Als veel mensen een product kopen, zal het wel goed zijn | 0 | 0 | 0 | 0 | 0 |
| Ik hecht waarde aan de mening van anderen | 0 | 0 | 0 | 0 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| Ik laat me niet beïnvloeden door de mening van anderen | 0 | 0 | 0 | 0 | 0 |
| Ik raadpleeg vaak reviews van andere klanten om zo het goede product te kiezen | 0 | 0 | 0 | 0 | 0 |
| Ik ben geneigd het product te kopen als anderen me voorgingen | 0 | 0 | 0 | 0 | 0 |
| Als ik niet de reviews van anderen lees, maak ik me zorgen of ik wel de juiste keuze maak | 0 | 0 | 0 | 0 | 0 |

Geef aan in hoeverre u het met onderstaande stellingen eens bent

| | Volledig mee oneens | Mee oneens | Noch mee oneens, noch mee eens | Mee eens | Volledig mee eens |
|--|---------------------------|---------------|---|-------------|----------------------|
| Als een expert het product aanraadt, zal het wel een goed product zijn | 0 | 0 | 0 | 0 | 0 |
| Ik vertrouw niet op de mening van een expert | 0 | 0 | 0 | 0 | 0 |
| De mening van een expert heeft toegevoegde waarde | 0 | 0 | 0 | 0 | 0 |
| Ik ben geneigd een product te kopen als een expert het aanraadt | 0 | 0 | 0 | 0 | 0 |
| De mening van een expert is niet geloofwaardig | 0 | 0 | 0 | 0 | 0 |

Bedankt voor het invullen van deze enquête. Uw antwoord is verwerkt.
