"TABLE TENNIS, IS THAT A SPORT?"

The image of a sport as a predictor of the intention to participate

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SUMMARY

Dutch national policy to increase sports participation focuses on binding and fascinating citizens within neighbourhoods, sporting disciplines and life stages (Rijksoverheid, 2011). To attract people towards certain sporting disciplines, knowledge about why certain sports attract specific people is important to make policy and marketing efforts more successful. An answer to this lack of knowledge is research on the (influences of) images of sports because a person's interest in a sport depends, amongst others, on the image a person has about that sport (Schlattmann et al., 1996 in Hallmann, 2011; Hover and de Jong, 2011). Whereas the images of sports held by the Dutch population have been researched by both Hover and de Jong (2011) and Schouten (2004), the role these images play in the decision-making process remained unclear. The main purpose of this research is therefore: *to explore the influence of the image of a sport on the behavioural intention to participate in that sport*.

Because the NTTB (Dutch Table Tennis Association) mentions the role of the image while explaining their decrease in their membership numbers (youth in the eastern competition district in particular), this sport is the main focus of this research. To define the role of the image of table tennis, two other sports were added for comparison. Because sports characteristics influence the image, two comparable racket- and duo sports were chosen: tennis and badminton (Tiessen-Raaphorst, Lucassen, van den Dool and van Kalmthout, 2008). The main research question was: *to what extent is the intention to start participating in table tennis, badminton or tennis related to the current images of those sports among youth?* This research question was answered by looking at the attitudes based on both the general images and personal images of the sports, their relationship with other motivation factors and with the intention to participate in each of the three sports. The motivation factors consist, in line with the I-Change Model, of the attitude, social influences and personal efficacy.

The general images of the three sports were measured by Hover and de Jong (2011) and were for this research converted into a value between one and five. To convert this general image into an attitude based on the general image, the value per characteristic of the general image is multiplied by the value given for the evaluation for the same characteristic resulting in the partial attitude. In order to get an attitude based on the general image, labelled as $attitude_2$, the mean of the partial attitudes is calculated. The attitude based on the personal image is calculated the same way and labelled as $attitude_1$. The evaluation, personal images, social influences and personal efficacy were measured using quantitative research. In total 190 questionnaires were obtained, 52% filled in by females, and 48% by males. The average age was 14 years. Several differences between the sports were found. First, $attitude_2$ towards tennis was rated higher than $attitudes_2$ towards the two other sports ($p<0,01$), moreover table tennis has a higher $attitude_2$ than badminton ($p<0,01$). Second, $attitude_1$ towards tennis was higher than the $attitudes_1$ towards table tennis ($p<0,01$) and badminton ($p<0,01$). Also the intention to play tennis is higher than the intention to play table tennis ($p<0,05$) and badminton ($p<0,01$).

For table tennis and tennis, attitude$_1$ has a significant relationship with the intention. For table tennis there was a 98,0% probability that a person with a score of 25 (maximum score) on attitude$_1$, had the intention to participate in table tennis activities. For tennis, there was a 95,8% probability that a person with a score of 25 on attitude$_1$ had the intention to participate in tennis activities. A score of 25 on the partial attitude 'a physical tough sport' gave a 57,9% probability that a person had the intention to participate in tennis activities. For badminton, none of the motivation factors related to the intention.

For both table tennis and tennis the attitude$_1$ related to the intention. Thereby the attitude$_1$ towards tennis was more positive than the attitude$_1$ towards table tennis ($p<0,01$) and the intention to play tennis was also higher than the intention to play table tennis ($p<0,05$). This gives an indication that the more negative attitude$_1$ towards table tennis could result in a lower intention to start participating in that sport whereas the more positive attitude$_1$ towards tennis could result in a higher intention. With the membership numbers in mind (the tennis association in the Netherlands has 690.370 members compared to the 33.627 members of the table tennis association (NOC*NSF 2011)), this indication seems logical.

Thus when one wants to know how to increase the intention to participate in table tennis among youth in the eastern region of the Netherlands, the attitude based on the personal image is of importance. However whether this attitude is a cause for the low membership numbers remains unclear because the direction of the relationship cannot be determined in this research. For marketers and sport associations, here the NTTB and the Koninklijke Nederlandse Lawn Tennis Bond, this knowledge is essential because the attitude$_1$ towards table tennis and tennis is proven to relate to the intention. Future research on the influence of images of sports is needed in order to [1] determine the direction of the relationship, [2] to investigate what factors influence the attitude$_1$ and [3] why for some sports this influence does not emerges. Important here is to develop a conceptual model directed at the images of sports, that can help answering the three questions that emerged.

PREFACE

This thesis was written to complete the master program 'Leisure, tourism and environment' at Wageningen University. For this thesis, a research was conducted at two high schools in the eastern part of the Netherlands, equivalent to the eastern competition district of the NTTB. The investigation was directed at obtaining knowledge about the image of table tennis and its influence on the intention to play table tennis. This because the NTTB stated that the image could be the cause for the decrease in participants they experience. In order to see whether the role of the image of table tennis is of special importance, two comparable sports were added in this research: badminton and tennis.

The study resulted in a logistic regression analysis for each sport, predicting the intention using the factors from the I-Change Model. The results are followed by a discussion in chapter five, and a conclusion showing the most important findings and providing answers on the research questions in chapter six. Finally, the recommendations can be found in chapter seven.

Special thanks go to the supervisors from Wageningen University, Karin Peters and Sjerp de Vries, for their support and feedback during the entire process. Also the support of friends, classmates, colleagues and family helped me in difficult times. All of them have made a large contribution to this thesis, for which I'm grateful.

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Aline van Bedaf

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1.1   Reason and purpose

Increasing sports participation is an important goal in Dutch national policy nowadays (Rijksoverheid 2011). The concrete ambitions concerning sports participation are defined in the 'Sportagenda 2016' (NOC*NSF 2012). Here, four goals can be found:

1. More people participate in sports (increase from 65% participating at least 12 times per year towards 75%);

2. People participate in sports more often (increase from 50% participating at least 40 weeks a year towards 60%);

3. People become more active (the participation in competitions and matches increases with 10%);

4. People participate in sports for a longer period in their lives (increase from 29% being a member of a sports association or club towards 35%) (NOC*NSF 2012).

The strategy used to reach these goals focuses on binding and fascinating Dutch citizens within neighbourhoods, sporting disciplines and life stages. To get more knowledge about how to increase the participation in sports, most research focuses on the motives people have to participate in sports in general (Brettschneider and Heim 1997 in Daniels, Sincharoen and Leaper 2005). However, because one sport attracts mostly young citizens and another sport attracts mostly older citizens, knowledge about why each sport attracts particular players is important. Especially for sporting disciplines, and the sports associations that pitch marketing efforts for these disciplines, this knowledge is beneficial when wanting to increase membership numbers.

When choosing a sport to participate in, a decision-making model as being used in tourism, marketing or consumer studies could be applicable because choosing a sport can be seen as purchasing a product or service (Hallmann 2011). In the field of tourism, research of Ashworth and Goodall (1988 in Park and Njite 2010) states that images (here destination images) are one of the most important factors when choosing a destination. In addition, Johannsen (1971, in Hallmann 2011) states that images play an important role in consumers' response to products, services, destinations and also sports. The concept of image can be defined here as the impression of an object or stimulus, formed in the mind of an individual (NIMA, 1993; De Pelsmacker and Van Kenhove 2002 in Hover and de Jong 2011). Sports however have a special character compared to products and services: whereas products are pure goods, and services consist of work done for others, sports can be seen as goods with a high amount of services (Shilburg, Westerbeek, Quick and Funk 2009 in Hallmann 2011). Research about images in the field of sports mostly focuses on sports events. However, the definition of the concept of image

does provide an opening for research on images of sports, as images of sports could then be defined as the impression of a sport, formed in the mind of an individual (Hover and de Jong 2011).

Studies focusing at images of sports and their role in the decision-making process whether or not to participate in sports is however scarce (Hallmann 2011). More research is desirable, because a person's interest in a sport depends amongst other things on the image one has about that sport (Schlattmann et al. 1996 in Hallmann 2011; Hover and de Jong 2011). To get more insight in the role that images of sports play in the decision-making process, this study will explore the influence of these images on the behavioural intention. Thereby a distinction will be made between the general image (held by the population) and the personal image (held by the individual)[1]. More insight in the role these images plays in the decision-making process can be beneficial to sports associations to prevent a (further) decrease in participants, or provoke an increase of membership numbers.

1.2   SETTING

The NTTB (Dutch Table Tennis association) states that the image of their sport plays a role in the decision-making process and that it might be the cause for the decrease in their membership numbers (NTTB 2009). This decrease is in sharp contrast with the general trend in membership numbers of sports associations which showed an increase of 0,6% in 2010 especially among youth members and female adults, the groups where the NTTB experiences the largest decrease (NOC*NSF 2011). This decrease is especially notable in the eastern competition district[2] where youth players only make up 30% (2010) of the total amount of players, against a percentage of 37 nationwide (van den Dool 2011; NTTB-Oost 2012). Whether this development in membership numbers is indeed related to the image of the sport, what the NTTB suggests, is unknown, amongst others, because the role of the image in the decision-making process has not been researched yet (Hallmann 2011). The NTTB defines the image of table tennis as it being a playgame which is unfavourable when wanting to promote it as a sport. Therefore the NTTB wants it to change towards an image characterized with terms as sexy, companionable and fast (NTTB 2009).

Because the NTTB acknowledges that the image of table tennis is unfavourable, table tennis is chosen as the primary sport in this research. Important is to research whether the image indeed does has an unfavourable effect on the decision-making process. To see whether this is the case, the role images play in the decision-making process need to be compared, and therefore two other sports are included. Since characteristics of a sport influence the sports' image and therefore possibly the decision whether to participate in the sport or not, badminton and tennis are chosen to make a comparison with table

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[1] An extended explanation of these concepts can be found in chapter two.
[2] A geographical district with an own NTTB competition, existing of the districts Zwolle, Ijsselstreek and Twente.

tennis: all require a racket, belong to the same category in the SportersMonitor, and can be played individually (van den Dool, Elling, and Hoekman, 2009; Tiessen-Raaphorst, Lucassen, Dool, and Kalmthout, 2008). Also the differences between the sports were reasons to choose these sports for a comparison: difference in number of participants/membership numbers, differences in the development of membership numbers, different image characteristics, and tennis is mostly played outdoors[3] (van den Dool 2011; Hover and de Jong 2011). These differences are either based on the image or on the intention, and therefore most likely to provide more insight in the interactions between both concepts. Thus this research focuses on the relationship between the images of table tennis, badminton and tennis and the intention to participate in that sport among youth in the eastern competition district of the Netherlands.

1.3 RESEARCH QUESTIONS

The main purpose of this research is:

To explore the influence of the image of a sport on the behavioural intention to participate in that sport.

Resulting from the research objective, the main research question is:

To what extent is the intention to start participating in table tennis, badminton or tennis related to the current images of those sports among youth?

The sub questions in order to provide an answer to the main research question are:

 I. What are the current general images of table tennis, badminton and tennis?

 II. What are the current personal images of table tennis, badminton and tennis?

 III. To what extent does the general image of each sport relate to the motivation factors and the intention to participate in table tennis, badminton and tennis activities among youth?

 IV. To what extent does the personal image of each sport relate to the motivation factors and the intention to participate in table tennis, badminton and tennis activities among youth?

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[3] This characteristic of the sport could influence the image characteristics and therefore contributes to the comparison because it leads to an extra difference between the sports and there images.

1.4 THESIS OUTLINE

In the next chapter, the theoretical framework is outlined, resulting in a conceptual model. The methodology is described in chapter three. The results are given in chapter four, followed by the discussion and conclusions in chapter five. In the last chapter, recommendations for future research are given.

2   THEORETICAL FRAMEWORK

In the Netherlands, images of sports are investigated by Hover and de Jong (2011). Although their research acknowledges that the consumption of a sport is influenced by images, it also states that there is a lack of knowledge about [1] those images and [2] their influence on the consumption of, and participation in a sport (Hover en de Jong 2011). Hover and de Jong (2011) do provide an overview of images of 15 sports held by the Dutch population and a list of characteristics forming the image of a sport. The list of characteristics Hover and de Jong (2011) used to measure the image of sports will be used in this research because this enables the use of their research findings. With their research they contribute to the knowledge about images, although this information would be more valuable when the role of images within the decision-making process is more clear (Hover en de Jong 2011). That is why this research focuses on the influence of images on the participation in sports.

2.1   CONCEPTUALIZATION OF IMAGES

Images of sports can be conceptualized similarly to how tourism research conceptualizes destination images (Kaplanidou and Vogt 2007 in Hallmann 2011; Hover and de Jong 2011). This conceptualization is called the tri-component model (Ajzen 2001 in Elling and Kemper 2011) and states that the image consists of a cognitive component which describes the consumers' knowledge regarding the sport, an affective component describing the emotional response and feelings, and a conative component which is the behavioural response towards it (Hover and de Jong 2011; Lee, et al. 2010). Because of the special character of sports[4], theories particularly directed at the images of sports, instead of tourism or marketing, could give more relevant insights (Shilburg, et.al. 2009 in Hallmann 2011). Few researches, all performed outside of the Netherlands, focus on images of sports. Daley and Rissel (2011) focus on the images of cycling as either a barrier or facilitator of cycling. Their research is however not based on a conceptual model and can therefore not contribute to the theoretical framework for this research. However, Hallmann (2011) focuses in her research on the images of women's soccer, using a theory originating from the field of consumer behaviour as a starting point. This theory consists of cognitive beliefs, affective emotions and behavioural actions, which shows a substantial overlap with the tri-component model (Funk, 2008 in Hallmann, 2011).

The limitedness of that theory is, as acknowledged by Hallmann (2011), that images do not stand on their own but that the image one holds is influenced by factors such as personality and involvement which are not included in the tri-component model (Vos 1992 in Hallmann 2011; Schwarz and Hunter 2008 in Hallmann 2011). Moreover, the three components do not operate at the same level. According

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[4] Sports are goods with a high amount of services (Shilburg, Westerbeek, Quick and Funk 2009 in Hallmann 2011).

to Mazursky and Jacoby (1986 in Lee, Hsu, Han and Kim 2010) the conative component can be seen as the behavioural intention and is therefore determined by both the cognitive and affective component. Furthermore, these two components are not independent from each other because the knowledge about a sport, the cognitive component, influences the emotional response towards it, so the affective component (Lee, et al. 2010). Finally, the characteristics of a sport that form the image according to Hover and de Jong (2011) can hardly be separated into these two components because whether a characteristic is either cognitive or affective varies to the individual (Delfabbro, et al. 2009). Because of these restrictions of the tri-component model, Delfabbro, et al. (2009) use the terms 'hot' and 'cold' cognitions instead. These cognitions are not, such as the cognitive and affective components two separate concepts, but fade gradually into each other. In line with this theory, the characteristics forming the image of a sport can be placed between the hot and cold cognitions, based on the emotions a characteristic evokes at the individual level (Delfabbro, et al. 2009). This level of emotion towards of a characteristic differs for each individual and thus for each respondent. Thereby, the emotional value of the characteristics of the image of a sport does not provide an extended insight in the role of the image in the decision-making process, therefore a practical implementation of this theory is not used in this research.

This MSc thesis focuses on the influence of images of sports on the intention. Hereby, the role of the image compared to other influencing factors needs to be determined. Influencing factors that were already mentioned in the previous chapter are personality and involvement (Vos, 1992 in Hallmann 2011; Schwarz and Hunter 2008 in Hallmann 2011) but also other factors influencing one's behaviour have to be included in the conceptual model to distinguish the role of the image. Therefore more extensive behavioural theories are outlined in the next paragraph.

2.2 THE CONCEPT OF IMAGE WITHIN BEHAVIOURAL THEORY

Within the field of sports and exercise behaviour research, one of the major predictive models is the Theory of Planned Behaviour (Hamilton and White 2008). According to this theory, behaviour is predicted by the intention to perform that behaviour. This intention can be predicted by the attitude, the subjective norm and the perceived behavioural control. Attitude here is the extent to which an individual values certain behaviour as either being positive or negative. The subjective norm is formed by the social influences coming from family, peers, etcetera. Perceived behavioural control indicates whether one sees certain behaviour as being easy to perform (Ajzen 1991). Although the Theory of Planned Behaviour is more extensive than the theories only containing image, it still overlooks factors such as personality. Therefore an enlarged model will be used as the basis for the conceptual model: the I-Change Model (Integrated Change Model) (de Vries, Mesters, van de Steeg and Honing, 2005). According to this model, behaviour is determined by the intention but also by the ability factors and barriers. The intention, in turn, can be determined by the motivation factors which consist of the

attitude (same as in the Theory of Planned Behaviour), social influences (subjective norm) and (personal) efficacy (which is conceptually related to the perceived behavioural control). Thus the motivation factors are influenced by predisposing factors, information factors and awareness factors (in line with Vos (1992 in Hallmann 2011; Schwarz and Hunter 2008 in Hallmann 2011). A schematic view of this model can be found in figure 1.

Figure 1   I-Change Model (de Vries, Mesters, van de Steeg and Honing, 2005)
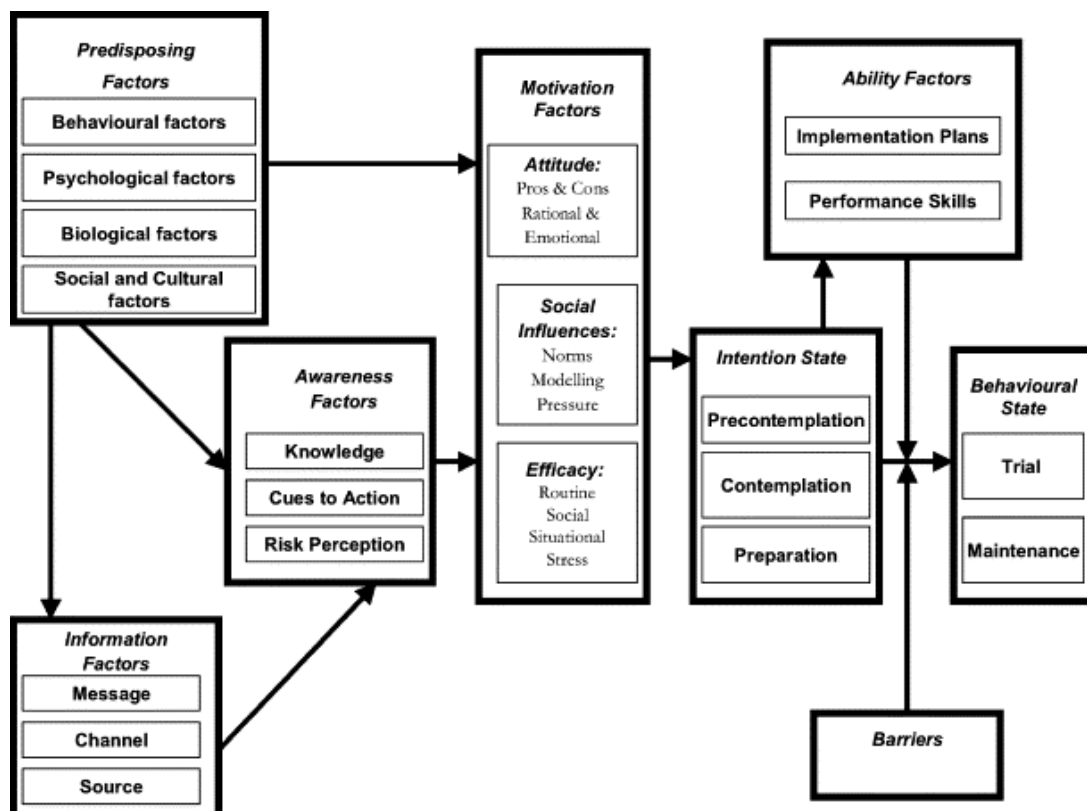
When using the I-Change Model to examine the role of images in the decision-making process, the concept of image has to be placed amongst the factors influencing the intention: the motivation factors (see figure 1). This because the precise influence images have when choosing a sport to participate in depends on its influence on the intention compared to these other factors.

2.3 LEVELS OF IMAGES

The image of a sport can be defined on different levels, as also came forward in the tri-component model, but it is essential that these levels do not overlap and can easily be distinguished. Therefore two types of images are used in this research. First, the general images, which are held by the population based upon Schouten (2004) and Hover and de Jong (2011). The general image might not be the same as the image an individual has about a sport, because this image is also influenced by personal experiences, personality and involvement (Vos 1992 in Hallmann 2011; Schwarz and Hunter 2008 in Hallmann 2011). Therefore, a second type of image exists: the personal image.

2.3.1 GENERAL IMAGES

The general image is measured at the level of the total population, although not every individual might be aware of the existence of this general image. The general image should be placed attached to the motivation factors in the I-Change Model, whereas it can function as an influencing factor on the motivation factors[5], but plays the largest role within the concept of attitude according to the Value Expectancy Theory. Because people can be unaware of the general image it should not be linked fixed with the awareness-, information-, and predisposing factors.
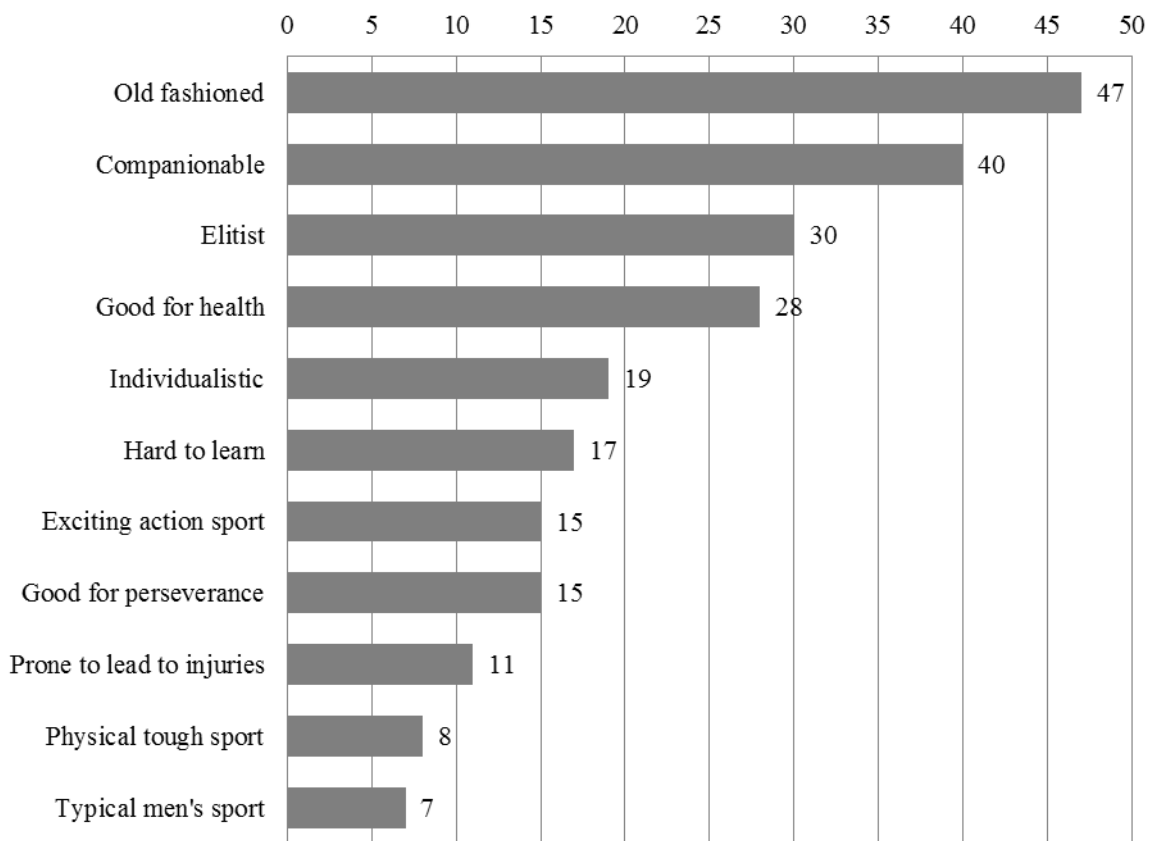
Both Schouten (2004) and Hover and de Jong (2011) measured the images of sports among people of 12 years and older, although using a different list of characteristics[6]. Both Schouten (2004) and Hover and de Jong (2011) investigated which sport fits the best to each characteristic, the applicability of the characteristics to each sport, and finally Hover and de Jong (2011) also provided the non-applicability of the characteristics to each sport. When looking at which characteristics fits best with a sport, only one characteristic is listed: badminton is seen as the most recreational sport (46%) (Schouten 2004). This fits the ideas about the image of the sport held by the badminton union in the Netherlands, which acknowledges that badminton has the image of a sport that is played mostly on campsites (Badminton Nederland 2012). In the research of Hover and de Jong (2011) only table tennis has a high ranking as it is seen as the most old fashioned sport (46%).

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[5] It can be seen as a source of information, but only when one is aware of the existence of the general image.
[6] Schouten used 25 characteristics, whereas Hover and de Jong (2011) measured the image of sports using a list with 11 characteristics via the SportersMonitor 2008.

The characteristic of badminton being a recreational sport is however not the term that is most applicable to badminton according to the Dutch population above 12 years. According to the research of Schouten, the characteristics most applicable to badminton are good for condition (58%), match sport (49%) and recreational sport (46%). Least applicable are dangerous (0%), adventurous (2%) and status enhancing (2%) (Schouten 2004). In the research of Hover and de Jong (2011) badminton scores relatively high on old fashioned, companionable, elitist and good for health and low on being a typical men's sport, a physical tough sport and prone to lead to injuries. (see figure 2).

Figure 2   **General image of badminton among 15-80 year olds (N=427)**


(Hover and de Jong, 2011)

Characteristics that apply the most to table tennis according to Schouten (2004) are: match sport (53%), good for condition (36%), strife (34%) and boring (33%). Least applying are: dangerous (0%), status enhancing (0%) and adventurous (1%). Hover and de Jong (2011) concluded that table tennis is seen as an old fashioned sport (47%), as well as hard to learn (32%) and companionable (31%) (see figure 3). Table tennis is the least associated with being prone to lead to injuries (7%), a physical tough sport (10%) and good for perseverance (13%) (Hover and de Jong 2011).

Figure 3   General image of table tennis among 15-80 year olds (N=445)
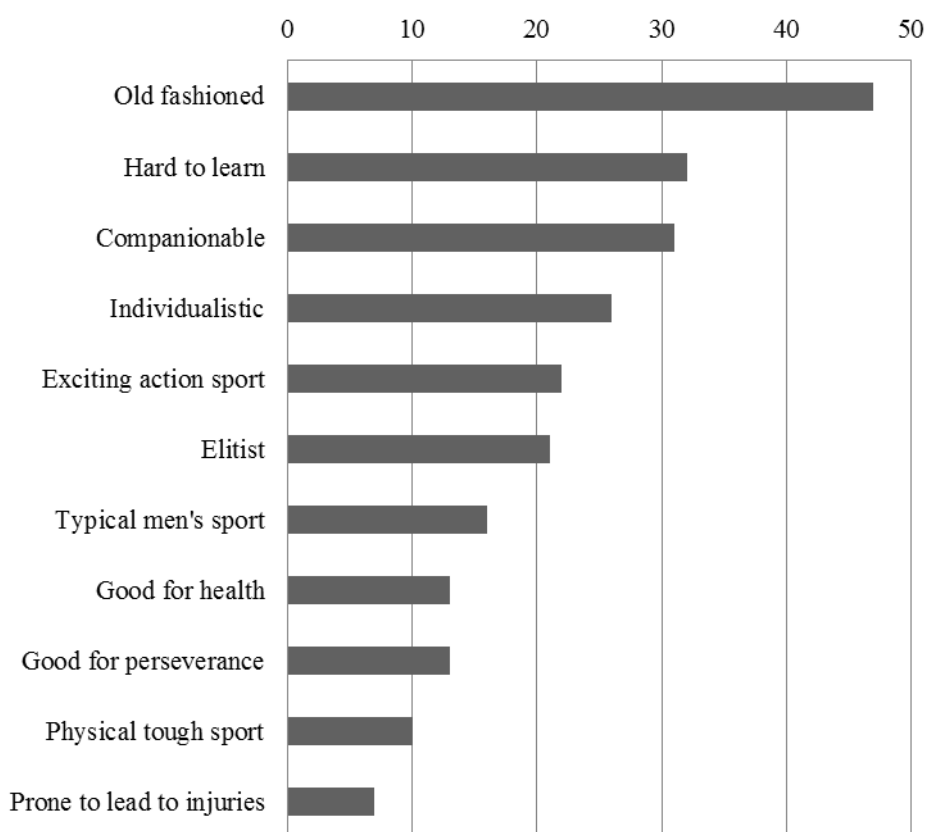
Finally, Schouten (2004) concludes that tennis is mostly associated with condition and health, and therefore the most applicable characteristic belongs to the extrinsic motives to participate in sports: good for condition (59%). This characteristic is followed by tennis being a healthy sport (47%), a expensive sport (44%) and a match sport (41%). Similar as badminton and table tennis, tennis is not seen as adventurous (0%) and dangerous (1%). When looking at the image of tennis in the study of Hover and de Jong (2011), it becomes clear that the valuations of the characteristics differ less compared to both badminton and table tennis meaning that no extreme characteristics are found. The characteristic that applies to tennis the most is elitist (64%), followed by exciting action sport (37%) and companionable (35%) (see figure 4). Least applicable to tennis are it being good for perseverance (24%), a physical tough sport (23%) and a typical men's sport (21%) (Hover and de Jong 2011).

Figure 4   General image of tennis among 15-80 year olds (N=447)
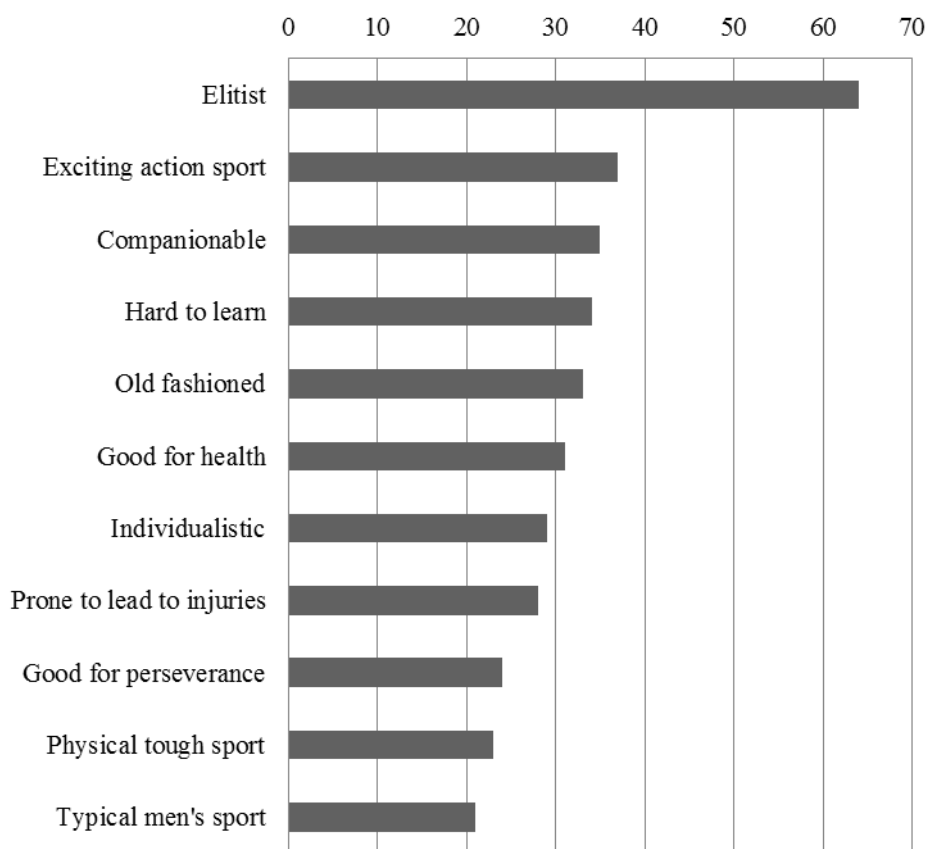
2.3.2 PERSONAL IMAGES

The personal image is the image about a sport an individual is aware of and which is influenced by the awareness, information, and predisposing factors. The personal image can be seen as the beliefs a person has about a sport. To position the personal image within the I-Change Model, the Value Expectancy Theory is helpful. According to this theory, people orientate themselves based on their attitude (as part of the motivation factors) which is a function of evaluation, the extent to which characteristics of a sport are important to them when choosing a sport, and beliefs, the personal image one holds when it comes to a sport (Fishbein and Ajzen 2012). According to the Value Expectancy Theory, the (partial) attitude then is a function of the evaluation and the belief about one characteristic[7]: a predictor measuring the extent to which the personal image matches the properties one looks for in a sport. Adding this to the I-Change Model, the behavioural intention is a function of the efficacy, social influences, and the attitude based on the personal image and evaluation.

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[7] To define the role of the general image, the personal image can be replaced by the general image in this function.

Illustrated, the location of the images of sports can be found in figure 5. In order to provide insight in the extent to which the image of a sport is related to the intention to start participating in a sport (compared to other influencing factors), the general image, personal image and evaluations will be used to calculate the two types of attitude.

The factors that are of interest in this model are thus the general and personal image, the evaluation, the social influences, the efficacy and the intention. Measuring the relationships between these factors will provide a first indication about the influences of the images on the intention, the differences between the roles of the general image and personal image, and about the interrelationships between the different factors. These interrelationships are expected to exist because a negative image about a sport is likely to result in low social support resulting in a lower intention to participate (Tiessen-Raaphorst, Lucassen, van den Dool and van Kalmthout 2008). Finally, measuring these factors for three different sports will give insight in whether the image of one sport plays a larger role, and thus also if the NTTB has a larger image problem than the other two sports associations. What the exact relationship is between the motivation factors and the intention and what the role of either the general image or personal image is in this interaction will become clearer when conducting research based on this conceptual model.

Figure 5   Conceptual Model
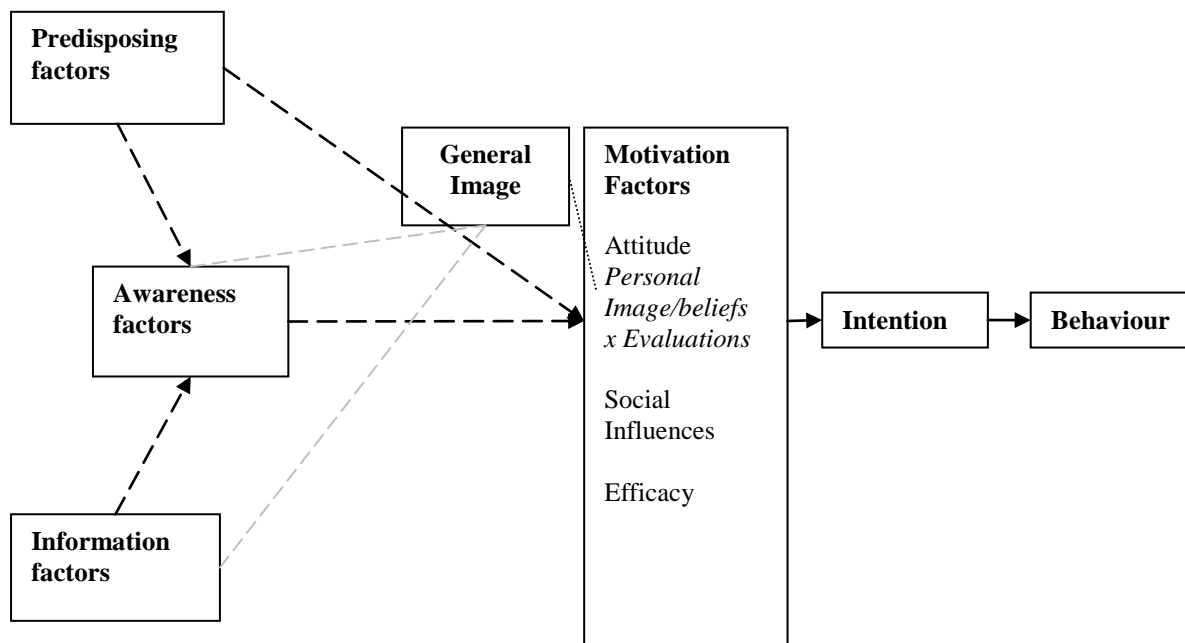
3 METHODOLOGY

In order to answer the defined sub questions, two different research methods have been used. For the sub question 'What are the current general images of table tennis, badminton and tennis?' an existing research has been used and calculations were done based on this data. This research was carried out by Hover and de Jong (2011), and was based on data from the SportersMonitor 2008 (van den Dool, Elling en Hoekman 2009). Quantitative research has been carried out to obtain primary data required to measure the factors within conceptual model. In doing so, the following three sub questions can be answered: 'What are the current personal images of table tennis, badminton and tennis?', 'To what extent does the general image of each sport relate to the aspects forming the motivation factors and the intention to participate in table tennis, badminton and tennis activities among youth?' and 'To what extent does the personal image of each sport relate to the aspects forming the motivation factors and the intention to participate in table tennis, badminton and tennis activities among youth?'. Using quantitative research enables examining relationships between the factors within the conceptual model using statistical analysis. Advantages of quantitative research are the following: it can be conducted everywhere (respondents can be approached everywhere), not much time is asked of each respondent (compared to qualitative methods such as interviews) and a large group of respondents can be involved. An extended overview of the data collection method can be found in the following paragraphs.

3.1 SECONDARY DATA

Hover and de Jong (2011) measured the general image for 15 different sports, among these are badminton, table tennis and tennis. The general image is measured among the Dutch population between the ages 15 and 80, with 427 respondents in total for badminton, 445 for table tennis and 447 for tennis. 11 characteristics were used to measure the image of a sport. Although Schouten (2004) used a more extended list of characteristics, the research of Hover and de Jong (2011) is chosen to calculate the general image from because in their research results, the percentages of respondents finding a characteristic applicable, neutral or not-applicable are given for each of the 11 characteristics forming the general image which makes it possible to calculate one value (between one and five) for each of the characteristics. Recalculation is done by multiplying the percentage answering 'not-applicable' with one (the lowest score), 'neutral' with three (the neutral score) and 'appropriate' with five (the highest score) and adding the outcomes. Therefore, for each characteristic, the applicability of each characteristic per sport could be calculated. The general image of each sport was calculated by taking the mean of the values for the characteristics for each sport. Goal of the recalculation was that the outcome could easily be inserted into the SPSS database and compared to the data obtained with quantitative methods. Because it is the general image, held the same for all individuals, the outcome for each characteristic per sport can be seen as a constant.

In social research, the focus often lies on attitudes, opinions, values and preferences (van Tuyckom, Vos and Scheerder 2011). To measure this using a quantitative research method, questionnaires containing scales can be used which contain sets of items in the form of statements (Lestaeghe and Neels 2009 in van Tuyckom, Vos and Scheerder 2011). Because, using a scale makes sure that the results can be inserted into a database and statistical analysis can be made, this method was used in this study. To make sure that the used statements are valid and reliable, statements used in previous researches will be used (Hallmann 2011; van den Dool, Elling, and Hoekman 2009; Schouten 2004; Tiessen-Raaphorst, Lucassen, van den Dool and van Kalmthout 2008, Ajzen 2012). These researches use statements or subjective scales that can be answered using the Likert Scale. Likert Scales are easy to understand by respondents and are simple in use when analyzing the data afterwards. Finally, when multiple statements are used to measure one concept (such as efficacy), the use of the Likert Scale gives the opportunity to combine them into one value when proven reliable and measuring the same concept. The Likert scales used to measure the different constructs range from one to five, with one being the least applicable or least important and five being the most applicable or most important. This scale was chosen because the scales indicate a level of applicability or importance, and therefore all scores needed to be positive.

The questionnaire consists of six parts: [1] background questions, [2] statements adressing the evaluation of the characteristics of the image[8] [3] statements adressing the personal images of the three sports, [4] statements adressing the social influences for the three sports, [5] statements adressing the efficacy for the three sports, and [6] statements adressing the behavioral intention for each of the three sports. The final version of the questionnaire can be found in the Appendix. To make sure that the questionnaire could be understood by the target group (12-18 year old high school students), the questionnaire was handed out to five children that did not belong to the research sample because they were active table tennis players. This test did not expose any problems in the questionnaire, besides that it might be too long to fill in. However two children managed to fill it in within five minutes which was the estimated time, the other three managed to fill it in up to eight minutes. Therefore, the questionnaire was not revised before handing it out to the research sample.

3.2.1   RESPONDENT'S CHARACTERISTICS

According to the CBS (Centraal Bureau voor de Statistiek), four RPA areas (defined by the Regionale Platforms Arbeidsmarkt) form the eastern competition district as it is used by the NTTB. The number of high school students spread over these four areas can be found in table 1.

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[8] The evaluative is the value giving the importance of a characteristic of a sport when choosing a sport to participate in.

Table 1   Number of high school students per RPA area

IJssel and Vecht	25.490
Noordwest Veluwe	10.175
Stedendriehoek	25.043
Twente	36.623

(CBS, 2012)

Within the total number of 97.331 students in this region, the survey was conducted at two high schools in the defined region. In order to get an acceptable confidence rate, 189 questionnaires were needed (based on the research population and a confidence rate of 90%). In total 190 questionnaires are filled in and therefore the results of this study are based on the 90 percent confidence rate (Field 2009).

One high school provided education levels between VMBO kader and MAVO, the second high school provided education levels between MAVO and VWO. Therefore the respondents are spread throughout all levels of education (see table 2).

**Table 2   Respondents per education level in percentages (N=190)**

VMBO kader	37
VMBO theoretisch	9
MAVO	55
HAVO	8
HAVO/VWO[9]	12
VWO	33
Missing values	36[10]

When looking at the characteristics of the respondents, 52 percent is female and 48 percent is male. The average age is 14 years old.

[9] When in first grade, combination classes exist where after students are redirected to either HAVO or VWO.

[10] The large number of missing values is due to the fact that this question was the last question of the questionnaire and therefore often skipped by the respondents.

Figure 6   **Respondents per age in percentage (N=148)**
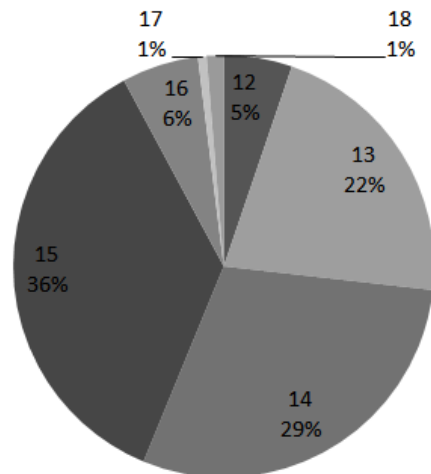
The respondents were asked in which sports they currently participated, either in a club or a competition. 137 respondents declared that they participated in one sport, 12 respondents played two sports and one respondent was active in three sports. Overall, 34 different sports were being played by the respondents. The sport played the most is football, with 51 respondents. Other sports respondents participated in were volleyball (13), fitness (11), dancing (9), hockey (9) and horseback riding (9) (see figure 7). Finally, 40 respondents didn't participate in sports at a club or in a competition. The racket sports that are central in this research are also played by some of the respondents: five children play tennis, three play table tennis and one plays badminton. When researching questions concerning the racket sports, these respondents will be left out of the analysis in order to provide an insight of the role of the image held by non-participants in racket sports.

Figure 7   Current played sports by the respondents (N=190)
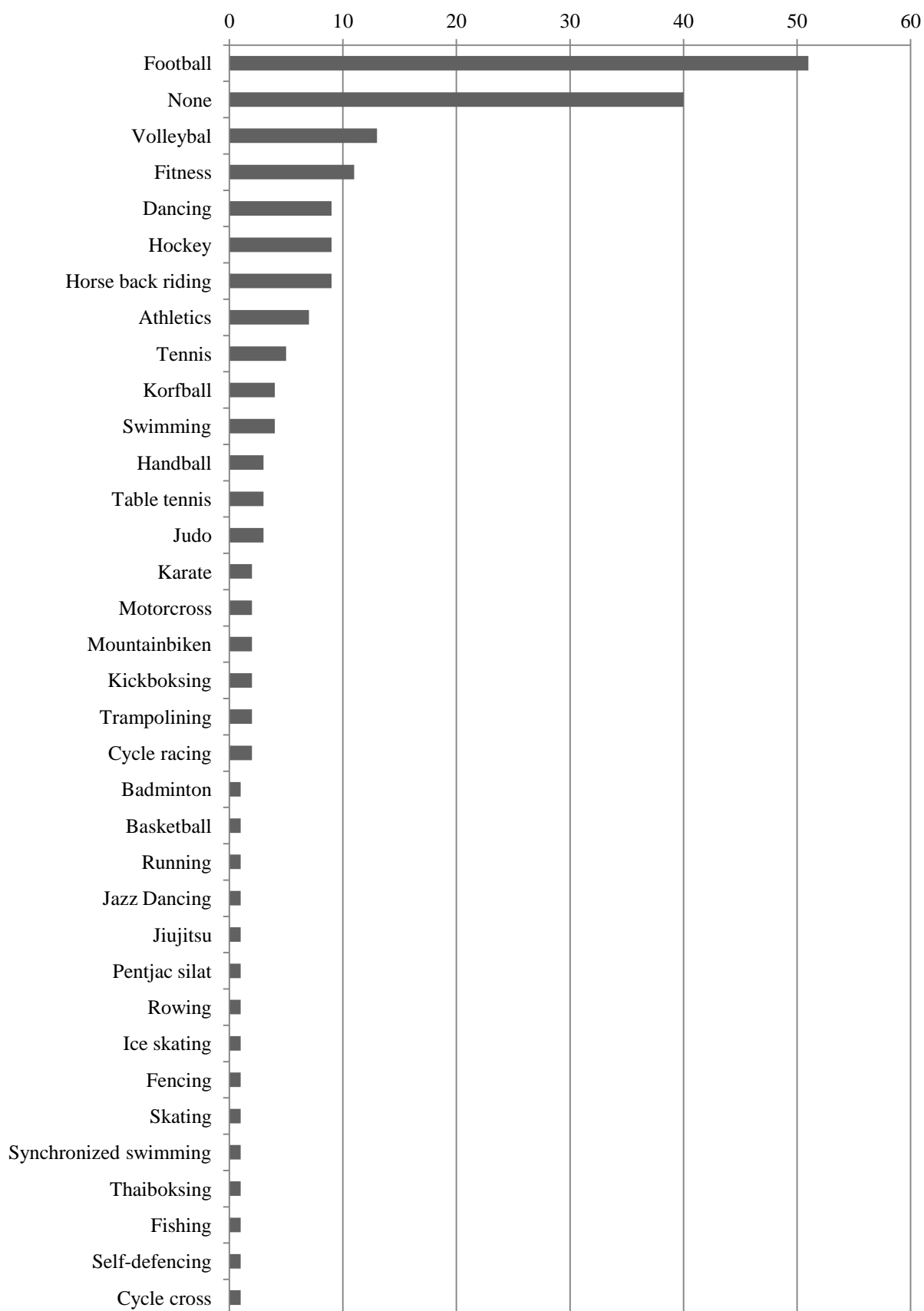
Personal Image

The personal image was measured using the questionnaires and therefore accounts for the research sample. The respondents indicated for each of the characteristics whether they would find it applicable, not applicable or neutral for the given sport using five levels. In the Likert Scale, the first two levels belonged to 'not applicable' (1 and 2) and the last two to 'applicable' (4 and 5), which has also been used to calculate the values for the characteristics of the general image.

Attitude

To calculate the partial attitudes[11] as variables, the evaluation and the partial beliefs (either from the general image or on the personal image) were multiplied. However, in order to increase the intention it is important to have predictor variables or partial attitudes that positively relate to the intention. Therefore, when a partial attitude correlated negatively with the intention, the evaluations need to be recoded for these particular partial attitudes because the respondents did not evaluate that characteristic as important when choosing a sport or found the opposite important. After looking at the correlations of the partial attitudes with the intention, none of the evaluations needed to be recoded (see also the formula's below).

To get the partial attitudes per respondent and per sport, the following calculations are made for each sport:

- Partial attitude Elitist = Personal belief Elitist x Evaluation Elitist
- Partial attitude Exciting action sport = Personal belief Exciting action sport x Evaluation Exciting action sport
- Partial attitude Companionable = Personal belief Companionable x Evaluation Companionable
- Partial attitude Hard to learn = Personal belief Hard to learn x Evaluation Hard to learn
- Partial attitude Old fashioned = Personal belief Old fashioned x Evaluation Old fashioned
- Partial attitude Contributing to health = Personal belief Contributing to health x Evaluation Contributing to health
- Partial attitude Individualistic = Personal belief Individualistic x Evaluation Individualistic
- Partial attitude Prone to lead to injuries = Personal belief Prone to lead to injuries x Evaluation Prone to lead to injuries
- Partial attitude Good for perseverance = Personal belief Good for perseverance x Evaluation Good for perseverance

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[11] A partial attitude is the attitude for the sport based on one characteristic.

- Partial attitude Physical tough sport = Personal belief Physical tough sport x Evaluation Physical tough sport
- Partial attitude typical men's sport = Personal belief Typical men's sport x Evaluation Typical men's sport

Because of the existence of both a general image and a personal image, two forms of partial attitudes can be calculated: the partial attitudes based on the personal image (as can be seen in the formulas above) and the partial attitudes based on the general image. These partial attitudes for the general image can be calculated by multiplying the general belief per characteristic per sport with the personal evaluation for that characteristic.

Finally, the overall attitude per sport per respondent was calculated by taking the average of the formulas above. This can be put into two formulas:

- $Attitude_1$= Average of the multiplications of the personal beliefs and evaluations
- $Attitude_2$= Average of the multiplications of the general beliefs and evaluations

Social influences

The social influences are measured using three statements for each sport. To see whether these statements are reliable to measure the concept, reliability analysis has been done. The Cronbach's Alpha (α) is the most common measure of scale reliability, whereby an α close to one is wanted. For the social influences concerning badminton Cronbach's Alpha was 0,882. Deleting one of the items would not increase the alpha, and thereby the reliability was considered acceptable (Huizingh 2004). The variable for badminton is therefore calculated by taking the mean of the three statements, when all three statements are filled in.

For table tennis and tennis the same steps are taken. For the social influences for table tennis α=0,924 and for the social influences for tennis α=0,918 and thereby using these statements in order to calculate the variables is justified. Also here, the mean is calculated when respondents filled in all three statements.

Efficacy

To measure the variable of efficacy, five statements are used per sport. The Cronbach's Alpha are: 0,881 for badminton, 0,909 for table tennis and 0,907 for tennis. Only deleting one item for table tennis will lead to a minimal increase of the alpha but because the level is already high enough, none of the items will be deleted when calculating the overall variables. The variables are calculated by taking the mean of the five statements per sport, if respondents answered to all five statements for the sport.

Intention

The intention to participate in a sport was measured using three statements for each sport. Using these three statements to measure one variable (intention) for each of the sports is reliable with for badminton an alpha of 0,887, for table tennis $\alpha=0,912$ and for tennis $\alpha=0,934$. The variable for the intention (before it has been tested for meeting the assumptions) is calculated by taking the means for the three statements if all are responded to.

3.2.3   MEETING ASSUMPTIONS

In order to draw accurate conclusions from the data, it is essential that the data meet certain assumptions. The five assumptions that have to be met will be discussed in the following subparagraphs (Field 2009).

Normal distribution

The check whether the data are normally distributed, the P-P plot is used. When using the P-P plot, z-scores are calculated and compared to the expected z-scores. The straighter the line in the plot is, the more it can be seen as a normal distribution. The P-P plot is calculated for each of the used variables, and for most of them the line was straight and not pointy. Only for the variables measuring the intention, this was not the case. On a scale from one to five, most answers were one and therefore a normal distribution did not occur. Because of these limited spread in answers, the intention has been recalculated into two values: no intention at all (0) and (slight) intention (1). From the original answers, the answer representing no intention (one) was recoded into a zero. The answers representing some value of intention (two to five) were recoded into one.

Homogeneity of variance

Homogeneity of variance means that the variances should be the same throughout the data. To measure this, Levene's test was performed. The Levene's test tests the hypothesis that the variances in two groups are equal. Therefore, this test has been performed on all used variables in this research, with gender forming the factor list variable because this factor was not of interest in the rest of the research and therefore was supposed to act independent. If the variances between the groups would be equal, the p-value of the Levene's test should be greater than 0,05. Here all p-valued gave a higher value, and therefore it can be concluded that this assumption has been met for gender.

Interval data

The data in the database should at least be measured at an interval level. The use of Likert Scales and answering categories ranging from one to five resulted in data at an interval level, therefore it can be assumed that the data meets this assumption.

Independence

The assumption that the data are independent means that the data obtained by one respondent does not influence the data obtained by another respondent. In the data collection, students were handed out a questionnaire on either a soccer field or a schoolyard. The attendance of both the researcher as well as teachers made sure that the respondents did not discussed their answers with each other and therefore the data can be considered as independent.

Multicollinearity

After running the first analysis, the output for each sport shows that the variables intention, social influences and efficacy do not correlate highly with each other and therefore there is no multicollinearity. Correlations are however there, so they have to be taken into account when drawing conclusions.

3.3 CONCLUSION

Using primary and secondary data, all factors defined in the conceptual model have been defined, measured and calculated. Using an existing study directed at the general images resulted in secondary data providing the general image, and obtaining data using a quantitative research method provided the primary data for the other predicting factors as well as the predicted factor. First analyses showed that most data meet the required assumptions, although the factor intention needed to be recalculated. The following step is to further analyse the obtained data.

4   RESULTS

In this chapter, answers are provided on the four sub questions determined in chapter one. First the calculated values for the general images, already described in chapter two, will be given. Thereafter the personal image, measured using quantitative research methods, will be described. Finally, the relationships between the two attitudes based on the images, the other predicting factors in the model and the behavioural intention are given.

4.1   GENERAL IMAGE

The general images as found in the study of Hover and de Jong (2011) were based on 11 characteristics. After calculating the results of that study into values usable in this research, the values given in table 3 appeared. The values vary from 1 (least applicable) to 5 (most applicable). The bottom line of table 3 shows that the general image of tennis has the highest value, followed by respectively the general image of table tennis and badminton.

Table 3   Values for the general image per sport per statement

	Badminton	Table tennis	Tennis
Contributing to health	2,63	1,88	2,84
Prone to lead to injuries	1,72	1,40	2,72
Hard to learn	2,05	2,83	2,93
Elitist	2,61	2,34	4,01
Companionable	3,14	2,75	2,80
Individualistic	2,15	2,74	2,71
A physical tough sport	1,57	1,52	2,41
Contributing to perseverance	1,74	1,73	2,58
Old-fashioned	3,28	3,37	2,73
A typical men's sport	1,22	2,12	2,16
An exciting action sport	2,04	2,18	3,05
General Image	2,20	2,26	2,81

When looking at the specific characteristics forming the general image, some extreme scores are noticed. According to the Dutch population, badminton is not a sport prone to lead to injuries. Thereby it is not a physical tough sport and finally the characteristic typical men's sport is the least applicable characteristic for badminton. For table tennis, similar scores are visible: the sport is not prone to lead to injuries and it is not seen as a physical tough sport. Most remarkable score compared to both other sports is the low score on 'contributing to health' where table tennis has a very negative score (1,88). Of the three sports, tennis has the most positive general image (2,81), although also here most characteristics show a negative score of applicability. Tennis is mostly seen as an elitist sport (4,01).

Furthermore, tennis is not seen as a sport typical for men. But overall, the scores per characteristic remain in the middle (around three) meaning none of them is either much or not at all applicable to tennis.

Whether there are significant differences between the general images of the three sports cannot be researched, because it is the general image (held by the Dutch population) and therefore these scores are equal for each respondent in the research sample. The differences found would therefore apply to all respondents.

4.2 PERSONAL IMAGE

The personal images are studied among high school students using a quantitative research method. How these personal images were calculated can be found in chapter three.

For personal image, badminton applies the most with the characteristics companionable, individualistic and contributing to health (see table 4). Badminton is the least seen as typical men's sport and exciting action sport. When looking at the personal image for table tennis, a similar distribution as for badminton can be seen. Table tennis also applies more with the characteristics companionable and individualistic. Lowest scores can be found with the characteristics elitist and prone to lead to injuries. Where for badminton and table tennis most scores are on the low side of the scale, these characteristics do not describe both sports very well. For tennis however, this is not the case. For tennis more applicable characteristics can be found: contributing to health, prone to lead to injuries and good for perseverance. The only statements ranking relatively low are old fashioned and a typical men's sport.

Table 4   Mean value for the personal image per sport per statement (N=157)

	Badminton	Table tennis	Tennis
Contributing to health	2.82	2.52	3.34
Prone to lead to injuries	2.41	2.17	3.22
Hard to learn	2.43	2.56	2.94
Elitist	2.30	2.02	2.86
Companionable	2.91	2.97	3.00
Individualistic	3.10	3.12	3.11
A physical tough sport	2.25	2.35	2.99
Contributing to perseverance	2.56	2.68	3.30
Old-fashioned	2.75	2.61	2.77
A typical men's sport	2.13	2.20	2.45
An exciting action sport	2.08	2.22	2.82
Personal Image	2.53	2.49	2.98

To compare the means of the personal images, a paired samples t-test was conducted. When looking at the sports next to each other using a paired samples t-test, it becomes visible that the personal images for both badminton and table tennis deviate to the lower values, whereas tennis diverges to a more neutral personal image. For these three images, two significant differences exist. The output shows that there are no significant differences between the personal images of table tennis and badminton. The personal image of tennis however is significantly higher than the image of table tennis ($p<0,01$) and the image of badminton ($p<0,01$).

4.3 MOTIVATION FACTORS AND INTENTION

To investigate whether the general image and personal image of each sport relate to the other aspects forming the motivation factors and the intention, both the images were incorporated into the two attitudes first. In this paragraph the motivation factors (including the two attitudes) and intention are looked at more into depth: it provides an overview of the differences found between the three sports when it comes down to the motivation factors and the intention using a paired samples t-test. The relations between these factors can be found in paragraph 4.4 and 4.5.

First, the beliefs based on the general image are multiplied with the personal evaluations in order to calculate the $attitude_2$.

Table 5   The means of the $attitude_2$ per sport (N=181)

Badminton	6,6232
Table tennis	6,9947
Tennis	8,3368

The $attitude_2$ towards badminton differs significantly from the $attitude_2$ towards table tennis ($p<0,01$). Also the $attitudes_2$ towards table tennis and tennis differ significantly ($p<0,01$) as well as the $attitudes_2$ towards tennis and badminton ($p<0,01$). The $attitude_2$ towards badminton is the lowest here.

The personal image is used to calculate the $attitude_1$, therefore also the differences between these means are interesting (see table 6).

Table 6   The means of the $attitude_1$ per sport (N=163)

Badminton	7,6249
Table tennis	7,5493
Tennis	9,1444

Followed by the significant differences between the attitudes$_2$, significant differences are also found between the attitudes$_1$. The mean attitude$_1$ towards tennis is higher than the attitude$_1$ towards badminton ($p<0{,}01$), also the attitudes$_1$ towards tennis and table tennis differ with the attitude towards tennis having a higher value ($p<0{,}01$). The attitudes towards badminton and table tennis do not differ significantly.

Because the use of an attitude based on the personal image and an attitude based on the general image, also an analysis focusing on the differences between these attitudes is performed. The two attitudes towards badminton do show a significant difference, same can be said for the attitudes towards table tennis and tennis (all $p<0{,}01$), with the attitude$_1$ having the highest value for all three sports.

Another factor belonging to the motivation factors are the social influences. After calculating the means, the following values were found:

Table 7   The means of the social influences per sport (N=150)

Badminton	3,2489
Table tennis	3,2333
Tennis	3,3587

When looking at the paired samples t-test to see whether these means differ significantly, it can be concluded that two significant differences can be found. The means of the social influences of badminton and tennis differ ($p<0{,}05$) with tennis having the highest value, as well as the means of the social influences of table tennis and tennis ($p<0{,}05$). Tennis has the highest value.

Finally, completing the motivation factors, the differences between the efficacies for each sport were investigated. The following means appeared from the data but the differences between these means are not significant:

Table 8   The means of the efficacy per sport (N=150)

Badminton	2,9923
Table tennis	3,0563
Tennis	3,0884

Last factor within the conceptual model that has been measured is the intention. For the intention, the means were:

Table 9   The means of the intention per sport (N=149)

Badminton	0,4400
Table tennis	0,4765
Tennis	0,5400

To investigate whether the differences between the intentions are significant, a sign test was used because the variables are dichotomous (either zero or one). This test showed that the intention to play tennis differs from the intention to play badminton ($p<0,01$). The intention to play tennis also differs from the intention to play table tennis ($p<0,05$). No significant differences were found between the intention to play table tennis and badminton.

To sum up, all sports have a significant higher $attitude_1$ than $attitude_2$, where the $attitude_2$ towards tennis appears to be significant higher than the $attitudes_2$ towards respectively table tennis and badminton. On the other hand, when using the personal image to calculate the $attitude_1$, tennis appears to have the highest $attitude_1$ as well. This means that when the attitude is based on the general image, so the image people are not always aware of, people tend to have the most positive attitude towards tennis, and when based on the personal beliefs towards a sport multiplied by the evaluation, people[12] have the most positive $attitude_1$ towards tennis as well.

Looking at the other factors forming the motivation factors, the social influences have the most positive value for tennis. The scores for efficacy do not differ significantly between the sports. Finally, the intention is part of the conceptual model. Tennis has significantly the highest score on the intention compared to badminton and table tennis, meaning that the respondents are more likely to intend to participate in tennis than in badminton or table tennis.

4.4   INFLUENCES OF THE GENERAL IMAGE ON THE OTHER MOTIVATION FACTORS AND INTENTION

According to the conceptual model, there are numerous independent variables that possibly influence the dependent variable (behavioural intention). However, tests are necessary to investigate whether these independent variables are significant predictors.

Because there are three factors influencing the intention in this research (attitude, social influences and efficacy), only predictors making a significant contribution to predict the intention will be inserted into the final model. In order to get a model that only exists of predictors that make a significant contribution, the level of significance is used. When the level of significance of a predictor is less than

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[12] The respondents forming the research sample.

5% (p<0,05) the predictor is added into the final model. This 5% means that the found relationship has only a 5% chance of being based on coincidence.

To test the relationships, logistic regression was used. Logistic regression predicts the probability that an event occurs, thereby identifying the variables that are useful in making that prediction (Vaske 2008). After running the logistic regression test in SPSS, the following outcomes are important:

- *B*; is the coefficient. Using the B, the predicted log odds can be calculated by the formula: ln(odds) = B(constant) + B (attitude) + B (social influences) + B (efficacy). The B will be multiplied with the maximum score of the predictor. The ln(odds) can be converted into the predicted odds by exponentiation: $e^{ln(odds)}$. The e is equal to 2,718. This outcome will be used in the formula to calculate the predicted probability of intention (see the total formula on the bottom of this page) (Vaske 2008).

- *The predicted probability of intention*. This probability is calculated using a formula containing the predicted odds. The outcome of the formula is a percentage, giving the probability that a person has the intention to participate in that sport when having a maximum score on the predictor used in the formula (as this score was used to calculate the ln(odds)) (Vaske 2008).

- *Classification table*: compares the predicted to the observed outcomes in the database. If the independent variables of the conceptual model perfectly predicted all outcomes of the dependent variable, the classification table would show a 100% score on the overall percentage of correct predicted scores. Another variable providing insight in the fitness of the model is the Nagelkerke R2. The Nagelkerke R2 gives the amount of variance that is predicted by the combination of independent variables (Vaske 2008). Finally, the Hosmer and Lemeshow Test can be used. The level of significance of this test can be used to tell whether the model fits the observed data. If the test is not significant, the model fits the observed data (Vaske 2008).

To investigate whether the intention depends on the general image, the conceptual model will be used. As was concluded in chapter two, the intention can be predicted by the motivation factors existing of the attitude, social influences and efficacy. The attitude in this model will be the $attitude_2$ based on the general image of the sport. The model being tested using logistic regression in SPSS is:

$$Predicted\ probability\ of\ intention = \frac{e^{B0+B1*attitude2+B2*social\ influences+B3*efficacy}}{1+e^{B0+B1*attitude2+B2*social\ influences+B3*efficacy}}$$

In the formula, e is equal to 2,718. Furthermore, the B0 is the B given for the constant and every other B corresponds to the other predictors added to the model. However, predictors are only inserted into the formula if the B value is significant with $p < 0,05$.

4.3.1. BADMINTON

For badminton the model has been tested with the motivation factors including the $attitude_2$ as predictor of intention.

Table 10   Significance of the predictors for badminton (N=145)

Predictors	B	Level of significance
Constant	-1,398	0,306
$Attitude_2$	0,093	0,586
Efficacy	0,243	0,306
Social influences	-0,047	0,816

Here, none of the B values were significant (see table 10). So the conclusion can be drawn that none of these predictors has a significant relationship with the intention. Also only 57,2% of the observed intention is predicted correctly by the model, next to the fact that the model only accounts for 1,2% (Nagelkerke R^2) of variations in the intention. A percentage near 50% is the cut-off point here, because that percentage can already be achieved by flipping a coin[13] (Vaske 2008).

Where the $attitude_2$ has no significant relationship with the intention, neither does it correlate significantly with the efficacy and social influences. So the $attitude_2$ does not relate significantly with any of the factors in the model. One correlation that was found between the motivation factors is the correlation between the social influences and the efficacy (R=0,523, $p < 0,01$). Because no multicollinearity was found, this correlation is not a problem for the model. However it does show that the factors relate to each other (and therefore the one can influence the other) and therefore probably show some overlap.

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[13] A coin has two sides and therefore a 50% chance to fall on either head or tails. So when predicting the intention (being a dichotomous value: 'no intention' or 'intention') by flipping a coin, it is likely to predict 50% correct.

4.3.2. TABLE TENNIS

When looking at the same model but for table tennis, none of the predictors show to be significant (see table 11).

Table 11   Significance of the predictors for table tennis (N=143)

Predictors	B	Level of significance
Constant	-0,886	0,521
$Attitude_2$	0,044	0,786
Efficacy	0,048	0,849
Social influences	0,112	0,617

The non-significant predictors show that neither of them has a relationship with the intention to play table tennis. Thereby, the model would only predict 55,2% of the observed intentions correctly and 0,6% of the variations in intention can be explained using the model.

Similar to the correlations found for badminton, the efficacy correlates with the social influences ($R=0,581$, $p<0,01$). The $attitude_2$ does not correlate to any of the other predictors in the model and therefore does not play a significant role in the decision-making process.

4.3.3. TENNIS

When using the general image to calculate the attitude, also for tennis neither of the factors has a significant B (see table 12).

Table 12   Significance of the predictors for tennis (N=145)

Predictors	B	Level of significance
Constant	-1,670	0,216
$Attitude_2$	0,186	0,169
Efficacy	-0,039	0,871
Social influences	0,134	0,528

Thereby, the model would only explain 55,2% of the observed intentions and 2,3% of the variations in intention. Because for the other two sports, correlations were found between the predictors within the motivation factors themselves, also here the correlations between the $attitude_2$, social influences and efficacy were calculated. Similar as with the other two sports, the efficacy and the social influences for tennis correlate as well ($R=0,516$, $p<0,01$). However the influence of the $attitude_2$ does not come forward in these correlations because for tennis, the $attitude_2$ does not correlate with either the efficacy

or the social influences. Therefore, the conclusion can be drawn here that the attitude_2 has no significant relation with the intention, and neither with the other predictors within the motivation factors.

4.5 INFLUENCES OF THE PERSONAL IMAGE ON THE OTHER MOTIVATION FACTORS AND INTENTION

To investigate the influences of the personal image on the other motivation factors and the intention for each sport, similar analyses and calculations as for the role of the general image are done. Therefore here, the attitude_1 (based on the personal image) is the attitude of interest, resulting in the following formula:

$$\textit{Predicted probability of intention} = \frac{e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}{1+e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}$$

4.5.1. BADMINTON

To check whether each predictor makes a significant contribution to the model, the significance of the B is essential. In table 13 for each of the used predictors the B value and whether this value was significant is shown.

Table 13   **Significance of the predictors for badminton (N=145)**

Predictors	B	Level of significance
Constant	-1,472	0,085
Attitude_1	0,117	0,110
Efficacy	0,221	0,356
Social influences	-0,093	0,654

None of the predictors can be seen as significant predictors of the intention to play badminton because none has an acceptable level of significance. The model would only explain 54,4% of the observed intentions and thereby also only explaining 3,4% of the variations in intention.

Because the attitude_1 is the essence in this research, the attitude_1 is researched more into depth.

The attitude_1 contains of partial attitudes, based on the 11 characteristics. Therefore the same analysis has been done with the eleven separate partial attitudes. The following outcomes appear:

Table 14   Significance of the partial attitudes for badminton (N=123)

Predictors	B	Level of significance
Elitist	-0,096	0,156
Exciting	0,059	0,446
Companionable	0,002	0,958
Hard to learn	0,045	0,508
Old fashioned	0,059	0,377
Contributing to health	-0,050	0,398
Individualistic	0,071	0,180
Prone to lead to injuries	0,007	0,930
Good for perseverance	0,096	0,130
Physical tough sport	-0,139	0,058
Typical men's sport	0,086	0,176

None of the partial attitudes show to have a significant relationship with the intention, corresponding with the non significant relationship between the $attitude_1$ with the intention.

After concluding that neither the $attitude_1$ nor one partial attitude were positively related with the intention, the role of these (partial) attitudes within the conceptual model is low.

For badminton, the $attitude_1$ does not correlate with the other two predictors (social influences and efficacy) assuming to influence the intention. The social influences however do correlate with the efficacy with 0,523 (p<0,01). So the only relationship found in the predictive model for the intention to play badminton is the direct relation between the social influences and the efficacy. To increase the intention to play badminton, none of the predictors used in this research can be designated as being important according to the conceptual model. To increase the intention to play badminton, sports associations and marketers should therefore be more aware of other influencing factors, such as other motivation factors instead of focusing on the factors used in this research.

4.5.2. TABLE TENNIS

In response to the determination of the importance of the image in the decrease of membership numbers for the NTTB, the same model was researched for table tennis:

$$Probability\ of\ intention = \frac{e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}{1+e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}$$

Of course also here, only the variables that have a significant B will be added into the final model predicting the intention. For table tennis, the outcomes from logistic regression are shown in table 15.

Table 15   Significance of the predictors for table tennis (N=143)

Predictors	B	Level of significance
Constant	-1,768	0,047
Attitude$_1$	0,212	0,006
Efficacy	0,002	0,993
Social influences	0,023	0,922

Only attitude$_1$ seems to be a significant predictor here. Therefore, the same analysis was done with only the attitude$_1$ as a predictor giving a B of 0,230 and a B for the constant of -1,840 leading to the following formula:

$$Predicted\ probability\ of\ intention = \frac{e^{-1,840+0.230*25}}{1+e^{-1,840+0.230*25}} = \frac{49,899}{1+49,899} = 0.980$$

This results tell that there is a 98,0% probability that a person with a score of 25 on the attitude$_1$ (coming from the multiplication of the highest value for the evaluative and the personal belief) has the intention to participate in table tennis activities. The model based on only the attitude$_1$ predicts 65,1% of the observed intentions. Thereby this model explains 9,3% of the variations in intention, and this model fits the data given the non-significant Hosmer and Lemeshow Test (0,307). Therefore for table tennis, and the NTTB, it is interesting to focus on the partial attitudes forming the attitude$_1$. To investigate which partial attitudes are significant, a model predicting the intention using all partial attitudes was tested.

Table 16   Significance of the partial attitudes for table tennis (N=125)

Predictors	B	Level of significance
Elitist	-0,035	0,601
Exciting	0,040	0,533
Companionable	0,026	0,494
Hard to learn	0,066	0,375
Old fashioned	-0,040	0,587
Contributing to health	0,022	0,733
Individualistic	0,040	0,416
Prone to lead to injuries	0,012	0,850
Good for perseverance	0,061	0,242
Physical tough sport	-0,074	0,244
Typical men's sport	0,077	0,271

In contrast to the relationship between the $attitude_1$ and the intention, none of the partial attitudes show to make a significant contribution to the model. This outcome is notable because it shows that the $attitude_1$ can be used to predict the intention, but none of the partial attitudes can be identified as a predictor. Meaning that the overall concept of $attitude_1$ is the most important factor, but influencing this $attitude_1$ through the use of one of the characteristics of the sport forming that $attitude_1$ offers no solution.

When looking at the interrelationships between the factors influencing the intention for table tennis according to the conceptual model, the similar relationship as for badminton was found. The social influences correlate with the efficacy with 0,581 (p<0,01). Thereby, the $attitude_1$ correlates significantly with the social influences (R=0,179, p<0,05) and efficacy (R=0,136, p<0,05). Therefore, the $attitude_1$ comes forward in more aspects than only the attitude itself. With the $attitude_1$ correlating with the social influences and efficacy, the attitude has an overlap with the other predictors in the model and thus plays for table tennis a larger role when predicting the intention than the probability based on the $attitude_1$ itself indicates.

So for table tennis, the $attitude_1$ showed to be of importance because it relates with the intention to play table tennis. Next to this direct relationship, the $attitude_1$ also relates to the social influences and efficacy that are the other two predictors in the conceptual model. Although these do not show a significant relationship with the intention, the role of the $attitude_1$ is noteworthy in the decision-making process for table tennis.

4.5.3. TENNIS

Finally for tennis, the same model was used:

$$Probability\ of\ intention = \frac{e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}{1+e^{B0+B1*attitude1+B2*social\ influences+B3*efficacy}}$$

After inserting these variables, the logistic regression analysis showed the following B values and levels of significance:

Table 17   **Significance of the predictors for tennis (N=145)**

Predictors	B	Level of significance
Constant	-1,230	0,170
Attitude$_1$	0,177	0,014
Efficacy	-0,132	0,601
Social influences	0,068	0,762

One of the predictors can be seen as significant predictors of the intention to play tennis because it has an acceptable level of significance: attitude$_1$. When running the same test with only the attitude$_1$ as a predictor, it has a B of 0,185 and the constant has a B of -1,499. Therefore the following formula appears:

$$Predicted\ probability\ of\ intention = \frac{e^{-1,499+0,185*25}}{1+e^{-1,499+0,185*25}} = \ 0,958$$

This outcome tells that there is a 95,8% probability that a person with a score of 25 on the attitude$_1$ has the intention to participate in tennis activities.

When looking at the fitness of the model based on the attitude$_1$, 59,9% of the observed intentions is predicted by the model. Second outcome showing the fitness of the model is Nagelkerke R^2, when predicting the intention to play badminton using the model based on the attitude$_1$ it accounts for 7,2% of the variations in intention. Finally, the Hosmer and Lemeshow Test gives a level of significance of 0,975, meaning that the model using attitude$_1$ as a predictor fits the data. Because the model based on the attitude$_1$ alone fits the data, the attitude$_1$ is researched more into depth.

Table 18   **Significance of the partial attitudes for tennis (N=129)**

Predictors	B	Level of significance
Elitist	0,014	0,796
Exciting	0,084	0,194
Companionable	0,019	0,678
Hard to learn	0,088	0,205
Old fashioned	-0,022	0,704
Contributing to health	-0,017	0,754
Individualistic	0,039	0,432
Prone to lead to injuries	0,001	0,992
Good for perseverance	0,081	0,199
Physical tough sport	-0,151	0,013
Typical men's sport	0,059	0,323

Followed by the fact that the $attitude_1$ relates to the intention, also one of the partial attitudes is significant. Therefore one partial attitude can be seen as useful when wanting to predict intention: 'physical tough sport'. When running the same analysis again but with only that partial attitude as a predictor, the B has a value of -0,004 and the B of the constant is 0,220, leading to the following formula:

$$Predicted\ probability\ of\ intention = \frac{e^{0,220+0,004*25}}{1+e^{0,220+0,004*25}} = = 0,579$$

Using only the partial attitude 'physically tough sport', there is a 57,9% probability that a person with a score of 25 on that partial attitude has the intention to participate in tennis activities. With a value above the cut-off point of 50%, the partial attitude contributes to predicting the intention. This outcome predicts 54,5% of the observed intentions and 0,0% of the variations in intention. The Hosmer and Lemeshow Test gives a level of significance of 0,586 and therefore the model does fit the data.

After researching the interrelationships, the similar relationships as for table tennis were found: the efficacy correlates with the social influences (R=0,516, p<0,01). And the $attitude_1$ correlates with both the efficacy (R=0,146, p<0,05) and the social influences (R=0,249, p<0,01). Therefore, also for tennis the $attitude_1$ is important when wanting to predict the intention, and in particular the partial attitude 'physically tough sport' while that partial attitude alone already leads to a 57,9% probability. In sum, it can be concluded that the attitude based personal image of tennis plays an essential role in the decision-making process for this sport.

4.6   CONCLUSION

It can be concluded that the most important factor relating to the intention is $attitude_1$. There are however differences between these relationships per sport. For two sports $attitude_1$ made a significant contribution to the probability of intention (table tennis and tennis) whereas for badminton this contribution could not be found. Also remarkable is the fact that tennis one specific partial attitude of $attitude_1$ showed to have a significant relationship with the probability of the intention, whereas for the other sports no partial attitude stands out. A more comprehensive description of the conclusions can be found in the next chapter.

5   DISCUSSION

In this chapter, the results are discussed. Central in this research was the question to what extent the intention to start participating in table tennis, badminton and tennis is related to the current image of those sports among youth. Therefore, the general image and personal image were investigated and described using secondary and primary data. Thereafter, both the images were integrated into the motivation factors of the conceptual model which made it possible to research the relationships between the current images of the sports and the intention.

5.1   THEORETICAL FRAMEWORK

This study was a first step to explore the influence of the image of a sport on the behavioural intention to participate in that sport. Because of the lack of research focusing on the role of images of sports in the behaviour towards that sport, the theoretical framework was based on more general research on destination images, sport event images and behaviour change in relation to sports. On the one hand, this led to the use of a model which contained numerous predictors of intention thereby contributing to the knowledge about the role of the image compared to other influencing factors. On the other hand, fitting in the image of a sport was difficult because it was not used inside this model before. However taken from the Value Expectancy Theory (Fishbein and Ajzen 2012), the use of the attitude containing the image did not agree with the conceptualizations of images found in other researches, consisting of the cognitive-, affective- and conative component (tri-component model). For future research, it is important to position the conceptualization of images of sports (such as the tri-component model) in a model showing the decision-making process. The use of the model in this research showed relationships, but a model especially directed at the images of sports might provide a better insight and above all, it is a better basis for future research directed at this subject.

5.2   METHODOLOGY

In the conceptual model the concept of image came forward in the general image and within the attitude, as part of the motivation factors. The attitude consists of the personal beliefs/scores on image aspects multiplied by the evaluatives, resulting in the $attitude_1$. To measure the role of the general image, the personal beliefs/images were replaced by the general beliefs/images in the calculation of the attitude, resulting in the $attitude_2$.

The general image was made quantitative after performing calculations on the research outcomes of Hover and de Jong (2011). To measure the personal image, questionnaires were conducted among high school students. Also, the questionnaire was used to measure the social influences and efficacy experienced for each sport, and finally the intention to start participating in the three sports. The questionnaires were conducted at two high schools during a sports- and activities day. Unfortunately, not all students had enough time to fill in the complete questionnaire due to obligations of the schools.

Second, the use of only two schools to conduct the research might have led to a distorted research sample because students at one school could have a similar image of a sport while making up half of the research sample. Third, approaching them on a sports- or activities day might have led to respondents wearing coloured glasses because they played another sport at the moment of responding. Finally, because the respondents were hanging out in groups they might have influenced each other. In the light of data collection, it is therefore useful to conduct future research in this field among a larger group of respondents, spread amongst more schools (when the research is done among high school students), and approaching them inside classrooms thereby increasing the chance that they are more focused on the questionnaire while filling them in, and at the same time do not participate in another sport, so less influenced by other sports.

5.3 RESULTS

Images

The general images of the three sports were defined in the report of Hover and de Jong (2011). Tennis had the highest general image (2,81[14]), compared to table tennis (2,26) and badminton (2,20). Tennis also has significantly the highest personal image of the three sports 2,98). Also here, table tennis comes second 2,53) and badminton last (2,49). All three general images are lower than the personal images measured in this research. These differences imply that either the image people hold towards a sport is more positive when they are actually aware of it, or the differences are caused by the different research samples used in both researches[15], in other words: the image held by youth is more positive than the image held by the total population. The latter reason is likely, because the image one holds towards a sport can depend on many factors, among which age and education level that both differ substantially between the research samples used in this research and the research by Hover and de Jong (2011). A research focusing on the differences of the images might provide more insight in the (cause of the) differences between the general image and the personal image, so whether this is in fact dependent on education and age. Also, using this design, a better understanding can be obtained about the relationships between both image constructs and the other motivation factors and the intention.

Attitudes

To investigate whether the intention to start participating in table tennis, badminton or tennis are related to these images, the role of the two attitudes compared to other factors within the conceptual model (social influences and efficacy) was analyzed. First of all, the $attitude_2$ of tennis scored higher than the $attitude_2$ of both table tennis and badminton ($p<0,01$). For the $attitude_1$ also tennis had the highest score. This means that both the general image and personal image of tennis complies the most with the evaluatives compared to the two other sports.

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[14] On a scale from 1 to 5.

[15] The general image is measured amongst the Dutch population between 15 and 80 years, whereas the personal image was measured amongst high school students between the ages of 12 and 18.

Social influences, efficacy and intention

When looking at the other predictors of intention, it can be concluded that the social influences are the most positive for tennis ($p<0,05$). This means that the respondents indicated that their family and friends would be more likely to approve their participation in tennis than their participation in either table tennis or badminton. The efficacy, so whether the respondents would find themselves capable of participating in the sport, did not differ between the sports. Finally, the intention (dependent variable) to start playing tennis was higher than the intention to start playing badminton ($p<0,01$) or table tennis ($p<0,05$). The higher intention to start participating in tennis is logical when looking at the membership numbers, which are much higher for tennis than for both the other sports (NOC*NSF 2011).

The role of attitude$_2$ for predicting intention

Logistic regression was used to research the relationship between the predicting factors and the intention. The predicted probability of intention, based on the use of the predictors for each of the three sports, was calculated using logistic regression. First, the attitude based on the general image was used in the analysis. For all three sports, the attitude$_2$ did not show a significant relationship with the intention. Neither did the other motivation factors (social influences and efficacy) and attitude$_2$ did not correlate with the efficacy or social influences. Because neither of these predictors related to the intention, it can be concluded that attitudes$_2$ towards the three sports don't relate (neither direct nor indirect) with the intention. Therefore it can be concluded that attitude$_2$ for badminton, table tennis and tennis do not play a significant role in the decision-making process. Because of the earlier conclusion that these general images are significantly lower rated than the personal images, this outcome might be positive for the three sports. After all, a more negative image towards a sport that significantly relates with the intention needs to be changed with the membership numbers in mind, which is difficult to achieve. However here, the relationship is not significant and therefore changes are not necessary[16]. The precise reason why no relationship was found between the attitude$_2$ and the intention is hard to determine. However a possible explanation can be found. With the personal image being more positive than the general image, the general images apparently did not reflect the images held by the respondents, in other words: the respondents held different general images than the one's measured by Hover and de Jong (2011). A relationship between the attitudes based on the general images and the intention is therefore not likely to occur, because one of the factors did not come forward from the same research sample and therefore does not correspond with their thoughts. So the attitude$_2$ tells in fact to what extent the general image held by the Dutch population between the ages of 15 and 80 matches the characteristics high school students (12-18 year olds) find important when choosing a

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[16] Changes comprise here changes in the attitude based on the general image among the research sample, for the three researched sports.

sport to participate in. Also the intention is measured amongst the 12-18 year olds. Logically, the attitude$_2$ towards the sports could become more positive (and thus arrive at the same level as the attitude based on the personal image in this research) when measuring the evaluatives amongst for example 70-80 year olds. This older age category would indicate other characteristics of a sport as important when choosing a sport whereas the older people get, the more they tend to choose sports based on the contribution to health, whereas younger people tend to choose sports that are fun and provide pleasure (van den Dool, Elling and Hoekman 2009). So when measuring the evaluatives and intention amongst the same age group as the general image was measured, the attitudes$_2$ are likely to be more positive and probably then, a relationship with the intention can also be determined.

In other research fields, such as marketing and tourism destinations, the (general) image did also relate to the intention (Hallmann 2011; Lee, et al. 2010). Therefore, next to the use of more similar research sample, other conceptual models need to be found (for example already used models in the tourism industry or marketing) which could provide more insight in that relationship than the I-Change Model provided in this research.

The role of attitude$_1$ for predicting intention

The same analysis has been done with the attitude$_1$ instead. Here, for both table tennis and tennis the attitude$_1$ showed to be a significant predictor of the intention, whereas the efficacy and social influences were not. For badminton, none of the predictors was significant.

For table tennis, there is a 98,0% probability that a person with a maximum score on attitude$_1$ has the intention to participate in table tennis activities. Predicting the intention using attitude$_1$ explains 65,1% of the observed intentions in the data. For tennis, there is a 95,8% probability that a person with a maximum score on attitude$_1$ has the intention to participate in tennis activities. The use of this model to predict the intention explains 59,9% of the intentions observed in the data. Whereas both models fit the observed data according to the non-significant Hosmer and Lemeshow Tests, the relationship seems to be the strongest for table tennis because of the larger probability but mostly because of the higher percentage explaining the observed intentions in the data. Therefore it can be concluded that the attitude$_1$ is helpful when wanting to predict the intention and therefore also when wanting to increase the level of intention for both table tennis and tennis.

Further analysis showed that for tennis also one partial attitude relates with the intention. The partial attitude 'physical tough sport' gives a 57,9% probability that a person scoring the maximum score on that partial attitude has the intention to participate in tennis activities. This outcomes predicts 54,5% of the observed intentions in the data. Because of the high probability it can be concluded that this partial attitude is helpful when wanting to increase the intention to play tennis.

In contrast, for badminton no relationships were found with the attitude$_1$. Therefore, the image does not play a role in the decision-making process for the intention to play badminton for the respondents in this research. The reason why the intention to play table tennis and tennis do relate to the attitude based on the personal image and the intention to play badminton does not, remains unclear. In the theoretical framework, a possible explanation can be found in the tri-component model. The tri-component model was mentioned in the theoretical framework because that model is more used in research directed at images of sports. The attitude used in this research is the extent to which an individual values certain behaviour (Ajzen, 1991) and this concept agrees more with the affective component in the tri-component model. For both table tennis and tennis the attitude, and therefore the affective component relates to the intention whereas for badminton this is not the case. It could be possible that for badminton the cognitive component is more important than this affective component, probably influenced by the fact that a lot of Dutch high school students have played badminton at their high school and therefore have more knowledge (cognitive component) about this sport than about the other sports which are hard to implement in a gymnasium. To sum up, whereas the attitude (affective component) towards table tennis and tennis related to the intention (conative component) this could not be concluded for badminton, probably the more known and played sport among high school students, wherefore relationships might be found between the cognitive component and the intention (conative component).

To get more insight in the role of the images in the decision-making process, future research should be based on a different conceptual model as was also concluded before. The use of another model is likely to result in advantages when a model already used in images research is being directed at the images of sports. This also because no clear explanation can be found for the lack of a relationship between the image of badminton and the intention to play that sport. However, models using more motivation factors originating from the field of marketing or tourism should be used here to integrate such a model and being able to define the role of the image in the total process.

6   CONCLUSION

When looking at the attitude based on the personal image it appeared that $attitude_1$ of tennis was higher than those of both table tennis and badminton (p<0,01). Also, the intention to participate in tennis activities was significantly higher than the intention to participate in table tennis and badminton. The $attitude_1$ of badminton did not relate to the (low) intention, but for both table tennis and tennis, this relationship was found. It is therefore not unlikely that the membership numbers are related to the (personal) images of both sports. Especially because the attitude based on the personal image towards tennis is more positive, corresponding with their higher membership numbers, whereas the attitude based on the personal image towards table tennis is more negative, corresponding with the lower membership numbers of the NTTB. In other words, where the tennis association experiences high membership numbers related to the $attitude_1$, the NTTB experiences low membership numbers, whereas the intention to start playing that sport relates to the (lower valued) $attitude_1$. For badminton the relationship did not occurred. Therefore, the lower $attitude_1$ amongst non-participants could in fact have led to a lower intention to participate in the sport resulting in lower membership numbers, thereby indicating the personal image plays a role in the decision-making process.

The claim of the NTTB that the decrease in membership numbers is related to the image problem cannot be discarded here (NTTB 2009). Of the two sports where $attitude_1$ related to the intention, $attitude_1$ towards table tennis was lower than the $attitude_1$ towards tennis (p<0,01), however the lower $attitude_1$ cannot be seen as a cause for the lower membership numbers, therefore the direction of causality remains unclear and should be the focus in future research. To research whether the attitude based on the personal image is in fact the cause for the lower membership numbers, and directing activities at improvement of the image are helpful for the NTTB, some questions for future investigation need to be answered first such as: "what is the direction of the relationship between the $attitude_1$ and the intention?", "what factors influence the $attitude_1$?" and "why is the relationship not found for every sport?". The first is important to establish whether the $attitude_1$ towards a sport can be seen as a cause for low, or high, membership numbers. It is not illogical that low membership numbers would lead to a lower $attitude_1$ towards that sport because apparently that sport is not popular, which can also lead to a vicious circle[17]. The second question is important for sports associations when wanting to change the $attitude_1$ held by their target groups because according to the I-Change Model (used as a basis for the conceptual model) the motivation factors including the attitude, can be influenced by the predisposing factors and awareness factors. Finally, getting more insight in why for some sports the $attitude_1$ does not relate to the intention is important, because this also might be

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[17] Having low membership numbers can logically lead to a lower attitude towards that sport by the Dutch population. That lower attitude towards the sport may in turn lead to a lower intention to play that sport, and therefore again lower membership numbers.

dependent on the research sample or the image itself. More research and research using another construct for images might provide answers to these questions.

7 RECOMMENDATIONS

The conclusions drawn in this research are important for researchers as well as sports associations. Based on the findings and the research methods used, several recommendations are given for future research (7.1) and for sports associations (7.2).

7.1 RECOMMENDATIONS FOR FUTURE RESEARCH

The results of this research give an indication that the attitude$_1$ towards a sport relates to the intention to participate in that sport. However because that relationship only occurred when the attitude was based on the personal image and only for table tennis and tennis, multiple recommendations for future research can be made.

First, because this research was conducted amongst a specific research sample, future research should use larger groups of respondents. This group should be spread over different age categories and different education levels so it represents the Dutch population in total. Doing this, more insight will be gained about the differences in attitude among the different groups in society (e.g. age categories), but also the chance of getting respondents with the same coloured glasses[18] will be reduced resulting in more reliable data.

Second, to define the precise role of the images of sports it is important to focus on the conceptualization of images of sports. In this research, the use of a model with the image integrated amongst the motivation factors showed that there are relationships. However the lack of a relationship between the attitude and intention for badminton that could not be explained using this model, makes that a model specially directed at the images of sports is needed to get more knowledge about the conceptualization of images and their role in the decision-making process.

Finally, to get more insight in the relationship of the attitude based on the personal images with the intention, similar research needs to be conducted for other sports as well. The results for these sports need then to be compared to the membership numbers of the particular sports associations to see whether the links found in this research exist for other sports as well. Either based on the conceptual model in this research or a new model, more and extended research will provide an increased insight in these relationships. Also, when finding these relationships more often, it will provide a reason to conduct research on questions that remained after this research: "what is the direction of the relationship between the attitude and the intention?", "what factors influence the attitude?", and "why is the relationship not found for every sport?".

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[18] In this research, only two schools are used. Students from one school, making up half of the respondents, could have the same view and therefore all hold a similar image towards a sport.

7.2 RECOMMENDATIONS FOR SPORTS ASSOCIATIONS

For sports associations such as the NTTB it is important to acknowledge the possible impact of the attitude$_1$ people hold towards the sport. Because the attitude$_1$ is based on the personal image, it is important to get more insight in the personal image held by the particular target groups of the NTTB such as youth, 35+ and companies (NTTB 2009). If the NTTB chooses to focus on 35+ or working people/companies instead, the personal image among these target groups need to be measured first because the general image did not relate to the intention and the relationships found in this research are not generalizable to for example other age groups, or sports.

So first, for marketers and sports associations it is of importance to know how their target group thinks of the company or sport. Difficulty for sports associations and marketers are the differences found in this research:

- Not every sport experiences a negative image;
- The relationship between the attitude$_1$ and the intention differs per sport and even lacks for one sport (badminton);
- The partial attitudes that relate with the intention differ per sport and only occurred for one sport (tennis);
- The general images do not relate to the intention.

These points show that when a sports association wants to respond to their hypothesized image problem, they have to set up a specified research in order to get more insight in the decision-making process for their own sport, among the target group they want to attract. Only then it can be established whether the attitude containing the (personal) image does indeed relate with the intention for that sport for that specific target group, whether there really can be spoken about an image problem and which particular aspects (partial attitudes) of the image are of importance.

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ONDERZOEK NAAR DE SPORTDEELNAME AAN DRIE RACKETSPORTEN

Aan de hand van deze vragenlijst willen wij te weten komen waarom jongeren kiezen om deel te nemen aan een bepaalde sport. Hiervoor is jouw mening erg belangrijk! Daarom zijn in onderstaande vragenlijst enkele vragen en stellingen te vinden die te maken hebben met jouw sportdeelname en -keuzes. Bij de stellingen mag je steeds aankruisen in hoeverre je het met de stelling eens bent. Er zijn geen goede of foute antwoorden. Het gaat om jouw mening. We vinden het erg fijn als je deze enquête invult. Het duurt ongeveer 5 minuten. De ingevulde vragenlijsten worden anoniem verwerkt, niemand komt te weten wat jij hebt ingevuld. Alvast bedankt voor je deelname!

[1] Welke sport(en) doe je op dit moment bij een vereniging of in een competitie?

_____

[2] Welke sport(en) heb je vroeger gedaan bij een vereniging of in een competitie?

_____

[3] In hoeverre zijn de volgende aspecten voor jou van belang bij het kiezen van een sport?

	zeer onbelangrijk	onbelangrijk	neutraal	belangrijk	zeer belangrijk
Het is een elitiste sport	❑	❑	❑	❑	❑
Het is een spannende actiesport	❑	❑	❑	❑	❑
Het is een gezellige sport	❑	❑	❑	❑	❑
De sport is moeilijk om aan te leren	❑	❑	❑	❑	❑
Het is een ouderwetse sport	❑	❑	❑	❑	❑
De sport is goed voor de gezondheid	❑	❑	❑	❑	❑
Het is een individualistische sport	❑	❑	❑	❑	❑
Het is een blessuregevoelige sport	❑	❑	❑	❑	❑
De sport is goed voor het doorzettingsvermogen	❑	❑	❑	❑	❑
Het is een fysiek harde sport	❑	❑	❑	❑	❑
Het is een typische mannensport	❑	❑	❑	❑	❑

[4] In hoeverre vind je badminton...

	helemaal niet	bijna niet	neutraal	wel	heel erg
een elitiste sport	❏	❏	❏	❏	❏
een spannende actiesport	❏	❏	❏	❏	❏
een gezellige sport	❏	❏	❏	❏	❏
moeilijk om aan te leren	❏	❏	❏	❏	❏
een ouderwetse sport	❏	❏	❏	❏	❏
goed voor de gezondheid	❏	❏	❏	❏	❏
een individualistische sport	❏	❏	❏	❏	❏
een blessuregevoelige sport	❏	❏	❏	❏	❏
goed voor het doorzettingsvermogen	❏	❏	❏	❏	❏
een fysiek harde sport	❏	❏	❏	❏	❏
een typische mannensport	❏	❏	❏	❏	❏

[5] In hoeverre vind je tafeltennis...

	helemaal niet	bijna niet	neutraal	wel	heel erg
een elitiste sport	❏	❏	❏	❏	❏
een spannende actiesport	❏	❏	❏	❏	❏
een gezellige sport	❏	❏	❏	❏	❏
moeilijk om aan te leren	❏	❏	❏	❏	❏
een ouderwetse sport	❏	❏	❏	❏	❏
goed voor de gezondheid	❏	❏	❏	❏	❏
een individualistische sport	❏	❏	❏	❏	❏
een blessuregevoelige sport	❏	❏	❏	❏	❏
goed voor het doorzettingsvermogen	❏	❏	❏	❏	❏
een fysiek harde sport	❏	❏	❏	❏	❏
een typische mannensport	❏	❏	❏	❏	❏

[6] In hoeverre vind je tennis...

	helemaal niet	bijna niet	neutraal	wel	heel erg
een elitiste sport	❑	❑	❑	❑	❑
een spannende actiesport	❑	❑	❑	❑	❑
een gezellige sport	❑	❑	❑	❑	❑
moeilijk om aan te leren	❑	❑	❑	❑	❑
een ouderwetse sport	❑	❑	❑	❑	❑
goed voor de gezondheid	❑	❑	❑	❑	❑
een individualistische sport	❑	❑	❑	❑	❑
een blessuregevoelige sport	❑	❑	❑	❑	❑
goed voor het doorzettingsvermogen	❑	❑	❑	❑	❑
een fysiek harde sport	❑	❑	❑	❑	❑
een typische mannensport	❑	❑	❑	❑	❑

[7] In hoeverre ben je het eens met de volgende stellingen?

	helemaal niet	bijna niet	neutraal	wel	heel erg
Mijn klasgenoten zouden het goed vinden als ik zou badmintonnen.	❑	❑	❑	❑	❑
Mijn familie zou het goed vinden als ik zou badmintonnen.	❑	❑	❑	❑	❑
Mijn vrienden zouden het goed vinden als ik zou badmintonnen.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan badmintonnen, zelfs als ik problemen of zorgen heb.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan badmintonnen, ook als ik me slecht voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan badmintonnen, ook als ik me gespannen voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan badmintonnen, zelfs als ik moe ben.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan badmintonnen, ook als ik druk ben.	❑	❑	❑	❑	❑

	helemaal niet	bijna niet	neutraal	wel	heel erg
Mijn klasgenoten zouden het goed vinden als ik zou tafeltennissen.	❑	❑	❑	❑	❑
Mijn familie zou het goed vinden als ik zou tafeltennissen.	❑	❑	❑	❑	❑
Mijn vrienden zouden het goed vinden als ik zou tafeltennissen.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tafeltennissen, zelfs als ik problemen of zorgen heb.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tafeltennissen, ook als ik me slecht voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tafeltennissen, ook als ik me gespannen voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tafeltennissen, zelfs als ik moe ben.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tafeltennissen, ook als ik druk ben.	❑	❑	❑	❑	❑

	helemaal niet	bijna niet	neutraal	wel	heel erg
Mijn klasgenoten zouden het goed vinden als ik zou tennissen.	❑	❑	❑	❑	❑
Mijn familie zou het goed vinden als ik zou tennissen.	❑	❑	❑	❑	❑
Mijn vrienden zouden het goed vinden als ik zou tennissen.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tennissen, zelfs als ik problemen of zorgen heb.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tennissen, ook als ik me slecht voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tennissen, ook als ik me gespannen voel.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tennissen, zelfs als ik moe ben.	❑	❑	❑	❑	❑
Als ik wil kan ik gaan tennissen, ook als ik druk ben.	❑	❑	❑	❑	❑

[8] Hoe groot is de kans dat je binnen een jaar gaat deelnemen aan:

	zeer klein	klein	neutraal	groot	zeer groot
een badmintontraining bij een vereniging	❑	❑	❑	❑	❑
een badmintonclinic op school of bij een vereniging	❑	❑	❑	❑	❑
een badmintoncompetitie of toernooi	❑	❑	❑	❑	❑

	zeer klein	klein	neutraal	groot	zeer groot
een tafeltennistraining bij een vereniging	❑	❑	❑	❑	❑
een tafeltennisclinic op school of bij een vereniging	❑	❑	❑	❑	❑
een tafeltenniscompetitie of toernooi	❑	❑	❑	❑	❑

	zeer klein	klein	neutraal	groot	zeer groot
een tennistraining bij een vereniging	❑	❑	❑	❑	❑
een tennisclinic op school of bij een vereniging	❑	❑	❑	❑	❑
een tenniscompetitie of toernooi	❑	❑	❑	❑	❑

[9] Wat is je leeftijd?

_____ jaar

[10] Wat is je geslacht?

- ❑ Man
- ❑ Vrouw

[11] Op welk niveau volg je onderwijs?

- ❑ VMBO basis/kader
- ❑ MAVO
- ❑ HAVO
- ❑ VWO
- ❑ Anders namelijk: _____

Einde van de vragenlijst.