An investigation of Information exposure and social stigmatization among students in the Netherlands

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Abstract

This paper investigated the social stigmatisation of HIV/AIDS and how this related to the information exposure of HIV/AIDS among students currently studying in the Netherlands within higher educational institutions. The study also took into account the group comparisons between Caucasian-Dutch and Asian-Dutch students which served as a unique study since this provided societal relevance for the overall population as well as the cultural differences within a single population, namely; Dutch and North-Eastern Asian individuals. In addition to cultural differences, gender differences between and within both sample groups were also investigated.

The results of the study provided insight to the social implications of both local Dutch and Asian-Dutch students and differences in the way each group perceives risk in terms of HIV/AIDS and how this relates to the information they are exposed to. Additionally, only looking at how people are exposed to information through the use of media was not enough, thus, linking information exposure to the social stigma of HIV/AIDS added value to the overall research, given that information shapes the perception a person has on a given topic. Using a quantitative approach, this study conducted online surveys (N=298) and utilised quota sampling methods in order to reach the specific target group for the study.

Based on the results of the research question and sub-research questions, the conclusion was made that information exposure positively relates to the social stigmatisation of HIV/AIDS among students in higher educational institutions in the Netherlands. The degree to which Caucasian-Dutch and Asian-Dutch students differ in their social stigmatisation of HIV/AIDS did not differ significantly, indicating that the ways they think about HIV/AIDS remain relatively the same. Information exposure differed on certain levels, however, overall did not differ significantly among both groups. Gender differences among and within these two groups did not differ but could not specifically be pointed out as to why this was the case. Possible reasons may lie within the design of the questionnaire. Recommendations based on the results suggest that shifting the focus of the study towards more differentiated groups may have been more ideal in analysing differences within a population.

Key words: Social Stigmatisation, Information Exposure, HIV/AIDS, Asian, Dutch, Netherlands.

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1. Introduction

Through globalisation, everything is becoming increasingly standardised by the ideas and commodities through which we experience our everyday lives (Levitt, 1983). As such, everything we see and do can be judged on a more global scale. So why is this all relevant? A pattern that can be seen throughout this study is information exposure, particularly in the Netherlands. It is important to understand the division of television stations and their content since this is considered as part of information. Other forms of media such as internet usage and print newspapers were also included but were not further elaborated upon in this paper since the variable that measured information exposure was composed of various information sources which included internet websites and newspapers, among others (Brug et al., 2004).

Additionally, this study sought to investigate how people stigmatized HIV/AIDS in accordance with the information they have been exposed to and how they have been educated regarding this matter. Thus, to what extent does this knowledge translate to their overall perception in contracting this virus? Research has shown that peoples perceived risk (in the Netherlands) of contracting the common cold (72.9%) or having an accident at home (52%) according to Brug et al., (2004) is more likely to occur than being infected with the HIV/AIDS virus (1.9%). Moreover, looking at how males and females might differ regarding this particular topic posed an interesting point for investigation. Gender in this research acted as the moderator variable. Healthcare knowledge differs between males and females, as well as distress signals between genders (Kennedy et al., 1995). Taking gender into account provided a better overview for the investigation. Gender is further discussed in the theoretical framework.

An abundance of research has been done, linking information exposure to social stigma in different countries (Bos, A.E.R., Kok, G., & Dijker, A. J. 2001), however, these studies took into account the general population and did not investigate the cultural differences within the population of the country, and as such this research poses a unique standpoint and complements existing research. The sexual healthcare industry can potentially benefit from this research, since it unveiled insights to the stigmatization of students and in turn, companies are able to adjust to their preferences in a way to assist in the understanding of HIV/AIDS if they chose to do so. Governmental institutions are able to gain a more in-depth understanding of how people perceive HIV/AIDs in their country while at the same time implement nationwide strategies which allowed added attention to HIV/AIDs if needed.

Not only will the Netherlands benefit from this research, but other developed countries within proximity as well, such as Germany.

Currently, the total population of the Netherlands from 2013 is over 16.7 million citizens. Of those 16.7 million, 796,243 of the population are non-Dutch and of those non-Dutch, 97,337 constitute the Asian population (CBS statline, 2013). Since this study focussed on the Netherlands, taking into account the local Dutch population was essential as they are most likely the target group who have spent the most amount of time exposed to information broadcasted by the various forms of media. Since the second largest number of citizens within the Netherlands is comprised of people from Asian decent (CBS statline, 2013), using this group as a comparison was deemed relevant for this study. Including this group of people enabled a larger reach for the target sample. Noting that within this Asian population, the study focussed on the Asian-Dutch students, meaning students of Asian descent but who were born and raised in the Netherlands. The reason for selecting students of higher education rather than middle school or high school students is because during higher education, students should already have basic health education in either middle or high school curriculum (Weaver et al., 2005). It is important to note at this point that North-Eastern Asian countries were selected for this study rather than collectively grouping all Asian countries as one. This is because within Asia, there are a number of countries with various regional cultures and ideals and as such narrowing this down to North-Eastern Asia which included; China, Hong Kong, South Korea, Taiwan and Japan, allowed the investigation to analyse each of these countries more in depth. The reasoning behind using a comparison group from another ethnic background was the cultural differences that already exist between these two groups (Hofstede, 2010).

Moreover, ethnic backgrounds were considered in order to note any cultural differences between the sample groups, within the country. Using Hofstede's cultural dimensions, an analysis of the two main cultures (Caucasian-Dutch and Asian-Dutch) were investigated. Since these two cultures served as a major part of this study, an in depth analysis of these cultures was made which was elaborated upon at a later stage. In addition to this, the study served as a basis for raising more awareness of HIV/AIDS among students in the Netherlands and in effect, taking preventative measures against contracting HIV/AIDS and other sexually transmitted diseases (STDs). Being able to investigate information exposure and link the social stigma behaviour to this, allowed for a deeper understanding of

why people perceive HIV/AIDS as a low risk in the Netherlands. The results of the study provided insight to the social implications of both local Dutch and Asian-Dutch students and differences in the way each group perceives risk in terms of HIV/AIDS and how this relates to the information they are exposed to. Additionally, only looking at how people are exposed to information through the use of media was not enough, thus, linking information exposure to the social stigma of HIV/AIDS added value to the overall research, given that information shapes the perception a person has on a given topic (Gutierrez, 1994).

Although there had been a variety of studies, which investigated information exposure on people in combination with social stigma, ways in which one is able to reduce the social stigma of HIV/AIDS have yet to be done. Using mass media as an intervention tool, in an attempt to reduce social stigma is one way to ensure results (Brown, Trujillo and Macintyre, 2001). Incorporating these strategies into media forms such as documentaries is one strategy to emphasise and attempt to reduce the social stigma of HIV/AIDs (Brown, Trujillo and Macintyre, 2001). Additionally, taking into account the group comparison (Caucasian-Dutch and Asian-Dutch) served as a unique study since this provided societal relevance for the overall population. By law in the Netherlands it is required to have a health care plan, whether it is basic or full coverage (Daley and Gubb, 2013). Since health care plays a large role in the Netherlands, this research could assist in future policy making of the health care system and raise more awareness of HIV/AIDS provided that the state is responsible for protecting their citizens against illness and other diseases.

The research question served as an investigative stand point in order to explore the relationship between information exposure and social stigma. Focussing only on students in the Netherlands, group comparisons were made between the Caucasian-Dutch and Asian-Dutch students to increase the scope of the study. Looking at specific variables such as gender, social stigma and information exposure, sub-research questions was formed in order to provide a detailed and relevant analysis for the study which can be found in the theoretical framework. As described by Hofstede (2010) using cultural dimensions to compare the Dutch culture with North-Eastern Asian culture justified group comparisons within the Netherlands.

Based on the information provided, the following research question was developed;

To what degree does information exposure relate to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands?

Based on this research question, a number of sub-research questions were formed into order to measure the group comparisons with regards to their information exposure and social stigma of HIV/AIDS. This study investigated the relationship between information exposure and social stigma, additionally also looking at the differences of these concepts between Caucasian and Asian-Dutch students. Moreover, gender was also compared between and within both groups.

As a result of the main research question; *to what degree does information exposure relate to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands?* The following sub-research questions were formulated which aided in the analysis of both sample groups, looking at differences in their social stigma and information exposure between groups as well as the differences among genders between and within both sample groups:

1) *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their information exposure?*

The aim of this question was to gain a better understanding of the differences in information exposure between the two sample groups.

2) *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their perceptions of social stigma of HIV/AIDS?*

The aim of this question was to form a better understanding between the two sample groups with regards to their social stigma of HIV/AIDS.

3) *To what extent do male and female Caucasian-Dutch students differ in their information exposure?*

4) *To what extent do male and female Caucasian-Dutch students differ in their Social Stigma of HIV/AIDS?*

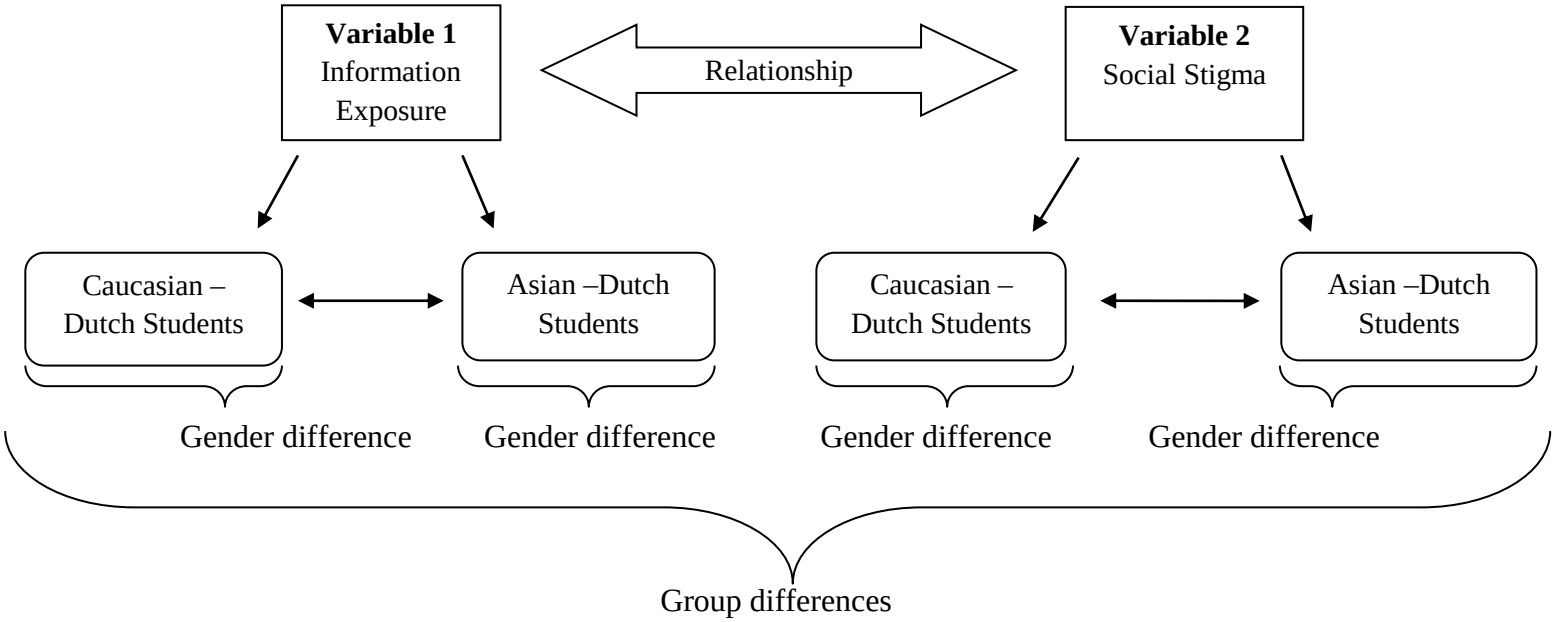
The aim of these questions was to investigate any differences between the genders within the Caucasian-Dutch sample groups regarding information exposure and social stigma of HIV/AIDS.

5) *To what extent do male and female Asian-Dutch students differ in their information exposure?*

6) *To what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS?*

The aim of these questions was to seek out any differences between the genders within the Asian-Dutch sample groups regarding information exposure and social stigma of HIV/AIDS.

Below you will find a visual representation of what was investigated for this study:



2. Theoretical framework

The literature presented in this section analysed the concepts of social stigma, information exposure and gender. Combining these concepts and connecting them to the overall research, formed the framework which was used as the basis for applying the study at hand. Applying this framework at a later stage allowed for concrete conclusions to be made.

Statistics have shown that the incidents of HIV/AIDS in the Netherlands are far lower (0.2% in 2010) than in other countries, both in Europe and other parts of the world. This implied that through the exposure of information and the social stigma behaviours, this led to a lower incident of HIV/AIDS, signifying that the social stigma of HIV/AIDS is low within the Netherlands. Although the incidents of HIV/AIDS are low in the Netherlands, the implications that this virus has on a society are deadly and should be viewed and treated as a potential threat upon a community or population. The proportion of incidents of HIV/AIDS in

the Netherlands only provided the sum of the entire population. Looking at the division between Dutch and other cultures were not stated. Hence, this study looked at the differences in stigmatisation patterns between two distinct sample groups.

The use of HIV/AIDS information in the Netherlands was investigated in order to shed light on the social stigmatisation among Caucasian-Dutch and Asian-Dutch students in the Netherlands. Reasons for this particular research was to fully understand and seek out whether there were any significant differences between ethnic groups using the natives of one country and foreigners who have attempted to integrate themselves to the local environment. Focussing on students; specifically higher education institutions gave access to a large spectrum of students that improved the probability of reaching the target groups selected for this research, particularly the Asian-Dutch Students. Moreover, sampling students from higher education in the Netherlands within these two ethnic groups were taken into account given that students (aged 18 to 25 years old) have had sex education in high school and assumed to have had at least one sexual encounter (Steele, 2014). As such, these students would have already familiarised themselves with the essential information regarding sexually transmitted diseases (STDS) and know the risks involved.

Having this preconception of STDS during high school education was important to consider. Sampling students who were still in high school or in early years of their education might have led to misunderstandings of the questionnaire and in turn lead to insignificant results for the overall study. Moreover, students at different ages do not interpret information in the same way. At older ages, students have a better understanding of the information that they read (Swanson and Howell, 2001). Given this, various information sources which when combined formed information exposure and was also taken into account, specifically focussing on Dutch information sources that included; Television, Newspapers, Radio, Internet among others.

2.1 Social stigma

Information continues to play an increasingly important role in how we perceive both society and the rest of the world in our everyday lives, including stigmatisation. Through this, stereotypes are formed based on how an individual perceives given information about another person or illness (Snyder and Tanke, 1977). Social stigma is defined as the perception that is formed through how a person shapes ideas portrayed either in the media or through other

information sources (Crocker and Major, 1989). Social stigmatisation can be classed as an illness or behaviour that is different from the norm (Goffman, 1963), thus individuals who encounter illnesses such as HIV/AIDS form a negative stigmatisation of the person having that disease because they are different from what society knows to be 'normal'. Goffman's (1963) discussion about stigma provides a basis for the understanding of stigmatisation and since then, various studies have been applied using Goffman's framework ranging from cancer studies (Fife and Wright, 2000) to mental illnesses (Corrigan and Penn, 1999) to measure stigmatisation on various levels in relation to the illnesses.

Stigmatisation varies on different levels depending on the illness or how much deviation from the norm an individual might be. HIV/AIDS shows the potential to have multidimensional stigmatisation (Alonzo and Reynolds, 1995). Alonzo and Reynolds (1995) identify three sources which propose schemas for understanding the variations of stigmatisation in relation to HIV/AIDS. A person that stigmatises illnesses is connected to deviant behaviour through either; producing it i.e. mental illness or being a product of it; in this case, spreading sexually transmitted diseases (Alonzo and Reynolds, 1995). Using Goffmans (1963) definition of explaining stigma; character blemishes, abominations of the body and tribal stigma as well as Katz (1981) who distinguishes four dimensions of stigma; threat, responsibility, visibility and sympathy. Additionally, also taking into account Jones et al., (1984) six dimensions of stigma; conceal ability, course, disruptiveness, aesthetic qualities, origin and peril. These three sources can be applied to an individual depending on how much they know about the given illness, hence, HIV/AIDS has multidimensional stigmatisation depending on how well informed an individual might be regarding the virus.

Alonzo and Reynolds (1995) further explain how these different dimensions contribute to the negative stigmatisation of HIV/AIDS. People who have HIV/AIDS are stigmatised for the reason that their illness is; 1) related to deviant behaviour, either as a product or producer of that given behaviour, 2) it is their responsibility to avoid these issues, 3) the actions which caused the individual to contract the illness were immoral, 4) viewed as something which is contagious and is a threat to the rest of the community, 5) their illness relates to an undesirable and un-aesthetic death, or 6) the illness is not well understood and is viewed in a negative light by health care providers. These stigmatisation motifs are essential for uncovering possible outcomes in this study because the point of investigation takes into account the stigmatisation of two groups of students with very distinct cultural backgrounds.

While one group, for the sake of argument; Caucasian-Dutch students might show a lighter stigmatisation of people living with HIV/AIDS and argue that it is an individual's responsibility to inform themselves about the risks and dangers of HIV/AIDS. Whereas the Asian-Dutch might find that people who have HIV/AIDS are highly contagious and are a threat to the rest of the community. Looking closer at these two groups, this study attempted to uncover the differences between these two groups of students with regards to their social stigma of HIV/AIDS.

The levels of stigma related experience with HIV/AIDS can also differ from one another depending on the individual faced with it. A person living with HIV/AIDS who has a strong connection with the gay community would most likely receive less negative stigmatisation than a person who has a larger network consisting of non-gay communities (Alonzo and Reynolds, 1995). Within the Netherlands, it is not frowned upon to be homosexual since the Netherlands is considered a tolerant country (Saharso, 2003). With the exception of some anomalies, generally, people living in the Netherlands do not negatively stigmatise against homosexual people. This in turn might reflect the perceived social stigma of HIV/AIDS. Additionally, a person who has contracted the HIV/AIDS virus or knows someone who has the virus might differ in their stigmatisation towards people with HIV/AIDS in comparison to someone who is not affiliated in any way with the virus. Social stigma as mentioned can have multidimensional levels depending on the individual. For this study, the concept of social stigma was comprised of three sub-concepts.

Within the concept of social stigma, for the purpose of this study, was divided into three sub-concepts (Perception of risk, Discrimination and Equality) in order to analyse social stigma on an individual level. Perception of risk can be defined as 'danger from future damage' (Douglas, 1994). In addition, "When defining perceived risk, a question arises concerning the need to consider its existence 'out there'" (Joffe, 2003, p. 56). Essentially there are many variances of risk and as such, risk, for the purpose of this study was linked with social stigma since the stigmatisation of a disease is a form of risk. Perception of risk was considered, seeing as perception along with discrimination and equality, when combined, formed social stigma (Genberg et al., 2008). Kaperson et al., (1988) discussed the social amplification of risk and made use of risk analysis to show that the channels of information are central when receiving information about risk. In this case, perceived risk was used as an

element to form the overall social stigma used for the study. The other elements which form social stigma for this study were discrimination and equality.

Discrimination is seldom discussed without linking it to stigmatisation. Discrimination is typically defined as being "treated unfairly" (Parker and Aggelton, 2003) which occurs commonly in contexts which discuss ethnic and race issues. Discrimination played a large part together with perception and equality in this study as it provided insight to the view points of students studying in the Netherlands and their opinions regarding HIV/AIDS. Equality in the context of HIV/AIDS closely relates to perception and discrimination. If a person perceives an individual that has HIV/AIDS negatively, they will in effect discriminate against them, thus treating them unequally (Visser, Makin and Lehobye, 2007). The three components were closely linked with one another as each concept was needed to measure the stigmatisation of HIV/AIDS (Genberg et al., 2007). A number of studies have investigated the stigmatisation of HIV/AIDS and in turn implemented strategies in order to either raise awareness or reduce the negative stigmatisation of HIV/AIDS.

The way in which these three concepts relate to one another is important when combining them to form social stigma. Measuring social stigma through questionnaires answered by the population is one way to analyse the stigmatisation of HIV/AIDS. Additionally, mass media can also have an influence in the formation of stigmatisation towards HIV/AIDS. In 1989, an 'Excuses' Campaign was launched in the Netherlands in an attempt to prevent the spread of HIV/AIDS (De Vroome et al., 1991). The success of this campaign meant that forming positive preventative measures in relation to HIV/AIDS assured the practices of safe sex among the communities. As such, the social stigma of HIV/AIDS was reduced, showing that information exposure has an influence on the way in which people think about HIV/AIDS and their stigmatization of the virus.

Given that media can have an influence on the social stigma behaviour, linking the use of information exposure and the social stigma was deemed relevant. A study done in 2003, based in Kenya sought to prove that mass media can influence the personal risk and self-efficacy. Results showed that exposure to branded advertising led to higher levels of personal risk (Agha, 2003). This explains the relevance of measuring information exposure in relation to social stigma. Stigmatisation alone can be formed through people's opinions, however, where this stigmatisation has come from, needs to be analysed through the

information they have received, hence, the information sources they have been exposed to. Different cultures search for health information in different ways. Thus, this study looked at the information use between two cultures within a single society; Caucasian-Dutch and North-Eastern Asian students currently living in the Netherlands.

2.2 Information exposure

Studying the social stigma behaviour among Caucasian-Dutch and Asian-Dutch students was significant since this provided a deeper understanding with regards to the information exposure and the social stigmatisation between these two groups. Hence, the use of the North-Eastern Asian population who are currently in the Netherlands proved to be a more significant point of investigation. A reason for this is that although both ethnic groups live in the same country and each group was exposed to a similar information environment, their cultural values in the home setting might differ. Therefore, the investigative stand point in which this research took place, served a basis for uncovering any differences in the social stigmatisation between these two groups. Moreover, how each group searched for information of coming into contact with the HIV/AIDS virus was also taken into account.

Media regulation, within the European Union follows similar laws and protocols in terms of what is being broadcasted on television (Cullen International, 2013). During the last years, there have been a number of campaigns broadcasted in the Netherlands such as the initiative by Dance4life, presenting people with HIV/AIDS and sharing their stories, along with charity programming to help children in developing countries who are born with HIV/AIDS, however, not much emphasis has been placed on HIV/AIDS within the Netherlands. The last successful campaign that was targeted towards young individuals broadcasted campaigns through radio, and print media which took place in 1991 (Myhre and Flora, 2000). Furthermore, among the total population within the Netherlands (16.7 million), 21,012 of the population are registered with having HIV/AIDS. This number in comparison to other countries shows a relatively low level of HIV/AIDS incidents. There is an abundance of information about HIV/AIDS; however, the amount of information that is broadcasted in the Netherlands is scarce, possibly due to the media regulation laws which are set for the European Union (Cullen International, 2013). Dutch information sources were taken into account as it reflected the social stigma behaviour of the respondents in question. As such, a

sub-section to this research was that exposure to certain information sources might have an influence on the public's social stigma behaviour.

The way in which humans are exposed to information determines how we react to certain sounds, movements or gestures. By paying attention to these attributes, we behave in the norm (Donohew, 1996). This linked closely with the cognitive needs that vary between each individual in terms of the levels of sensation seeking and sensation avoidance each individual would have (Zuckerman, 1990). A theoretical model based on an activation model of information exposure has hence been designed to measure the choice behaviours and cognitive needs of an individual. The model also suggests that there is an acceptable range in the levels of stimulation and if the individual finds the information stimulating enough, they will continue exposing themselves to this information. (Donohew, Lorch & Palmgreen, 1998). Taking this into account and applying this model suited well with the present research as it measures information exposure on various levels. Although this study did not specifically measure information sensation, this model served as a basis to seek out the preferred mediums each student used to gather information regarding HIV/AIDS.

The way in which people acquire information about health related issues has shifted from traditional media such as newspapers, television and radio, towards actively searching for health information and advice using the internet (Sillence et al., 2007). It is said that 80% of adults in the US and 66% of adults in Europe go online to seek health advice (Pew Research, 2003; Taylor and Leitman, 2002). Sillence et al., (2007) further explains that the problem arises when evaluating the quality of certain information on health websites. "...in a systematic meta-analysis of health website evaluations, 70% of studies concluded that quality is a problem on the Internet." (Sillence et al., 2007, p. 2). Keeping this in mind, this study focussed on students who are currently studying at higher educational institutions and as a student, the internet plays an important part when searching for information, it can be assumed that the internet would have been the preferred information source to read about HIV/AIDS among Caucasian-Dutch and Asian-Dutch students.

Other forms of information sources were also included for this study in order to investigate the differences between these sources among both groups of students. Moreover, the information acquired regarding HIV/AIDS by students in hindsight looked at how much they knew about HIV/AIDS. Henderson et al., (2004) noted that generally, older adults do not

know as much as younger adults (students) when it comes to HIV/AIDS which might signify that through the use of the internet that provides instant access to an array of information, students can easily read about HIV/AIDS. This was taken into account when choosing the target group for this study. Given that students would know more about HIV/AIDS, investigating how these students acquired this information and through which information sources provided more detailed results.

Furthermore, looking specifically at two sample groups (Caucasian-Dutch and Asian-Dutch), ways in which these two cultures looked for information was also considered. When looking for health information on the internet, different cultures search for information in different ways, "A sixth of Japanese health seekers (17%) report that they only look for information if instructed to do so by their doctors, while less than 5% do so in the United States (3%), France (4%), and Germany (5%)" (Morahan-Martin, 2004, p. 499). Typically, this looked at western cultures in comparison to Asian cultures which relates to this research when dealing with the Dutch and North-Eastern Asian culture. As noted here, there are already differences in the initiatives taken by individuals to search for health related information. While the United States, France and Germany can be viewed as Western cultures, the comparison in this case was Japan which is typically viewed as a North-Eastern Asian culture. Information exposure for the purpose of this study was divided into two sub-concepts; consumption of information and credibility of information sources. Investigating these two sub-concepts independently from one another shed light on the different information sources that Caucasian-Dutch and Asian-Dutch students use to read about HIV/AIDS.

Within the concept of information exposure, two sub-concepts were formed which contributed to the overall measurement of information exposure; Consumption of information sources and Credibility of information sources. Using these two concepts assisted in the measurement of the amount of information sources that was consumed in the last year and which information sources were considered most credible by the Caucasian-Dutch and Asian-Dutch students with regards to HIV/AIDS.

Brug et al., (2004) conducted a study which investigated the risk perception of severe acute respiratory syndrome (SARS) among the population in the Netherlands. Part of their study focussed on looking at which information sources respondents used to inform or keep

up to date about the developments of the SARS virus. The respondents were asked to provide an estimate of how much of each information source (Newspapers, Television, Radio, Internet websites, Doctors, Government agencies, Consumer or patient interest groups and Family or friends) they consumed in the last year in relation to the SARS outbreak. Additionally, using the same information sources, the respondents were asked to rate how credible they thought each information source was.

Baring in mind, internet is becoming increasingly more and more used when searching for health advice (Sillence et al., 2007). It was therefore assumed that both Caucasian-Dutch and Asian-Dutch students would most likely select internet websites as the most consumed and preferred medium for either reading about HIV/AIDS or being notified in case of an outbreak. Moreover, although both groups of students might find that internet is the best medium to receive information regarding HIV/AIDS, the information which is presented to them might not be as credible as they think. Sillence et al., (2007) noted that the quality of information on the internet may lack in certain areas. Given this, the use of internet, although most dominant among students, may not be so reliable as to say that they can fully trust the information they receive on the internet. These sub-concepts contributed to the present study by adapting the measuring instrument to cater for HIV/AIDS instead of SARS. As mentioned earlier, differences among these two groups might occur since the study focussed on two distinct cultures and the way these two cultures search for information may vary.

2.3 Cultural background

Children who are raised in a western society with different cultural views have parents who often remain within their own cultural heritage. One could in turn state that these children who adapt to the local culture are labelled as Third Culture Kids (TCKs) as described by Barringer (2001). Third Culture Kids are a group of youth who are different from the people surrounded by them (Pollock and Van Reken, 2001). Not only are these children different physically, they also have a different perspective of the world. This was important to keep in mind when comparing the Dutch culture with the North-Eastern Asian culture since the North-Eastern Asian culture not only differed physically but also in the way they think. Pollock and Van Reken (2001) describe Third Culture Kids in terms of children growing up in an international environment due to their parents moving to different countries

for work related purposes. This study specifically looked at students who were born and raised in the Netherlands; essentially, Asian-Dutch students would have obtained a Dutch nationality noting that they have lived in the Netherlands from the very beginning.

These students were still classed as Third Culture Kids because given the physical differences, Asian-Dutch students adapted themselves to the local culture which provided them with a sense of belonging to a particular country or culture (Eakin, 1996). These individuals who come from different cultures essentially come into first hand contact with changes which occur in their environment (Redfield, Linton and Herskovits, 2009). An emerging concept; Acculturation is seen through this, adding to what has been said about Third Culture Kids. Acculturation, not to be confused with culture- change which is only one aspect that constitutes acculturation as well as assimilation. Acculturation shows how two existing cultures within a single society are able to co-exist with one another, hence, North-Eastern Asian culture within the Dutch society. Furthermore, integrating into a particular culture i.e. Asian-Dutch students, showed the relevance for this study. The way in which Asian-Dutch students adapt themselves within the Dutch society collectively combined the concepts of Third Culture Kids and Acculturation respectively.

In the North-Eastern Asian culture, as defined by Hofstede's cultural dimensions, tends to lean more towards a collectivistic culture whereas in the Netherlands, people tend to follow the more individualistic culture (De Mooij, 2010). Given what has already been said regarding social stigma and how cultural differences can be apparent within one society, social stigma might differ between the two samples groups used for this research. Moreover, this aided in seeking out differences in social stigma behaviour among the two samples even though both target groups live in the same environment. Aside from looking at social stigma behaviour and information exposure, cultural differences were also taken into account. Hofstede's cultural dimensions show a broad perspective of the cultural differences between the Netherlands and North-Eastern Asia, as such, a more in depth understanding of the two cultures was needed in order to gain a better grasp of the selected participants of the study.

2.4 Cultural differences

Hofstede (2010) managed to synthesise various cultural dimensions for a number of countries. Depending on the country, each has their own cultural attributes which make each of the countries unique in their own cultural setting. Looking at the following figures below,

it is noted that the Netherlands has been compared to a select number of North-Eastern Asian countries that were provided by Hofstede's country comparison. It was important to note that the sample of the North-Eastern Asian population that was selected was based on their national status. Moreover, grouping the entire Asian population into one category is not ideal given that there are large differences between regional cultures within Asia. For the purpose of this study narrowing the Asian population down and only focussing specifically on North-Eastern Asian countries i.e. China, Hong Kong, South Korea and Japan allowed for better analyses to be done, assuming that these countries share similar cultural traits. Using Hofstede's cultural dimensions, these countries were analysed in more detail. Sampling North-Eastern Asian students who are from North-Eastern Asia originally but born and raised in the Netherlands was essential since part of the study looked at how one culture might adapt to another culture given the length of time spent in one place.

Significant differences can be assumed on most accounts and was expected since the Netherlands and the North-Eastern Asian countries have two very distinct cultures. As such, using North-Eastern Asian students for this research served its purpose as it showed one extreme culture in relation to the other. Cultural differences are important to keep in mind since this study looked at group differences within the Netherlands. Although Hofstede defines six different cultural dimensions, not all dimensions were relevant for this study, as such; a detailed description of Individualism, Masculinity and Uncertainty avoidance was elaborated upon. Individualism, Masculinity and Uncertainty avoidance were deemed most relevant since these dimensions reflect the variables social stigma, information exposure and gender which was investigated. Other dimensions also contribute to the core systems of each society, however the differences between the latter shows stronger contrasts between the North-Eastern Asian and Western societies and what was analysed in this study.

Figure 1.1 Hofstede Cultural Dimensions Model (2010): Netherlands.

Individualism

Individualism in the Netherlands scores high with 80 meaning that people in the Netherlands are more independent among its members.

Masculinity

For masculinity, the Netherlands has a score of 14 which indicated that the Netherlands is more of a feminine society.

Uncertainty Avoidance

The Netherlands scored 53 for Uncertainty avoidance, meaning that the Netherlands leans slightly more towards a society that seeks to avoid uncertainty if possible.

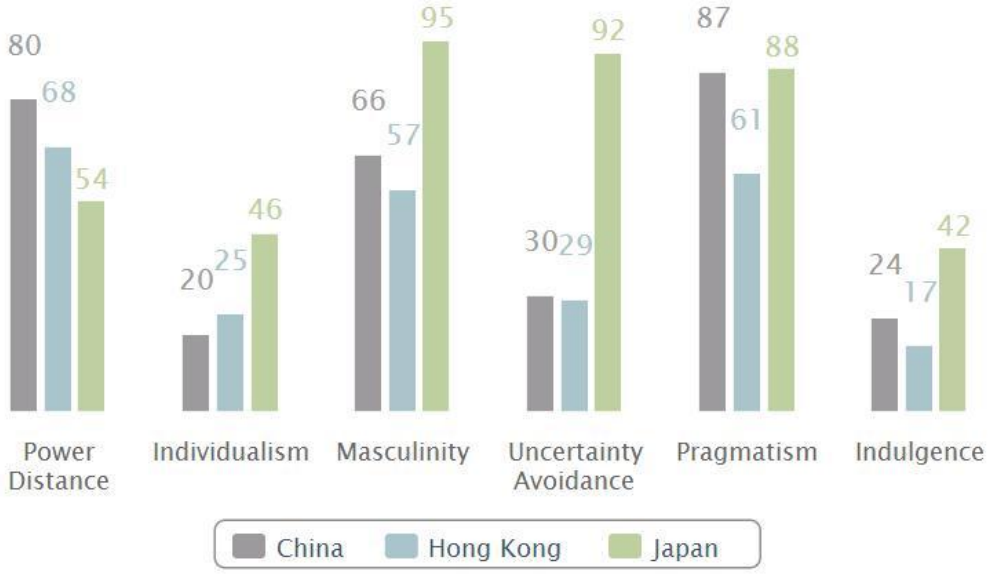


Figure 1.2 Hofstede Cultural Dimensions Model (2010): China, Hong Kong and Japan.

Individualism

China (20), Hong Kong (25), and Japan (46) all score below the average on individualism, meaning that the society tends to lean more towards a collectivist culture.

Masculinity

China (66), Hong Kong (57), and Japan (95) shows a significant difference in comparison to the Netherlands (14) meaning that all three countries score higher than the Netherlands which indicates that these societies tend to be more masculine rather than feminine.

Uncertainty Avoidance

Uncertainty avoidance for; China (30), Hong Kong (29) remain below the average meaning that the notion of rules and regulations can change to suit the situation in addition to being pragmatic. Japan (95) on the other hand exhibit high uncertainty avoidance, indicating that Japan follows strict sets of laws and regulations to keep structure within their lives. The same can be said about the Netherlands (53), however, does not score as high as Japan.

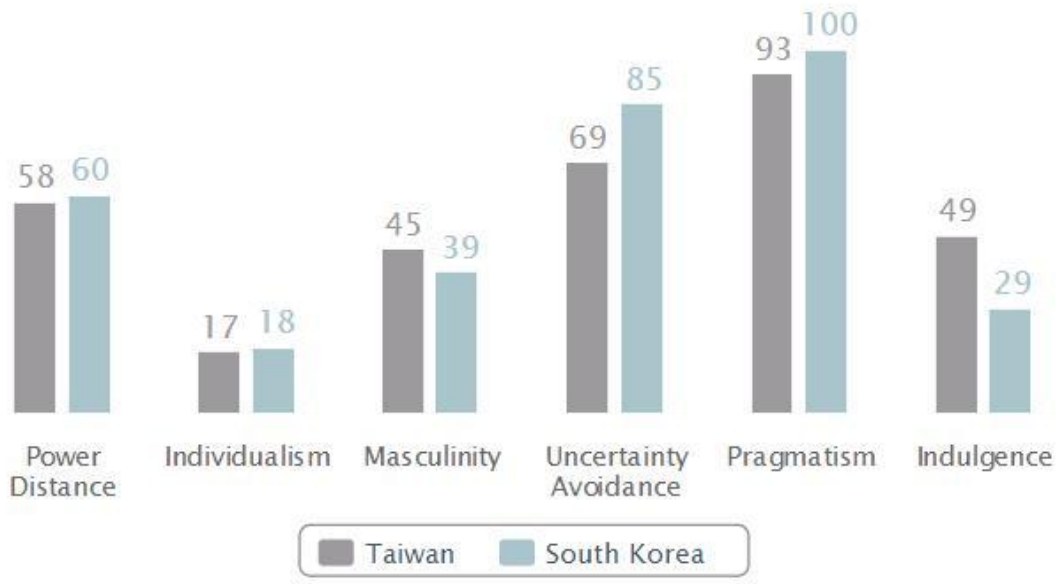


Figure 1.3 Hofstede Cultural Dimensions Model (2010): Taiwan and South Korea.

Individualism

Taiwan (17) and South Korea (18) score low for individualism which shows that North-Eastern Asian countries have a more collectivistic culture, indicating that loyalty towards groups are stronger than individual stances.

Masculinity

Taiwan (45) and South Korea (39), both countries score higher than the Netherlands (14), leaning more towards a feminine culture which entails a more balanced lifestyle between work and leisure.

Uncertainty Avoidance

Taiwan (69) and South Korea (89) score relatively high with this dimension which means that they follow strict rules and regulations, perhaps even stricter than the Netherlands (53).

A trend that is seen across all North-Eastern Asian countries in contrast to the Netherlands is that the North-Eastern Asian countries have a more collectivistic culture where family and loyal groups are formed and are the primary objective when making important decisions. However, the Dutch mindset tends to work on a more goal orientated level, where self fulfilment and making one's own decisions is more important. This was important to keep in mind, given that the Netherlands lives in a more individualistic society, the way Dutch students think may vary in comparison to the Asian-Dutch students. The dimensions of individualism and collectivism can be connected to social stigma for this study. The way this was connected, looking at the North-Eastern Asian cultures, is that being within a more collectivistic society, discussing topics within groups is important either among family or friends. Deciding upon what constitutes as bad or good is made through group consensus. In the case of HIV/AIDS, this would be a difficult topic to make a decision upon since this is seldom spoken of as it might be considered as somewhat of a 'taboo' (Yoshioka and Schustack, 2001) but is generally viewed as negative. Within the Dutch culture, topics such as HIV/AIDS are usually open for discussion, given that the Netherlands is more tolerant towards these types of topics (Saharso, 2003), with the Netherlands being a more individualistic society, each person has their own opinion about a given topic and can be discussed and debated with another individual in an open manner.

Masculinity differed greatly between the North-Eastern countries and the Netherlands. North-Eastern countries lean more towards a more masculine culture rather than feminine, noting that these cultures are success driven and less likely to have a 'work to live' attitude. Linking this dimension to the concept of gender within this study allowed for a better overview of the differences between males and females between each sample group. It was assumed that among the North-Eastern Asian sample group, males would strongly express their opinion regarding the topic, where as females might feel uncomfortable in answering such questions. In general, given that HIV/AIDS is a sensitive topic among North-Eastern Asians, questions regarding HIV/AIDS in the study might have driven them away in answering the questions truthfully. Provided what was said about the Netherlands according to Hofstede's cultural dimension. The fact that the Netherlands follows a more feminine culture, notes that people tend to be more open and comfortable in talking about such topics. Overall, masculinity and femininity is difficult to specifically link with gender since the context in which masculinity and femininity is spoken of, does not clearly reflect what is meant by gender for this study. Gender for the purpose study, simply looks at differences between males and females while in the context of Hofstede's cultural dimensions, the concepts of 'gender' were discussed based on how a society functions.

Uncertainty avoidance varies again between North-Eastern Asian cultures but is more diverse in comparison to the Netherlands. This dimension reflects the concept of information exposure used for this study. Although some North-Eastern Asian countries fall below the average for this dimension, other North-Eastern Asian countries scored higher than the Netherlands, signifying that measures are taken to avoid uncertainty. The way this relates to information exposure is through the channels which individuals seek information regarding HIV/AIDS. In the case of North-Eastern Asian countries that scored low i.e. China (30) and Hong Kong (29), people would seek information about HIV/AIDS only when necessary. The rest of the countries who show higher scores indicate that they will most likely inform themselves about HIV/AIDS beforehand to understand the risks and dangers involved if they need to deal with such a virus.

These dimensions were important factors to take into account when conducting this study since these characteristics were somewhat reflected in the results. Specifically, focussing on three of the dimensions that reflected the variables used in this study, provided a more in-depth overview of the focus for the study in terms of the sample groups.

Choosing to focus on North-Eastern Asian countries allowed for specific and direct comparisons to be done between the two sample groups. Including all countries within Asia in the study, would have required significantly more time since cultures within all the Asian countries differ greatly, thus, only selecting North-Eastern Asian countries that share similar cultural traits was more relevant and manageable for the time frame given. The reason for specifically looking at North-Eastern Asian countries was that the North-Eastern Asian community within the Netherlands appeared to be relatively large and by doing simple research, was easier to contact given the personal network of these students.

Overall, the Netherlands according to Hofstede (2010) follows a more feminine culture but does not necessarily mean that females and their views dominate the culture. Femininity describes the lifestyle in which the Netherlands lives in rather than the society being dominantly ruled by females. The same can be said for the North-Eastern Asian countries that are classed as more masculine that do not refer to males dominating the society but are more success driven. Not only was it important to note the cultural dimensions on a country level, but looking at the cultural settings within these countries, namely; high and low cultures as defined by Hall (1989) provided a more in depth understanding of the nature in how the Dutch and North-Eastern Asian culture communicate and share information within their society. Distinguishing between two different cultures and analysing their ways of thinking through the way they act as a community, allowed for a more in depth understanding of the Dutch and North-Eastern Asian culture. As such, looking at how high and low cultures differ from one another was important. High and low cultures provided additional information to what has already been said regarding Hofstede's cultural dimensions.

2.5 Low-context culture

Through the way in which information is portrayed, the Netherlands presents a form of low-context culture, additionally elaborating on Hofstede's analysis of the Dutch culture leaning more towards individualism. Individuals appear to be more fragmented and have little involvement with others (Hall, 1989). As a result, people are more effective in resolving conflicts in the work place and at the same time still able to maintain their personal relationships. Relating to Hofstede's dimension of the Netherlands being more individualistic, the Netherlands exhibits more of a low context culture, being able to keep work separate from their social setting. This contributes to the current study by noting the

way in which these individuals think about certain topics, people are able to reflect on issues in a more rational manner. This is then assumed that their social stigma of HIV/AIDS does not overlap with other knowledge of less dangerous illnesses such as the common cold.

In the social setting, people who follow the low context culture are easily affected by either the process or outcome of a project. Since the bond between co-workers are not clearly defined, as a result, when things go wrong, people will deviate from the project or leave completely. Commitment raises many concerns within low context cultures since they do not feel responsible for the outcomes of a project or business deal (Hall, 1989). Given that this relates to the work ethic of an individual, the Netherlands show some aspects of this behaviour given the individualistic mind set. In the long term this raises issues regarding commitment and responsibility in both the workplace and at home. Linking this to the context of this study, people that live and think in a low context culture environment might seek advice regarding the seriousness of HIV/AIDS on the internet and if still unsure, would discuss this with their family or friends.

The issue which arises from social orientation and commitment is responsibility. Within low context cultures, it is difficult to determine who is responsible unless it is explicitly written or clear; therefore, it is difficult to censure the person responsible for a task that was not done correctly given the flat structure of an organisation (Hall, 1989). Again, this is seen within the Dutch culture where in the work place, organisations view tasks and responsibilities in a more democratic light. Being more democratic leads to a flat structure of an organisation which can prove difficult when assigning tasks and making individuals responsible for particular tasks. Relating this to the present study, given what was said about the Dutch culture, although the Netherlands is considered more of an individualistic society, the Netherlands is more tolerant and are more open to talk about topics such as HIV/AIDS. As such, when children grow up, they are taught about HIV/AIDS and other STDS during high school as this is most likely part of their curriculum and is the teacher's responsibility to inform them about HIV/AIDS and its potential dangers. In contrast to this, North-Eastern Asian countries exhibit more of a high context culture which can be reflected and related to what has been noted using Hofstede's cultural dimension.

2.6 High-context culture

Within high context cultures, individuals retain a deeper mindset when commitment and social settings are involved. Contributing to Hofstede's cultural analysis of the North-Eastern Asian countries, Hall (1989) provides aiding information as to why North-Eastern Asian countries gear more towards a collectivistic society which led to the discussion of high context cultures. Individuals that exhibit a high context culture are deeply involved with one another and through this, a social hierarchy is constructed. More intimate relationships are made and commitments are followed through. This is seen within between the North-Eastern Asian countries based on the cultural dimensions provided by Hofstede (2010). Additionally, within collectivistic cultures, decision making and task division are decided upon as a group rather than from a single individual. In the context of this study, a scenario may occur where an individual might want to know more about HIV/AIDS; in turn he/she will search for information regarding HIV/AIDS either online or consult medical specialists. North-Eastern Asian cultures will not discuss these types of issues with family or friends since a topic such as this is considered a 'taboo' (Yoshioka and Schustack, 2001).

Social orientation within high context cultures correspond with group decisions rather than individual, which builds upon the North-Eastern Asian cultural dimensions of Hofstede's analysis, placing family first, continuing with friends and ending with the rest of the society. Within high context cultures, there is a clear line between outsiders and insiders (Hall, 1989). In order to become part of a group, a person from within a group would need to 'approve' the outsider while convincing the rest of the group. This is commonly seen within North-Eastern Asian cultures as they might view 'outsiders' as untrustworthy until told otherwise. In turn, they lack commitment to third parties. Relating this to the present study, given what was said about North-Eastern countries being more of a collectivistic society, although HIV/AIDS is not spoken of and might considered as somewhat of a 'taboo' it is the individuals responsibility to inform themselves about HIV/AIDS through other ways such as reading about it through the internet or consulting consumer or patient interest groups or even their own doctors. Within North-Eastern Asian cultures, consulting with someone of higher power or expertise allows for more trust to be given towards them. As such, seeking information about HIV/AIDS at their doctor or consumer or patient groups who are seen to be experts, will lead them to trust what they might say regarding the topic.

Applying what has been said regarding Hofstede's cultural dimensions together with High and Low context cultures, the two concepts complement one another and provided an in depth understanding of both the North-Eastern Asian and Dutch cultures. The cultural dimensions discussed; Individualism, Masculinity and Uncertainty Avoidance presented a range of values and beliefs between the North-Eastern Asian and Dutch culture. While Hall's discussion on High and Low context cultures takes things one step further in saying that not only do cultural dimensions play a role but what these dimensions exhibit, but are reflected in how a society functions. Hall's discussion on high and low context cultures additionally explains how high and low context cultures disseminate and interpret information, thus, linking to the concept of information exposure. Social stigma can be formulated through Hofstede's views regarding cultural dimensions.

Understanding the concepts of high and low context cultures and how this relates to Hofstede's cultural dimensions was important for this study since Halls (1989) interpretation provides additional information to what has already been discussed regarding the cultural differences between the Netherlands and North-Eastern Asian countries. One element that was not considered, which had an impact on the variance of results was gender. Gender, although not the main focus, was also considered since this study analysed the social stigma and information exposure among students. Male versus female interpretations generally speaking, is assumed to differ significantly between one another which in turn needed to be considered for this study.

2.7 Gender

Whether someone is male or female, each individual is unique in their way of thinking. Males often think more analytically than females, Winstead, Derlega, and Unger (1999) note that men are often 'guided by reason' whereas women tend to do the opposite and appeal more to the emotional side of a situation. Females in general have a better ability to decode non verbal cues and interpret facial expressions easier than males (Costa Jr, Terracciano, McCrae, 2001). Even though the general consensus is that genders would typically differ in opinions or behaviours, the possibility does exist that there may not be differences between genders with regards to specific topics.

Li et al., (2004) investigated the HIV/AIDS knowledge among Chinese college students taking into account geographic, gender and age differences. The results showed that

knowledge of HIV/AIDS did not differ between genders. Although knowledge of a given topic does not justify behaviours between males and females, there is a possibility that no differences could be found between males and females. Limited knowledge on a given topic from both males and females may lead to no difference in the perceptions of a topic i.e. HIV/AIDS. Furthermore, a study done by Ahmed et al., (2009) assessed the knowledge, attitudes and risk perceptions of pharmacy students with regards to HIV/AIDS. The results showed that there were no significant differences between males and females aside from subjects concerning Post Exposure Prophylaxis (PEP). Moreover, there were significant differences found between ethnic groups. This study proved that there is a possibility that perceptions between males and females do not differ, for the most part, not significantly between males and females. Keeping this in mind was important for this study because although gender was taken into account as a moderator variable, it was not essential for this purpose of this study. Ethnicity was also investigated by Ahmed et al., (2009) as such, contributed to the focus of this study. Looking at two ethnically different groups (Caucasian-Dutch and Asian-Dutch) in terms of their cultural backgrounds were taken into account which provided a larger scope for the investigation.

Taking into account all the concepts that have been discussed in this section formed the framework for the study. Knowing that social stigma was formed using three categories (perception of risk of HIV/AIDS, discrimination and equality) was important to know since the analysis measured each category collectively as well as individually. The same was done for the information exposure variable that consisted of two categories (Consumption and Credibility of information sources). Hofstede's discussion on the cultural dimensions of Dutch and North-Eastern Asian cultures were needed to understand the two sample groups used for this study. In addition that this, Hall's explanation of high and low context cultures complimented the discussion of Hofstede's cultural dimensions. All concepts that were mentioned contributed to the variables; social stigma, information exposure and gender which were analysed through the formation of the main research question and sub-research questions.

As a result of the main research question; *to what degree does information exposure relate to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands?* The following sub-research questions were formulated which aided in the analysis of both sample groups, looking at differences in their social stigma and information

exposure between groups as well as the differences among genders between and within both sample groups:

7) *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their information exposure?*

The aim of this question was to gain a better understanding of the differences in information exposure between the two sample groups.

8) *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their perceptions of social stigma of HIV/AIDS?*

The aim of this question was to form a better understanding between the two sample groups with regards to their social stigma of HIV/AIDS.

9) *To what extent do male and female Caucasian-Dutch students differ in their information exposure?*

10) *To what extent do male and female Caucasian-Dutch students differ in their Social Stigma of HIV/AIDS?*

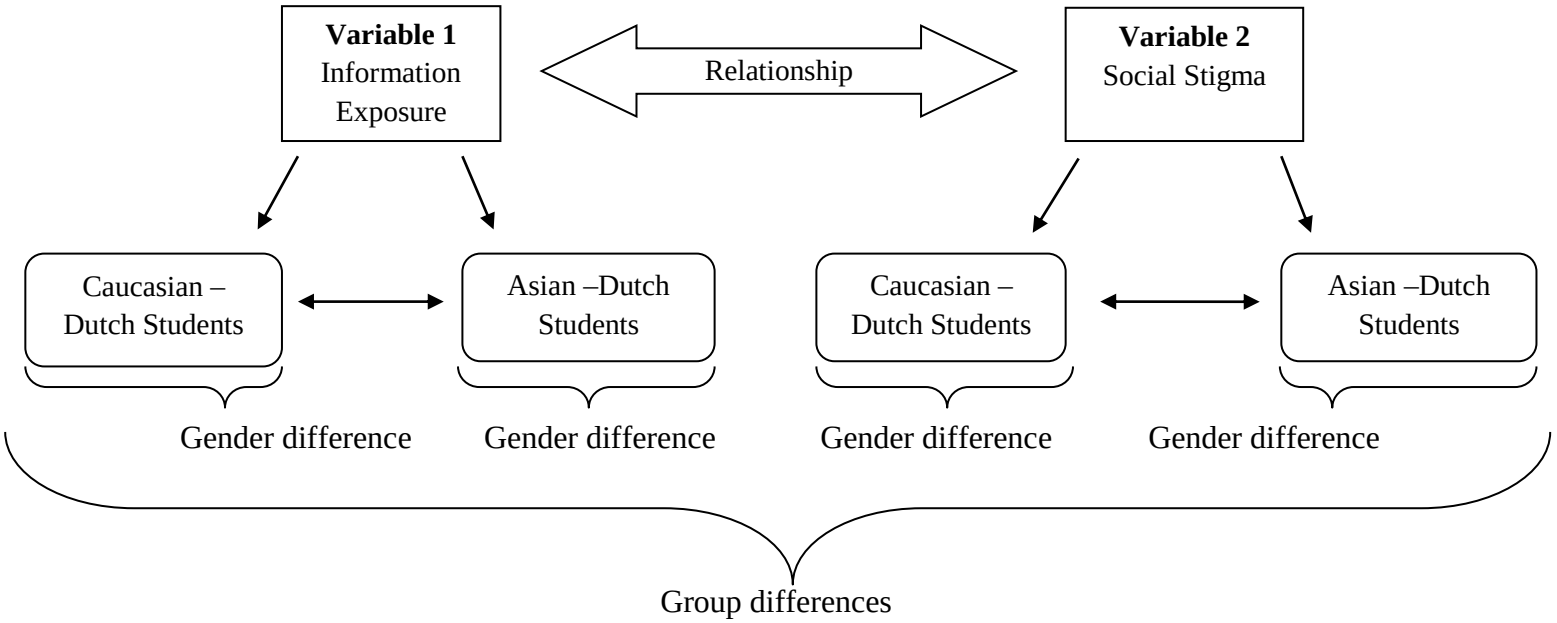
The aim of these questions was to investigate any differences between the genders within the Caucasian-Dutch sample groups regarding information exposure and social stigma of HIV/AIDS.

11) *To what extent do male and female Asian-Dutch students differ in their information exposure?*

12) *To what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS?*

The aim of these questions was to seek out any differences between the genders within the Asian-Dutch sample groups regarding information exposure and social stigma of HIV/AIDS.

Below you will find a visual representation of what was investigated for this study:



3. Methodology

3.1 Research design

This paper applies a quantitative approach, which provided a general overview of perceptions of social stigma in relation to information exposure on HIV/AIDS among students in Dutch higher educational institutions. An online survey was created based on two scales used in existing studies regarding information exposure (Brug et al., 2004) and social stigma (Genberg et al., 2007).

Surveys that are distributed online have the benefit of allowing anyone in the world to access the survey. With most people connected online, simply clicking on the link, which was provided made the survey more accessible (Schmidt, 1997). Developing an online survey saved both time and money. Schmidt (1997) raised the point that conducting online surveys allowed for more interactivity which could increase the motivation for respondents to complete the survey. This was important since more and more students were asked to fill in surveys by other students and by the University.

Additionally, Dillman (1998) presented some fundamental criteria to follow in order to achieve the highest response rate when conducting online surveys. Coverage, sampling,

measurement and nonresponsive error are all possibilities when designing and distributing online surveys. It was essential to keep all of these sources of error low in order to obtain reliable results (Dillman, 1998). Designing a questionnaire that is clear for the respondent was important and allowed for a higher response rate. Overall, there were some key criteria to follow, however, certain criteria were excluded since problems such as "Provide computer operation instructions as part of each question where the action is to be taken..." (Dillman, 1998, p. 10), since the survey was also designed online using a specific interface, respondents simply 'click' through for further questions. The point at which surveys became a problem during this study was when the distribution of surveys took place. The survey was distributed simultaneously while additional studies took place; as such the number of surveys which were circulating among students discouraged some students from completing certain surveys which caused survey fatigue. Survey fatigue poses a problem if there are more surveys being distributed at the same time regarding the same topic. This causes an overlap in the results for researchers and drove students away from doing the same or similar survey more than once (Porter, Whitcomb and Weitzer, 2004).

Moreover, this had an effect on the representativeness of the sample. Collecting representative samples which can be inferred back to the population raises issues when conducting surveys. Depending on the type of sampling, being able to have a sample representative to the population was difficult since some surveys do not use the proper technique (Krosnick, 1999) which in turn might also cause a bias towards certain surveys. Krosnick (1999) further explained the notion of bias in surveys. It was important to consider the demographic and attitudinal composition of the sample that was being represented. All these factors were taken into account when designing and distributing the survey for this study. Certain issues were found in the end, possibly relating to the design of the survey or the answers provided by the respondents.

Since these surveys were created and distributed online and among students, the sampling was done in large groups because this research focussed on students and large amounts of students could be surveyed without surveying the same students twice (Porter, Whitcomb and Weitzer, 2004). The data which was then collected was tracked in terms of the number of respondents who have completed the survey and how many outstanding surveys need to be completed according to each group. Using surveys for this research allowed for better comparisons between groups and provided a better overview of the results. Surveys

were distributed among different universities within the Netherlands, in total four universities assisted in the distribution of the survey. A total of three student associations spread out across the three universities helped by sending the survey to their members. The universities who assisted in the distribution of the survey provided the link to the survey through their intranet which is a channel message that contains all students within the university. This was effective in terms of reaching a large amount of students at once, however, did not necessarily reach the correct target group. Reaching the target amount of students for the Caucasian-Dutch sample did not pose any challenges; however, contacting and recruiting Asian-Dutch students appeared to be more difficult than anticipated.

Additionally, the student associations who were contacted were specifically Asian associations. With the three associations averaging 800 members in each association and predominantly consisting of Asian members, their assistance allowed for the target amount of students to be reached. The proportions of North-Eastern Asian students within these associations were not specified. However, the screening question at the beginning of the survey: *What is your ethnic background?* With the option: *Asian-Dutch (Both parents are Asian i.e. from China, Korean, Taiwan, and Japan. But you are born in the Netherlands)* ensured the sample of Asian-Dutch students were from Asian decent and were from one of the North-Eastern Asian countries. As a result, the target amount of students was reached. Moreover, contacting students within personal networks did allow for some respondents for the survey, however, was not as effective when contacting a student associations or a university that has a larger reach of students.

The surveys were designed for fast completion (approximately ten minutes) by the respondents. Towards the end of the data collection process, the response rate was high, meaning that all students who started the survey completed the survey with the exception of a few students who dropped out. However, more time was needed in order to collect the target amount of respondents; thus, neighbouring universities within the Netherlands were contacted again to recruit more participants. Moreover, the students associations within the universities who were also contacted were contacted again for the redistribution of the survey in order to increase the number of respondents to meet the overall target amount. Churches that hosted the North-Eastern Asian community were also contacted but no response was given regarding the distribution of the survey. Additionally, all surveys were done anonymously and confidentiality was kept.

The research focussed on students who were currently studying in the Netherlands. This was not limited to students at university level, but must be of higher education i.e. University of applied sciences. This was done for two reasons; students of higher education were assumed to have significant information exposure (Weaver et al., 2007) and were able to form individual opinions regarding their social stigma. Secondly, only sampling university level students would have limited the data that was collected for the particular group needed for this research, while having a wider range of students from other higher education backgrounds provided a broader overview. The results of the survey analysed the correlation between information exposure and social stigma. Additionally, group differences as well as gender differences were investigated between the Caucasian-Dutch and Asian-Dutch students and how these results related back to the main variables.

Main variables as mentioned before include: 1) information exposure, 2) social stigma and 3) Gender. The units which were connected to this variable were the two sample groups; Caucasian-Dutch and Asian-Dutch students who were cross compared using the three main variables.

3.2 Measurement

The survey that was created was a compilation from two different studies because this study measured two variables which were not yet conducted in one research. A scale provided by Genberg et al., (2007) assessed the HIV/AIDs stigma and discrimination in developing countries. The items used for that study was replicated and used for the purpose of this research. Within this study, three subscales were used in order to test the sub-research questions reflected in the study. This study collected data from two different cultures simultaneously which yielded similar and reliable results (Genberg et al., 2007). Brug et al., (2004) used a scale which looked at which sources people used for their information; magazines, television, doctors, friends, internet etc. Using these items was also replicated for the purpose of this study. The reliability and validity of these scales were essential since this study intended to replicate the items and adjust questions accordingly. A breakdown of the measurement scales are important to note since both concepts measured in this study contained more than one sub-category within them.

Given the three subscales (perception, discrimination and equality) questions were designed to specifically measure these concepts and when combined formed social stigma.

Questions that measured perception based on this study asked respondents to rate different statements on a five point likert scale, using statements such as: *people living with HIV/AIDS should be ashamed.* The respondent then rated this on the likert scale ranging from; completely disagree, disagree, neutral, agree and completely agree. To measure discrimination, the same method was used; however, statements were changed to suit the subscale which included statements such as: *people living with HIV/AIDS face neglect from their family*. Repeating this for the subscale of equality statements such as: *people with HIV/AIDS should be allowed to participate fully in the social events in this community* were used providing the same likert scale for measurement. For all statements used in this study please see appendix A.

Brug et al., (2004) measured information exposure regarding the severe acute respiratory syndrome (SARS). Given that SARS is a completely different virus than HIV/AIDS, the risk perceptions scale in this study was not replicated. However, the information exposure scale was replicated for this study since the scale used, only sought to measure the frequency of information and the preferred medium to receive information regarding SARS, thus, the same could be replicated to measure information exposure of HIV/AIDS. Although reliability and validity was not mentioned in the study, having obtained the original questionnaire from the author, it was assumed that the scale was reliable and valid to use and replicate for this study.

The two subscales that measured information exposure consisted of consumption of information and credibility of information. The way in which these questions were constructed was similar to the scale which measured social stigma. A five point likert scale was also used where respondents rated the different information sources ranging from; nothing, little, some, much and very much. The first subscale that measured consumption of information asked the respondent to rate on the likert scale how much of each information source they have consumed in the last year with regards to HIV/AIDS for this study. Information sources included: Newspapers, Television, Radio, Internet websites, Government agencies, Doctors, Consumer or patient interest groups and Family or friends. Using the same information sources, the respondent was then asked the rate on the likert scale how credible they think each information source was. For specific details about this scale, please see appendix A.

Combining these two scales into one overall questionnaire allowed for sufficient data to be collected for this research. Once the survey was designed, it was distributed according to the sample that was selected for this study.

The questions of the survey (see appendix A) were designed to retrieve truthful answers which contributed to the overall results and acted as a basis for further research regarding this topic. The time in which respondents needed to complete the survey was approximately ten minutes. A total of 39 items (23 to measure social stigma and 16 to measure information exposure) were asked to measure both concepts. The 23 items which measured social stigma was divided according the sub-category that was being measured (perception, discrimination and equality) and the same was done for the 16 items measuring information exposure (consumption and credibility). By separating these items in the design of the survey, allowed for students to complete the survey without any problems which might have occurred if all items were shown at once. Furthermore, this might have frightened students, thus resulting in incomplete surveys. Once the survey was created, the total amount of time needed to collect all 250 respondents was set for one month and a half. Adding the extra half month serves as a buffer period, if more respondents are needed, this was the time in which the surveys were distributed more frequently.

Using surveys for this research was considered most relevant for the reason that the data which was collected could be analysed directly once the number of respondents have been reached. Conducting surveys also ensured anonymousness of all respondents. Additionally, using the correct scales that measured the concepts were important in order for concrete conclusions to be drawn based on the data that was collected. Using the two existing scales, which measure both perceptions of social stigma of HIV/AIDS and information exposure on HIV/AIDS, were comprised into one coherent online questionnaire. This then was distributed among Caucasian-Dutch students and Asian-Dutch students who are currently studying in the Netherlands. This was done in order to investigate any cultural differences between them in terms of their information exposure and their social stigma of HIV/AIDS.

3.3 Sampling

The type of sampling for this research follows the criteria based on Babbie (2008). Quota sampling uses the approach by segmenting a population into different sub-groups. Once this is done, a portion of each sub-group is selected for the study (Babbie, 2008). Given

the context of this study using quota sampling for this research was deemed relevant as the sample was divided into sub-groups, namely; students currently studying in the Netherlands and narrowing this further into Caucasian-Dutch and Asian-Dutch students creates another sub-group which was investigated. Gender differences between these groups was also looked at based on the sub-research questions that were formulated which was discussed at a later stage. Conducting quota sampling has its advantage from an administrative standpoint. In contrast to random sampling, using quota sampling reduced the time needed to filter through the anomalies which were not relevant for the research. Quota sampling was also efficient when doing research over a short time (Moser, 1952). Disadvantages may include some bias towards the sample, which was not representative to the population. The probability of including the entire population was less likely with quota sampling than with random sampling; however, since this research looked at specific sub-groups, quota sampling was needed for the results to be representative of the two sample groups.

For the results of this study to be relevant and reliable, the number of respondents was crucial. Having a smaller amount of respondents would not reflect the overall population and therefore one would not be able to infer the results back to the population. As suggested by Hill (1998) a sample of 200-250 students was the aim for this research (100-125 students per group). The total numbers of respondents were initially lower than expected given the timeframe, thus, an extra two weeks were added accordingly to reach the target amount.

The original sample for this study was to collect 200 to 250 respondents; 100-125 Caucasian-Dutch and 100-125 Asian-Dutch students (Caucasian-Dutch respondents where both parents are Caucasian-Dutch and Asian-Dutch with Parents who are Asian but born and raised in the Netherlands). A total of 298 responses were collected with 125 Caucasian-Dutch and 122 Asian-Dutch students. The remaining 18 respondents together with the 33 respondents were classed as missing, thus were excluded from the dataset as they did not meet the criteria for the study. These respondents were a combination of the pre-test (N=33) and respondents who did not match the criteria for the study i.e. did not have a Dutch nationality or did not have Caucasian-Dutch or Asian parents (N=18). The timeframe in which these respondents were collected took longer than expected. A period of one month was allocated for data collection, however, due to the specific target group (Asian-Dutch students) an additional two weeks were added (not including the buffer time of two weeks) which was required in order to meet the desired number of respondents for this particular

group. Percentages between these two groups, 44.6% of the total sample were male while 55.4% were females. Within the Caucasian-Dutch sample, 41% were male and 59% were female. Within the Asian-Dutch sample, 48.2% were male and 51.8% were female who completed the survey.

3.4 Reliability and Validity

Social stigma was classed into three sub-categories which were measured collectively and individually to note any specific or general differences between the two sample groups as well as within them. The three sub-categories; Perception, Discrimination and Equality used a total of 23 items to measure social stigma. Genberg et al., (2007) assured the reliability and validity of this scale based on their evaluations of using the same scale in previous studies which also measured social stigma; hence the three sub-categories were the underlying constructs of stigma.

For each sub-category, ten items were used to measure perception; eight items used to measure discrimination and five items used to measure quality. Computing all these results in SPSS allowed for statistical analyses to be done for social stigma as a whole while also computing each sub-category individually, separate measurements were done to measure individual scores between both sample groups. No adaption to these items was needed since it measured social stigma of HIV/AIDS which was also measured for this study. Furthermore, Genberg et al., (2007) mentioned the way in which the scale was tested in order to ensure the validity of the scale, "This measure was tested among community members in both countries and assesses the attitudes of community members regarding HIV/AIDS, as well as their perceptions of how individuals with HIV/AIDS are treated in their communities and attributions of how they might experience HIV/AIDS stigma" (Genberg et al, p.773, 2007). The results of these tests showed good divergent validity for the items that were used and as such, was replicated for this study. Genberg et al., 2007 evaluated the reliability and validity of using their scale through the discussion of previous studies that also measured stigma at different levels. "Some researchers have suggested that the underlying contexts of stigma are similar enough across societies, both developed and developing, that a reliable and valid scale should prove useful in multiple contexts" (Van Brakel, 2006 as cited in Genberg et al., 2007). Given the evaluation of this scale, the items used to measure social stigma (23) for this study was reliable enough to be used for this study.

Genberg et al., (2007) ensured the validity of the scale used to measure social stigma through results that present psychometric analysis which comprised of the three components which form social stigma related to HIV/AIDS. One of the main concepts measured in this study was the social stigma of HIV/AIDS, thus, the validity of the scale used by Genberg et al., (2007) was relevant since it measured the same concept replicated for this study. "Item-to-total correlations and alpha coefficients with each item deleted showed good reliability for the first two subscales but somewhat lower reliability for the third subscale" (Genberg et al., 2007). Although the reliability for the third subscale was somewhat lower, the Cronbach's alpha (.71) was still valid in order to be used. By using a factor analysis, this study tested the validity of the scale and subscales.

Information exposure was comprised of only two sub-categories. The way in which these items were defined in each sub-category was similar in the answers that could be provided. The only difference lay in the framing of the question regarding the items. The two sub-categories Consumption and Credibility both had eight items. Consumption asked the respondent which item of each information source was consumed in the past year regarding HIV/AIDS i.e. Newspapers, Television, Radio, Internet websites, Doctors, Government agencies, Consumer or patient interest groups or Family and friends. Credibility, using the same items asked the respondent how much trust they had for each item. Combining these two sub-categories were the underlying construct that measured information exposure.

Brug et al., (2004) used items which were replicated for this study regarding information exposure. Although nothing is mentioned in the study regarding the reliability of the scale, the items used to measure information exposure were composed by one of the authors. Initially this would not be enough to ensure the reliability of the scale, however, a co-author of the study, was a former professor of the Erasmus University (Brug et al., 2004). Having noted this, the respective professor was contacted to obtain the original questionnaire used for the study and was then replicated for this study. Having received the original questionnaire ensured that the study had been conducted, thus was deemed reliable for this study.

Brug et al., (2004) do not note reliability and validity of this scale; however, the original questionnaire was obtained after contacting the authors, which was then replicated for this study. Additionally, Brug et al., (2004) stated that the questionnaire used for the study

was developed by the SARS Psychosocial Research Consortium (G.D. Bishop et al., unpub. data). Together with obtaining the original questionnaire used for that study, the reliability was assured by the authors. Having looked for other studies that replicated the same scale for their study, another study was found that applied the same scale developed by the SARS Psychosocial Research Consortium (Vartti et al., 2009). This study did not mention the reliability or validity of the scale. However, given that both studies that used this scale and having obtained the original questionnaire in order to be used for this study, it was assumed that the validity of the items used to measure information exposure was good. The scale needed to be adjusted because the scale used for Brug et al., (2004) looked at the information exposure of SARS rather than HIV/AIDS. The items used to measure information exposure were framed in a way that by changing the subject while keeping the same categories did not affect the results, thus adjusting the scale to suit this research was possible.

Before running any tests, a Cronbach's Alpha reliability analysis was done in order to confirm the reliability of the scales used to measure the two variables (Social Stigma and Information Exposure). For measuring Social Stigma, a total of 23 items were used based on Genberg et al., (2007). 16 items to measure Information Exposure were taken from another study (Brug et al., 2004) and combining these items, the relevant variables were measured for this study. Given that these items were replicated for the current study, it was already assumed that the reliability test would provide a positive result. For Social Stigma, a Cronbach's Alpha value of .95 was produced and for Information Exposure, a value of .71 for consumption of information and .86 for credibility of information. According to De Vellis (2003) any values above .7 are considered reliable, as such, further tests of the dataset could be made. Additionally, gender was also taken into consideration as part of the study, as such; looking at the percentages between genders within each group was investigated.

3.5 Type of data analysis

Before distributing the survey to the sample group of students, a pre-test of the survey was done among 10-20 respondents. This was done in order to ensure the understanding of the survey and to make any changes necessary in order to collect data which can be thoroughly analysed. Additionally, according to Pallant (2010), before conducting the correlation and t-test, a Cronbachs Alpha reliability test needed to be done using the data collected. This was done to ensure that the data which has been collected is relevant for the overall research. In order to check whether the data is valid, a Cronbachs Alpha of .70 needed

to be reached according to DeVellis (2003) and Pallant (2010). If the Cronbachs Alpha is below this value, the variable is considered invalid and cannot be used for further analysis for the overall research.

The data which was collected was all provided online, essentially creating a database where all answers to the survey were stored, as such; the data was in its raw form. The next step was to process the data and begin running analyses testing the research questions set for this research. Using the SPSS tool to analyse this data was essential, since this presented the results in a coherent manner. Within SPSS, various analyses could be done in order to test each research question, for this research a correlation and t-tests were done as this analysis showed the relationship between social stigma and information exposure. Using a correlation and t-test analysis provided a better understanding of the relationship between each variable (Pallant, 2010). A test that was needed when conducting correlation, that measures the relationship between the variables (positive or negative) is *pearsons r.* Pearson correlation coefficients (r) take on values from -1 to +1, the sign in front of the number only showed whether the variables have a positive correlation; when one variable increases, the other variable also increases or a negative correlation; when one variable increases, the other variable decreases (Pallant, 2010). Only looking at the number, showed the strength of the relationship of the two variables, if there is no correlation, the number data will show 0.

For t-tests, specifically focusing on independent samples t-test was relevant for this research since this test is used when comparing mean scores of two different groups of people or conditions (Pallant, 2010). An example focussing on this research was to look at the independent variable (e.g. Dutch and Asian-Dutch) and compare this with a dependent variable (e.g. Social Stigma). When conducting the independent samples t-test, it was important to know which values to look for. Once the calculations have been run and the SPSS output produced, looking at the Levene's test for equality of variances showed which figures to look for thereafter. If the sig. Value for Levene's test is greater than .05, one looks at the first line in the output which is the Equal variances assumed (Pallant, 2010). Conducting correlation and t-test focused on the main research question and sub-research questions that have been formulated rather than hypotheses, thus hypotheses have not been included for this research. Through SPSS, tables of the data were generated which provided an overview of the answers completed by the respondents. The results generated from the

surveys served as an interpretive analysis since the research sought to find the differences (if any) between the two groups of students in the Netherlands.

Given the main research question; *to what degree does information exposure relate to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands?* The first test that was done was a Pearson's R Correlation test that measured the relationship between social stigma and information exposure between Caucasian-Dutch and Asian-Dutch students.

The first sub-research question 1) *to what extent do Caucasian-Dutch and Asian-Dutch students differ in their information exposure?* An independent samples t-test was done, looking only at the differences in information exposure among both groups. Both consumption and credibility of information sources were measured separately to note any differences in the individual information sources used in this study.

The second sub-research question 2) *to what extent do Caucasian-Dutch and Asian-Dutch students differ in their perceptions of social stigma of HIV/AIDS?* Conducting an independent samples t-test for this question looked at the differences between both groups regarding social stigma of HIV/AIDS. Additionally, a Pearson's R correlation test was also done in order to investigate relationships between social stigma of HIV/AIDS compared to each information source.

The third Sub-research question 3) *to what extent do male and female Caucasian-Dutch students differ in their information exposure?* Was tested using an independent samples t-test to observe any significant differences among males and females within the Caucasian-Dutch sample regarding their information exposure.

The fourth sub-research question 4) *to what extent do male and female Caucasian-Dutch students differ in their Social Stigma of HIV/AIDS?* An independent samples t-test was done to investigate any differences among males and females regarding their social stigma of HIV/AIDS.

The fifth sub-research question *5) to what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS?* An independent samples t-test was done to investigate any differences among males and females regarding their information exposure.

The sixth sub-research question *6) to what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS?* An independent samples t-test was done

to investigate any differences among males and females regarding their social stigma of HIV/AIDS.

4. Results

Once the empirical data was collected, statistical analyses were done using SPSS data analysis software (version 20). Once the data was collected, the analysis was able to commence, transforming the data into measurable items was needed to obtain the required results. Accompanying the main research question, six sub-research questions were formed and were answered and explained accordingly. Social stigma is formed through the information that is provided by the media and in turn shapes the ideas that a person has on a given topic (Crocker and Major, 1989). The items that were used to measure social stigma consisted of three categories; Perception, Discrimination and Equality (Genberg et al., 2007). When combined, these categories measured the social stigma behaviours of an individual. Information exposure determines how an individual reacts to certain movements and gestures and by paying close attention to these attributes, everyone behaves according to the norm (Donohew, 1996). The information exposure items formed two categories; Consumption and Credibility of information (Brug et al., 2004). Combining these two categories formed overall information exposure that was measured across both sample groups, however, to analyse the individual media sources for each sample group, these categories were kept separate which provided a more detailed analyses of the results.

There were no major differences between gender and within both sample groups, additionally, gender differences were examined and cross compared regarding their Social Stigma and Information Exposure. Specifically looking at the information sources; 68.5% among the total respondents preferred the use of internet websites to receive information regarding HIV/AIDS. 21.5% preferred hearing about HIV/AIDS from family or friends. The remaining 10% was distributed among; Newspapers, Television, Radio, Doctor, Government agencies and Consumer or patient interest groups.

Social Stigma and Information Exposure were considered as main variables for this study, thus investigating the relationship between these two were important. The overall measurement of Social Stigma was formed by combining three categories; Perception, Discrimination and Equality of HIV. All categories combined, contained a total of 23 items which formed Social stigma. Information exposure was formed out of two categories;

Consumption and Credibility of information sources. A total of 16 items were used to measure Information Exposure. The initial test done was to analyse the relationship between Social Stigma and Information Exposure. In order to do so, a Pearson's R Correlation test was carried out which measured each category against one another. Pearson's R values range from -1 to 1, the difference between the negative and positive value simply indicates the direction of the relationship. r= .10 to .29 shows that there is a small relationship, r= .30 to .49 a medium relationship and r= .50 to 1.0 a large relationship between the variables (Cohen, 1988).

4.1 Main research question

The overall research question for this study looked at the degree to which *information exposure relates to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands?* The relationship between Social Stigma and Information Exposure was hence forth investigated using Pearson product-moment correlation coefficient (see Table 1). Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. Social Stigma was categorised into three categories and Information Exposure categorised into two categories. Separate t-tests were also done to see the differences between each sub-category in relation to the sample groups. There was a strong positive correlation between social stigma and information exposure (r= .57, n=231, p<.05). Additionally, the relationship between social stigma and information exposure between their sub-categories were also tested (see Table 2). There was a moderate, positive correlation between perception of HIV/AIDS and consumption of information (r= .47, n=231, p<.05). Moderate, positive relationships were shown between perception of HIV and Credibility of information (r= .35, n=231, p<.05). A moderate, positive relationship between Discrimination and Equality (r= .45, n=231, p<.05) was also found.

Table 1 Pearson's R Correlation test for **Total Social Stigma** and **Total Information Exposure**

Correlations			
		Total Social stigma	Total Information Exposure
Total Social stigma	*r*		.57**
	P		.000
	N	231	231
Total Information Exposure	*r*	.57**	
	P	.000	
	N	231	

Significance: *$p < .05$, **$p < .01$, ***$p < .001$

Perception t (115) = .27, p=.79, Discrimination t (114) = .15, p=.88 and Equality t (115) = .17, p=.87 of HIV/AIDS between males and females within the Caucasian-Dutch sample were calculated. Given these values, there were no significant differences between genders (where $p< .05$) within the Caucasian-Dutch sample group. The same categories were measured between males and females within the Asian-Dutch sample. Perception t (112) = -1.28, p=.20, Discrimination t (112) = -.91, p=.37 and Equality t (111) = .28, p=.78 of HIV where $p< .05$. Again, there were no significant differences between genders within the Asian-Dutch sample group.

A Pearson's R correlation test was done combining all categories. Table 2 shows the five categories that form social stigma and information exposure in relation to one another. This was done in order to see any general differences between the sub-categories. The only relationships that are shown that can be reported are discrimination (M= 20.61, SD= 3.68) in relation to equality (M= 17.46, SD= 3.88) with r= .45, Perception (M= 219.03, SD= 392.24) in relation to consumption (M=35.26, SD= 48.65) with r= .47 and perception in relation to credibility (M= 43.42, SD= 80.95) with r= .35 where $r< .01$. No significant findings were given at .05 levels. All three values show a moderate, positive relationship among one another. There was no significant relationship between the other categories. This means that students who consume more information have a more positive perception of HIV/AIDS.

Additionally, students who find the information sources more credible resulted in a higher perception of HIV/AIDS. Furthermore, looking at the two categories that form social stigma, the results showed that if there is more discrimination, there will be more need for equality. Additional tests were done looking at the individual information sources in terms of their credibility between both sample groups which was elaborated upon at a later stage.

Table 2 Pearson's R Correlation test for **Social Stigma** and **Information Exposure between each component**

Correlations				
		Equality	Consumption	Credibility
perception of HIV	*r*		.47**	.36**
	P		.000	.000
	N		231	231
Discrimination	*r*	.45**		
	P	.000		
	N	231		

Significance: *$p < .05$, **$p < .01$, ***$p < .001$

Additionally, another Pearson product-moment correlation coefficient (see Table 3) was conducted to investigate patterns regarding social stigma and information exposure within each sample group. Table 3 shows that there was a strong positive correlation between social stigma and information exposure (r= .75, n=114, p<.05) within the Asian-Dutch sample. Additionally, the correlation between social stigma and information exposure within the Caucasian-Dutch sample (r= .68, n=117, p<.05) also showing a strong positive correlation. Given that both sample groups had strong positive correlations, this meant that the more both groups of students read more about HIV/AIDS, the less their stigmatization of HIV/AIDS each sample group would have.

Table 3 Pearson's R Correlation test for **Social Stigma** and **Information Exposure between Asian-Dutch and Caucasian-Dutch sample**

		Asian-Dutch		**Caucasian-Dutch**	
		Total social stigma	Total information exposure	Total social stigma	Total information exposure
Total social stigma	*r*	1	.75**	1	.69**
	P		.000		.000
	N	114	114	117	117
Total information exposure	*r*	.75**	1	.69**	1
	P	.000		.000	
	N	114	114	117	117

Significance: *$p < .05$, **$p < .01$, ***$p < .001$

4.2 Sub-research question 1

The first sub-research question sought to investigate: *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their information exposure?* Consumption and

Credibility of information formed the variable Information Exposure and as a result was tested individually among both sample groups as well as between genders using an independent samples t-test. This was done in order to note any significant differences in the type of information sources they consumed and thought were credible among both groups. The consumption of information across both sample groups including genders was tested. Only significant differences were shown for Consumer or patient interest groups t (245) = -5.20, p=.00 and Family or friends t (245) = 2.07, p=.04 where p< .05.

Looking closer at the mean of both information sources, Caucasian-Dutch (M= 2.76, SD= 1.38) and Asian-Dutch (M= 3.76, SD= 1.64) for consumer or patient interest groups, showing that there is a higher preference for consumer or patient interest groups in the Asian-Dutch sample. Regarding the source of family and friends, Caucasian-Dutch (M=2.72, SD= 1.37) and Asian-Dutch (M= 2.38, SD= 1.22) show that Caucasian-Dutch have a higher preference for information provided by family or friends. All other sources did not show any significant differences between ethnic groups and consumption of information.

Looking at the credibility of information between both sample groups, only significant differences were found between Caucasian-Dutch (M=6.7, SD= 18.94) and Asian-Dutch (M=3.01, SD= .99) regarding consumer or patient interest groups t (245) = 2.15, p=.03 where p< .05. Furthermore, separate t-tests were done to investigate the differences between both sample groups in relation to their genders. Testing gender differences between sample groups as well as within both sample groups showed no significant differences among the sample groups and gender. As a result, these were not included in the report.

Majority of results showed no difference between the two groups, the only difference was indicated when looking at the consumption of consumer or patient interest groups and consumption of information by family and friends. The mean scores between each group for both sources of information reflect which group has a higher preference for each source. For consumer or patient interest groups, the Asian-Dutch group has a higher mean (M= 3.76, SD= 1.64), indicating that Asian-Dutch students prefer to consume information provided by these interest groups. A reason for this is imbedded in societal norms within the North-Eastern Asian culture. Talking about sex or HIV/AIDS can be considered to a certain extent ‘taboo’ (Yoshioka and Schustack, 2001) which is why individuals seek elsewhere for this type of information such as consumer or patient interest groups. The Caucasian-Dutch group showed

a significant difference (*M*= 2.72, *SD*= 1.37) for the item of family or friends. Although this difference is relatively small, it is still significant in relation to the Asian-Dutch group regarding this item. A reason for this difference follows the reasoning stated above that North-Eastern Asian individuals prefer to learn about HIV/AIDS from consumer or patient groups which Caucasian-Dutch individuals find it easier to speak about these topics with family or friends.

Having done the independent samples t-test for the credibility of information sources among both sample groups between genders, an interesting result was shown regarding the credibility of information sources which indicated that there was a higher preference for credibility of information within the Caucasian-Dutch sample, particularly the credibility of consumer or patient interest groups (*M*= 6.7, *SD*= 18.94). This can be explained by comparing both values of consumption and credibility of information. Although Caucasian-Dutch students have a higher preference for talking about HIV/AIDS with family or friends, they find that the information provided by consumer or patient groups more credible. There were no significant differences for the credibility of information sources for the remaining sources among both sample groups.

4.3 Sub-research question 2

The sub-research question: *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their perceptions of social stigma of HIV/AIDS,* Investigated the differences between Caucasian and Asian-Dutch students and their perceptions of social stigma of HIV/AIDS using a Pearson product-moment correlation coefficient test, in order to see the relationship between social stigma and the individual information sources. Furthermore, an independent samples t-test was also done to note whether there were any general differences among with sample groups. The information sources were used as a moderator variable which took into account all eight forms of media.

Table 4 shows the significant relationships between social stigma and information sources of both sample groups. It is apparent that not all eight sources of information was included, Television, Internet websites, doctors and government agencies were the only items that showed significant relationships towards social stigma. Within the Caucasian-Dutch sample; Television (r= .28, n=117, p<.05), Internet websites (r= .42, n=117, p<.05), doctors (r= .34, n=117, p<.05) and government agencies (r= .37, n=117, p<.05) all showed a moderate

positive relationship. The same was tested within the Asian-Dutch sample and showed that Television (r= .29, n=114, p<.05), Internet websites (r= .57, n=114, p<.05), doctors (r= .29, n=114, p<.05) and government agencies (r= .27, n=114, p<.05) had positive relationships between social stigma and the given information sources. With the exception of internet websites, television, doctors and government agencies all had a moderate positive relationship while internet websites showed a strong positive relationship.

Table 4 Correlation test for **social stigma** in relation to **information sources**

		Caucasian-Dutch		**Asian-Dutch**	
		Social Stigma		**Social Stigma**	
Television	*r*	.28**		.29**	
	P	.002		.001	
	N		117		114
Internet websites	*r*	.42**		.57**	
	P	.000		.000	
	N		117		114
Your doctor	*r*	.34**		.29**	
	P	.000		.001	
	N		117		114
Governmental agencies	*r*	.27**		.27**	
	P	.003		.002	
	N		117		114

Significance: *p < .05, **p < .01, ***p < .001

Having conducted the independent samples t-test to check for differences among both sample groups regarding their social stigma, no significant differences were found which can be justified by noting that the sample groups did not differ greatly in the way they think and that because the study sought to only collect data from Caucasian-Dutch and Asian-Dutch, meaning that both ethnic groups are born and raised in the Netherlands, hence differences in the way each group thinks, are relatively the same even though each group have a different cultural background, their values and ideas remain the same and the results indicate that.

4.4 Sub-research question 3

Looking at the sub-research question: *to what extent do male and female Caucasian-Dutch students differ in their information exposure?* An independent samples t-test was done to investigate any differences between genders with the Caucasian-Dutch sample.

Information Exposure between males (M= 47.23, SD= 16.36) and females (M= 51.19, SD= 24.46) within the Caucasian-Dutch sample indicated that there were no significant differences between genders regarding Information Exposure t (115) = -.98, p=.330 where $p<$ .05. Interestingly, there were no significant differences found between males and females regarding their consumption and credibility of information. In studies that use gender comparison variable, differences are usually found which call under the premise that males think in a different way than females (Winstead, Derlega, and Unger, 1999). However, this sub-research question only sought to investigate the way in which males and females within the Caucasian-Dutch sample consume information and which sources they find credible. It is acceptable to find no significant difference, given that males and females do no differ greatly in the way they consume information.

Various reasons as to why there is no difference between genders within the Caucasian-Dutch sample can be made, one being that since the question asked the respondent about their consumption and credibility of information regarding a particular topic, both males and females consume the same amount of information and feel that the same way about the credibility of the information that they receive respectively among all eight sources. Moreover, further tests showed that their preferred medium to consume information was the internet. According to Sillence et al., (2007) searching for health information on the internet has become more popular over recent years. It was important to note that within the Caucasian-Dutch sample, there were more females (N=69) than males (N=48) which is not a large difference which might explain the results provided.

4.5 Sub-research question 4

Independent samples t-test was done, focussing on the sub-research question: *to what extent do male and female Caucasian-Dutch students differ in their Social Stigma of HIV/AIDS?*

The results of Social Stigma between males *M*= 60.51, *SD*= 29.09 and females *M*= 59.35, *SD*= 18.11 with regards to their Social Stigma *t* (114) =.27, *p*=.79 showed no significant differences among males and females within the Caucasian-Dutch sample. Additionally, each component of social stigma was measured between males and females. The reason for measuring each component separately was to observe a more detailed overview of each component which formed social stigma. Referring to previous results, given that there were no significant differences between genders regarding information exposure, it was already expected that there would be no difference between genders regarding social stigma. Between genders within the Caucasian-Dutch sample, there are no significant differences for Perception, Discrimination and Equality of HIV/AIDS. Reasons for this result is difficult to pinpoint, however, might be due to motivations behind answering the questionnaire which will be discussed at a later stage.

4.6 Sub-research question 5

Answering the sub- research question: *to what extent do male and female Asian-Dutch students differ in their information exposure?* An independent samples t-test was conducted to observe any significant differences regarding information exposure among males and females within the Asia-Dutch sample.

The test showed that information exposure *t* (112) = -.74, *p*=.46 where *p*< .05 with males *M*= 46.33, *SD*= 14.39 and females *M*= 48.70, *SD*= 19.10 do not show any significant differences among males and females. Repeating, this could be explained by the type of question(s) that were asked, only focussing on one particular type of information, no significant differences were found between males and females consumption of information. Another t-test was done in order to observe any significant differences between males and females with regards to the credibility of the information sources. These were tested on an individual level, however, no significant differences were found among males and females between all information sources. Referring back to the discussion by Winstead, Derlega, and Unger (1999), in general, there should be differences between genders regarding certain topics. Possible explanations were further discussed in the limitations section of the paper. Additionally, lack of knowledge of HIV/AIDS may have also led to the insignificant differences between males and females within the Asian-Dutch sample. Li et al., (2004) noted that there were no differences in knowledge of HIV/AIDS among males and females between

Chinese college students. Without knowing the amount of knowledge both sample groups had regarding HIV/AIDS, the possibility exists that due to limited knowledge of HIV/AIDS, no significant differences were found among males and females within both Caucasian-Dutch and Asian-Dutch students.

4.7 Sub-research question 6

An independent samples t-test was conducted to investigate any significant differences for the sub-research question: *to what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS?*

The results observed, showed that between males *M*= 54.49, *SD*= 15.92 and females *M*= 59.81, *SD*= 26.36 within the Asian-Dutch sample no significant differences were found regarding Social Stigma *t* (111) = -1.29, *p*=.20. Although there was a more even distribution between males (*N*=55) and females (*N*=59), no significant results were recorded. Once again, unable to explain this result, limitations regarding the responses and lack of motivation to complete the questionnaire truthfully might have played a role which contributed to this insignificant result.

Furthermore, the respondents were asked to indicate from which information source they would prefer to receive information regarding HIV/AIDS in case of an outbreak. Figure 2 and 3 below show the results for both sample groups;

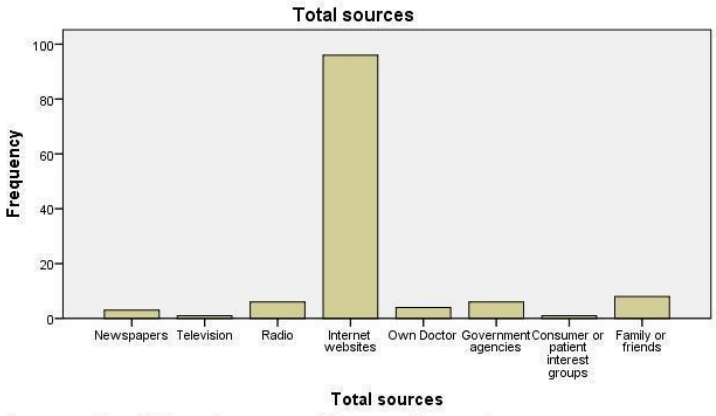


Figure 2 preferred information sources within Caucasian-Dutch sample

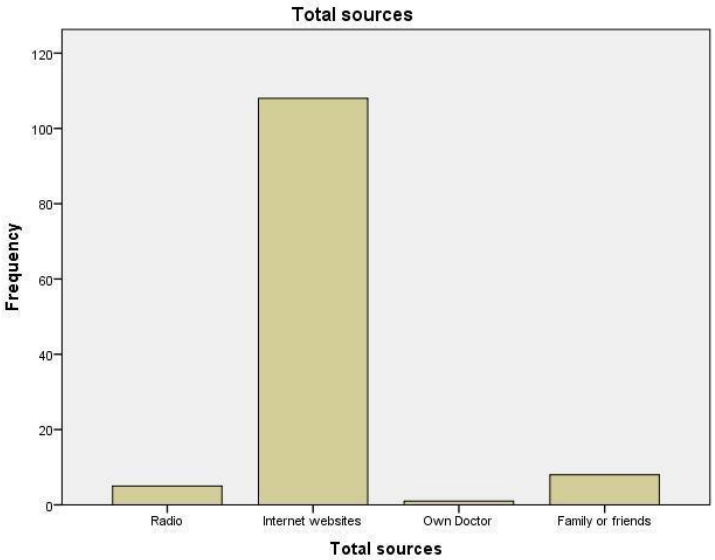


Figure 3 Preferred information sources within Asian-Dutch sample

Looking at both graphs, the Caucasian and Asian-Dutch both preferred to receive information regarding HIV/AIDS mainly from internet websites. Within the Caucasian-Dutch sample, there were a few respondents who also selected other forms of sources which explain the complete list of sources represented in the graph. The Asian-Dutch sample shows only four sources which were selected among the whole sample; radio, internet websites, doctors and family or friends. Although both samples might vary slightly in the preferred information sources to receive information about a HIV/AIDS outbreak, majority of the students between both samples prefer to receive the information through the internet. This is explained through the way the society is becoming more of a online community, where tasks which used to incorporate offline media, now has shifted towards online platforms such as use of the internet (Griffiths and Brophy, 2005). Regardless of the quality of the content that is on the internet (Sillence et al., 2007) both Caucasian-Dutch and Asian-Dutch students still prefer to receive information through the internet rather than traditional information sources.

In addition to the two graphs, an independent samples t-test was done in order to observe any significant differences among both sample groups with regards to the preferred mediums to receive information in case of an outbreak of HIV/AIDS. By looking at the graphs, it might be already assumed that there will be no significant differences between these two groups, given that among both groups, the most preferred medium is internet websites. The independent samples t-test showed that Caucasian-Dutch (M= 4.27, SD= 1.25) and Asian-Dutch (M= 4.23, SD= 1.03) with regards to the preferred mediums t (245) = .29, p=.77 had no significant differences among both sample groups and their preferred medium to receive information in case of an outbreak of HIV/AIDS. This meant that both Caucasian and Asian-Dutch students would prefer to receive information regarding HIV/AIDS mainly through the internet.

Based on the data provided by students of higher education institutions in the Netherlands, the results suggest that there are no significant differences between Caucasian-Dutch and Asian-Dutch students regarding their Social Stigma and Information Exposure of HIV/AIDS. Looking at the differences between genders within each sample group, again, there were no significant differences found. At first, these results seemed obscure as there were no differences between both gender and ethnic groups. Reasons for no significant differences between genders and other elements of this study could link to the lack of

motivation for students to answer the questionnaire which resulted in insignificant results for the overall research which was discussed in the limitation section of this paper.

5. Conclusion and Discussion

5.1 Discussion

The main research question investigated the degree to which *information exposure relates to the social stigma of HIV/AIDS among students in higher educational institutions in the Netherlands.* In order to investigate in detail the relationship between social stigma and information exposure, social stigma was divided into three categories (perception, discrimination and equality). Additionally, investigating social stigma alone provided a narrow perspective regarding each student's perception of HIV/AIDS. Noting where and how these perceptions were formed meant that linking information exposure in terms of their consumption and credibility of the information sources was important as this indicated whether there was a relationship between social stigma and information exposure and how strong this relationship might be. Using SPSS, allowed for correlation and t-tests to be done that illustrated the relationship between social stigma and information exposure. The test showed that there was a moderate, positive relationship between social stigma and information exposure, which meant that the more information students were exposed to regarding HIV/AIDS, resulted in a higher positive perception regarding HIV/AIDS.

The results explain that the way an individual perceives HIV/AIDS between the two sample groups did not differ greatly; signifying that the way Caucasian-Dutch students thought about HIV/AIDS was similar to the thoughts of Asian-Dutch students. Since both groups of students were ethnically different; it was assumed that North-Eastern Asian in terms of their cultures would differ somewhat from the Western cultures. Moreover, a possible reason for this insignificant difference was for the reason that both groups were in fact Dutch citizens regardless of their ethnicity. This meant that being born and raised in a country, a person adopts certain beliefs and attributes associated with the given country, thus, integrating themselves within the society, for the most part when thinking about HIV/AIDS (Redfield, Linton and Herskovits, 2009).

Accompanying the main research question, sub-research questions were formed in order to provide a more detailed investigation of the overall topic. Each sub-research question

sought to answer gender differences between males and females in accordance with information exposure and social stigma. Positive relationships were found when comparing information exposure with social stigma while insignificant differences between males and females within both sample groups were observed. The amount of information which a person consumes reflects what an individual might perceive on a given topic, hence, the more information that is consumed; the more rational perceptions can be made regarding a particular topic. Looking specifically at the individual information sources used for this study, it was found that the main information sources; Television, Internet websites, Doctors and Government agencies showed significant relationships with regards to social stigma.

Additionally, students preferred to receive information about HIV/AIDS through the internet. The amount of information sources has increased in many ways over the years, starting from newspapers to radio, leading to television and currently internet which is the preferred medium for majority of individuals (Chan and Fang, 2007). Interestingly, all these forms of information, although distinctly different from one another, are able to co-exist, showing that there is still a market for these forms of media, despite the introduction of the internet which combines all these forms of media into one. These forms of information sources were individually considered for this study and cross compared between each sample group.

Social stigma for the purpose of this study was comprised of three elements. Not only was social stigma measured against information exposure, each sample group was individually tested in order to investigate the differences between the genders within each group. Individual tests were done for each sample group for both variables to note any significant differences between genders. These tests reflected the sub-research questions that were formed as a result of the main research question.

The first sub-research question: *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their information exposure* used an independent samples t-test. This tested the differences between genders for information exposure. Provided that information exposure was divided into two categories, separate tests were done to note any differences in the consumption and credibility of information among both sample groups. Once the independent samples t-tests were done regarding information exposure between genders within each sample group, no differences were found between males and females. Since these

tests showed insignificant results on a general scale, individual tests for each information source were done to note any significant differences between each element of both variables.

The consumption of information across both sample groups was tested. Only significant differences were shown for Consumer or patient interest groups and Family or friends. Looking closer at the mean scores of both information sources for Caucasian-Dutch and Asian-Dutch regarding consumer or patient interest groups, showed that there was a higher preference for consumer or patient interest groups in the Asian-Dutch sample. Regarding the source of family and friends, Caucasian-Dutch and Asian-Dutch show that Caucasian-Dutch have a higher preference for information provided by family or friends. All other sources did not show any significant differences among both sample groups and consumption of information.

Looking at the credibility of information between both sample groups, only significant differences were found between Caucasian-Dutch and Asian-Dutch regarding the information source; consumer or patient interest groups. A reason for this is imbedded in societal norms within the North-Eastern Asian culture. Talking about sex or HIV/AIDS can be considered to a certain extent 'taboo' (Yoshioka and Schustack, 2001) which is why individuals seek elsewhere for this type of information such as consumer or patient interest groups.

Within the Caucasian-Dutch group a significant difference was found for the information source; family or friends. Although this difference is relatively small, it is still significant in relation to the Asian-Dutch group regarding this item. A reason for this difference follows the reasoning stated above that North-Eastern Asian individuals prefer to learn about HIV/AIDS from consumer or patient groups while Caucasian-Dutch individuals find it easier to speak about these topics with family or friends.

When conducting the Independent samples t-test for the credibility of information sources among both sample groups, an interesting result was shown regarding the credibility of information sources which indicated that there was a higher preference for credibility of information within the Caucasian-Dutch sample, particularly for the credibility of the information source; consumer or patient interest groups. This can be explained by comparing both values of consumption and credibility of information. Although Caucasian-Dutch students have a higher preference for talking about HIV/AIDS with family or friends, they

find that the information provided by consumer or patient groups more credible. Expert power (Cheney, 2011) can be seen here, where the experts (consumer or patient interest groups) have the knowledge and skills to claim what they know regarding HIV/AIDS. As a result, people who attend these groups acknowledge that they are credible. There were no significant differences for the credibility of information sources for the remaining sources among both sample groups which meant that among both sample groups, both perceived the remaining sources as more or less equally credible.

Moreover, different outcomes were found for the Caucasian-Dutch students, having a higher preference for talking about HIV/AIDS with their family or friends, show that in a western society such as the Netherlands, people tend to be more comfortable with these types of topics for discussion such as HIV/AIDS. This does not necessarily mean that people talk about HIV/AIDS in casual conversation but acknowledge what HIV/AIDS is and express their opinions about it. Given that the Netherlands is seen as quite a tolerant country (Saharso, 2003) being open to these types of discussions does not appear to be a problem among family and friends. Whether these discussions are reliable and credible in comparison to consumer or patient interest groups is still debateable.

The most dominant source across both sample groups was internet websites (68.5%). This meant that majority of students preferred to receive information regarding HIV/AIDS through the internet rather than other sources. This showed that the generation of students currently studying prefer to use the internet as the main source of information (Griffiths and Brophy, 2005). Among all eight items that measure information exposure, only four items showed significant relationships towards social stigma of HIV/AIDS.

The second sub-research question: *To what extent do Caucasian-Dutch and Asian-Dutch students differ in their perceptions of social stigma of HIV/AIDS* was tested using a Pearson product-moment correlation coefficient test, in order to see the relationship between social stigma and the individual information sources. Furthermore, an independent samples t-test was also done to note whether there were any general differences among with sample groups. The information sources were used as a moderator variable which took into account all eight forms of media.

There were significant correlations noted regarding the social stigmatisation of HIV/AIDS in relation to certain information sources, however, out of the eight information

sources, only four sources between both groups showed significant correlations. The four information sources: Television, Internet websites, Doctors and Governmental agencies can be seen in this case as the most relevant information sources for learning about HIV/AIDS among Caucasian-Dutch and Asian-Dutch students when forming social stigmatisation about the virus. Alonzo and Reynolds (1995) explained that stigmatisation of illnesses such as HIV/AIDS has multidimensional stigmatisations. As a result, the social stigma between Caucasian-Dutch and Asian-Dutch students does not differ from one another.

After this analysis, an independent samples t-test was done to check for any differences regarding social stigma of HIV/AIDS among both sample groups, results showed that there was no significant difference between these two groups. This did not come to much of a surprise as other results did. Seeing that the target groups were Caucasian- Dutch and Asian-Dutch, the criteria for sampling Asian-Dutch students meant that they had to be born and raised in the Netherlands. By noting this, the way in which these two groups think are relatively the same with regards to the topic of HIV/AIDS as the results suggest. Referring back to the discussion on Third Culture Kids (TCKs) and acculturation, the results indicate that Asian-Dutch Students have somewhat adapted themselves to their local environment. Although not being able to generalise this for the entire population, the way in which these groups of students think about HIV/AIDS appear to be similar. Since the Asian-Dutch students have lived in the Netherlands for a longer period of time (being born and raised in the Netherlands) and being exposed to the local culture, they were able to adjust to certain attributes of the Dutch culture. Referring back to Alonzo and Reynolds (1995) the stigmatisation of an illness such as HIV/AIDS comes in many forms. With this in mind, one could note that the way Caucasian-Dutch and Asian-Dutch students think about HIV/AIDS and how they stigmatise it, is relatively the same.

The third sub-research question: *to what extent do male and female Caucasian-Dutch students differ in their information exposure?* Was investigated using an independent samples t-test. Information Exposure between males and females within the Caucasian-Dutch sample indicated that there were no significant differences between genders regarding Information Exposure. Interestingly, there were no significant differences found between males and females regarding their consumption and credibility of information. In studies that use gender comparison variable, differences are usually found which call under the premise that males think in a different way than females (Winstead, Derlega, and Unger, 1999). Since it is

generally assumed that there would have been differences between genders, it is unclear why there were no major or significant differences among this group. The possibility exists that the questions in the questionnaire might not have been clear to the respondent or perhaps lack of motivation to complete the questionnaire truthfully. As a result, there were random answers that were given to certain sections which provided insignificant results for the study. Moreover, (Ahmed et al., 2009) discusses the insignificant differences between males and females in terms of their knowledge of HIV/AIDS. This might reflect the insignificant findings that were shown in this study by noting the lack of in-depth knowledge of HIV/AIDS among males and females resulted in no significant differences in their information exposure.

The fourth sub-research question sought to investigate: *to what extent do male and female Caucasian-Dutch students differ in their Social Stigma of HIV/AIDS.* The individual tests for each element that formed social stigma (perception, discrimination, and equality) showed no differences between genders among the Caucasian-Dutch sample. As a result, no further tests were done.

The results of Social Stigma between males and females with regards to their Social Stigma showed no significant differences among males and females within the Caucasian-Dutch sample. Additionally, each component of social stigma was measured between males and females. The reason for measuring each component separately was to observe a more detailed overview of each component which formed social stigma. Referring to previous results, given that there were no significant differences between genders regarding information exposure, it was already expected that there would be no difference between genders regarding social stigma. Reasons for insignificant differences may have included the design of the questionnaire. Genberg et al., (2007) ensured the reliability and validity of this scale in order to be replicable for other studies, however, what their study on stigmatisation did not take into account was gender. The fact that this study focussed on gender in addition to the main variables, might have influenced the overall results. Further explanations discussing the questionnaire were elaborated upon later.

Looking at the fifth sub-research question: *to what extent do male and female Asian-Dutch students differ in their information exposure?* An independent samples t-test was done.

The test showed that there were no significant differences regarding information exposure among males and females within the Asian-Dutch sample. Additionally, no significant differences were found between males and females regarding consumption of information. Another independent samples t-test was done in order to observe any significant differences between males and females with regards to the credibility of the information sources. These were tested on an individual level, however, no significant differences were found among males and females between all information sources individually. Given that information exposure can be interpreted on different levels, in this case, males and females within the Asian-Dutch sample did not differ, however, issues might lay in the design of the questionnaire that measured information exposure. Brug et al., (2004) did not discuss how information exposure was measured for their study and as such, using the scale which formed information exposure and replicated for this study might have been measured incorrectly. Based on the results presented in the study done by Brug et al., (2004), their scale simply measured the different information sources and collectively presenting the results without testing differences between genders.

The final sub-research question: *to what extent do male and female Asian-Dutch students differ in their Social Stigma of HIV/AIDS* was investigated using an independent samples t-test.

The results observed showed that between males and females within the Asian-Dutch sample no significant differences were found regarding Social Stigma. Taking gender into account for this study seemed to be a difficult variable to test. Taking into account what was said regarding social stigma and cultural backgrounds, these concepts were spoken of collectively without looking at specific details with regards to gender within these concepts. Looking specifically at gender differences proved to be irrelevant in this study since there were no significant differences even though it was assumed that differences would have been found. Furthermore, in certain studies, no differences between genders are able to occur (Ahmed et al., 2009). Although scarce in most studies the reasoning can be validated based on the similar studies presented in this study.

Overall, the individual tests that were conducted for the elements of information exposure (consumption and credibility of information) did show some significant differences with regards to the individual media sources. The sources of information were comprised of;

Newspapers, Television, Radio, Internet websites, your Doctor, Government agencies, Consumer or patient interest groups and Family or friends. Significant differences were shown between Consumer or patient interest groups and Family or friends in relation to the consumption of information of these sources. Results showed that within the Asian-Dutch sample, there was more preference for consumer or patient interest groups. On the contrary, Caucasian-Dutch students preferred talking about HIV/AIDS among family or friends. Within the North-Eastern Asian culture, HIV/AIDS is seldom spoken of. Fear of discrimination leads to fewer reported HIV/AIDS cases among the North-Eastern Asian population (Centres for Disease Control and Prevention, 2010). As a result, this would lead to a higher preference for consumer or patient interest groups, as these groups are not family or friend related which provides the individual with the information they would need regarding HIV/AIDS.

5.2 Conclusion

The research presented in this study has been replicated in various forms and in different communities. Conducting such research which focussed on cultural groups within a single community provided a unique investigative standpoint for the topic. Although the majority of the results were deemed insignificant, partial differences were found regarding the consumption and credibility of information sources, thus shed light on the potential differences between both cultures. The issue may lie within the sample groups which were selected for this study since both groups of students were essentially Dutch; their way of thinking did not vary. The focal point of this study sought to seek differences between students perception in relation to information where their ethnic background played a small role, thus adding to the results. These results in turn indicated that regardless of the ethnicity of the person, growing up in a Dutch society, the individual will adopt certain values and beliefs of the culture. Moreover, this does not necessarily mean that individuals will adopt the entire culture, since this study only looked at one single aspect (HIV/AIDS), the way students perceive this might be similarly related to the information that one is exposed to.

Based on Hofstede's cultural dimensions, the Netherlands is defined as a more individualistic society while North-Eastern Asian countries in general appeal more to the collectivistic society. Differences such as these were important to consider, however, the results did not provide relevant differences for comparison in this study. Comparing two

cultures in a more global setting i.e. looking at Dutch students in comparison to North-Eastern Asian students within the Netherlands, might have shown more significant results regarding social stigma and information exposure from a cultural perspective. Additionally, looking at gender in this respect could have provided more insight to the specific cultural dynamics of both groups and significant differences between genders; however, the results regarding gender differences were insignificant among both sample groups. Reasons for this are unclear but may lie in the design of the questionnaire and the scales used to measure the main concepts for this paper.

Additionally, Hofstede's cultural dimension for the North-Eastern Asian culture state that the North-Eastern Asian population tend to lead a more collectivistic lifestyle where family plays a primary role in the society (Hofstede, 2010). This can become difficult when the realisation that a family member is diagnosed with HIV/AIDS. As mentioned, the fear of discrimination or rejection plays a major factor when talking about such topics, particularly within the North-Eastern Asian culture. Obtaining this result shows the rooted values and beliefs that Asian-Dutch students have with their culture, regardless of their surrounding environment.

Based on the results of the research question and sub-research questions, the conclusion can be made that information exposure positively relates to the social stigmatisation of HIV/AIDS among students in higher educational institutions in the Netherlands. The degree to which Caucasian-Dutch and Asian-Dutch students differ in their social stigmatisation of HIV/AIDS did not differ indicating that the ways they think about HIV/AIDS remain relatively the same. Information exposure differed on certain levels, however, overall did not differ significantly among both groups. Gender differences among and within these two groups did not differ but could not specifically be pointed out as to why this was the case. Possible reasons may lie within the design of the questionnaire.

5.3 Strengths, limitations and future research

Given the insignificant differences between Caucasian-Dutch and Asian-Dutch students, various strengths, limitations and recommendations were found during the process of the study. Collecting the perfect amount of respondents in order to infer results back to the population was difficult, however, this study managed to collect a significant amount of data from both ethnic groups (N= 298). Having collected the right amount of respondents from the

Caucasian-Dutch (*N*=150) and Asian-Dutch (*N*=148) sample, more or less met the target amount set out for this study. Strengths within this sample were that due to the screening question at the beginning of the survey which asked the respondent about their ethnic background. If the respondent did not meet the criteria for the study, they were automatically redirected to the end of the survey and thus, excluded from the data that was collected. This was important to ensure the specific criteria for the study.

Combining two different studies and using items from each study, allowed for efficient design of the survey to measure social stigma and information exposure respectively. Using existing scales to measure social stigma and information exposure was of great benefit since the reliability and validity of these scales were already established. The study that measured social stigma provided extensive literature which proved reliability and validity of the scale. Given that, the scale also measured HIV/AIDS, it was deemed relevant for this study as well and did not need adjustments. The study that used the scale to measure information exposure did not provide any information regarding the reliability and validity of the scale; however, having obtained the original questionnaire from the authors, the reliability and validity was assumed. The scale needed to be adjusted in order to measure information exposure of HIV/AIDS instead of SARS, however, did not pose a problem, given that the questions asked only measured the consumption and credibility of information sources on a given topic. As such, was adaptable for this study.

A number of limitations emerged during the course of this study ranging from; recruiting of participants to insignificant results based on the data. Initially, the amount of time that was set for collecting the data needed to be extended as the number of respondents that was needed for the study was not reached within the designated time frame (one and a half months). An additional two weeks were added for the data collection, where additional respondents were needed for the Asian-Dutch sample group. Time played an important factor through the course of this research since it limited the scope of the study.

Additionally, although the right number of respondents were collected for this study, whether these results are reliable in terms of what can be said might be questionable if these were inferred back to the general population, since most results were insignificant. Having the right amount of respondents for a study that focuses on quantitative research is essential.

If the amounts of respondents are too little, the results might not be as reliable when making generalisations about the target group.

Although the survey was replicated, it showed some gaps in terms of what could be measured. Combining two scales from two different studies, may have led to the insignificant results for this study. Perhaps the scales were not made for replication for the present study. The scale that measured social stigma remained the same while the information exposure scale was adjusted to suit this study. The study measuring information exposure took into account information exposure for a different virus (SARS) and as such, might have led to distorted results when adjusting the items to measure HIV/AIDS. An issue may have also been in the reliability and validity of the scale used to measure information exposure. No information regarding the reliability or validity of this scale was mentioned in the study, however, having obtained the original survey; it was simply assumed that the scale was reliable.

A limitation may lay in the sample groups. A factor that was not carefully considered was the cultural aspect of the study. Focussing on Caucasian-Dutch and Asian-Dutch students greatly affected the results since both groups were fairly similar in terms of the way they think as the results suggest. The data analysis in turn was limited in what could be analysed further i.e. why there might be differences among both sample groups and gender, which could have lead to more concrete conclusions.

A potential limitation lay in the responses themselves as the surveys might have been time consuming for students which resulted in lack of motivation to complete the survey. The time period during which this research was conducted coincided with a number of other studies, meaning that this particular study might have been less interesting for students and as a result, less responses. In many cases, students would prefer to see a motivation behind completing surveys (monetary or material compensation).

Had the time in order to complete this study been prolonged, significant results might have prevailed. By extending the time of the data collection process, would allow for changes to be made in the data collection. Instead of conducting online surveys, interviews could have been arranged. By utilising face to face communication, could have provided more in depth interpretations to be made.

Two main concepts were covered in this paper; however these concepts provided a general overview of what should be elaborated upon. Social stigma can be further explained in different contexts and perhaps be discussed in a broader perspective. Although information exposure collectively summed up the array of information sources, the extent to which each information source is used and in what way can be investigated in more detail. Focussing on one form of media i.e. internet usage in relation to social stigma can be a study within itself. As mentioned previously and as the results suggest, the internet is becoming more favourable when looking for information. Given this, a study could be done only focussing on internet usage and how content online might influence a person's perception on a particular topic.

Although this was investigated in this study, it was studied in a broad sense rather than investigating the role that internet plays in forming perceptions. Results did show that internet was the preferred medium to receive information regarding HIV/AIDS, thus, using a single medium such as the internet and how this might shape perceptions of HIV/AIDS can be investigated in more detail. Having a more in depth focus specific media platforms should be done.

In order for more comparable results to be done, shifting the focus of the study to investigate the two different groups of students might have been more viable. This study looked at Caucasian-Dutch and Asian-Dutch students which might not have been ideal, given that Asian-Dutch students think in relatively the same way with regards to HIV/AIDS. Looking at differences between only Dutch students and only Asian students, would reveal the cultural differences between these two distinct cultures. Had the study included North-Eastern Asian students who did not live in the Netherlands, the results would have possibly provided more significant outcomes; however, given the time frame, the decision to study students within the Netherlands appeared to be a more viable solution.

Furthermore, focussing on one concept; either on social stigma or information exposure would have allowed for more in-depth analysis to be done on a single concept. By broadly looking at both concepts only touched upon certain academic contributions that the results might suggest. The concepts and target groups both play a vital role in this study, the overall focus of this study needed to be thought out better to ensure the quality of the study.

By focussing either on social stigma or information exposure and investigating more in depth of one of the concepts while relating this to HIV/AIDS might have provided more

suitable findings. Moreover, an example of this study being replicated would be to look at differences between males and females within the Dutch community could be more viable instead of combining ethnic groups as well as gender.

Not all was lost in the findings of this study. Given the results of the study, it is now clear that restructuring the focus of the study and designing the questionnaire based on specific scales to measure exact concepts are needed. The main areas, in which this study should be improved, if replicated for future research, should re-consider the target sample and focus on one concept. Both concepts can be considered for replication, however, information exposure should specify a single medium for analysis.

Additional research regarding gender should be taken into account, looking at one group in this case; Caucasian-Dutch and analysing the differences between males and females by increasing the number of respondents, only focussing on this particular group could provide a more in depth findings within the group and between genders. Using two cultural groups that live within the same country does pose an interesting point for investigation however, since both groups were screened as having a Dutch nationality, where their ethnicity played a small role between the two groups, signified that there were no major differences regarding their social stigma and information exposure of HIV/AIDS. This can be interpreted by noting that the Netherlands is a tolerant country and being so, the Dutch society are open towards discussing sex orientated topics. One is not able to infer these results to the general population because this study only looked at two cultural groups and specifically only looking at one topic of study (HIV/AIDS). Correcting this by looking at two cultural groups with different upbringings, should present significant results. Additionally, surveying students regarding their cultural heritage should have been considered in order to note specific cultural differences and to ensure differences between cultures.

Thinking in a more global sense, this study sought to uncover relationships between the perceptions of HIV/AIDS and how an individual acquires information regarding this can be seen as a stepping stone to larger, more in depth studies that investigate other populations regarding the same topic or other areas which might require explanation e.g. the political segment of a country or economic factors that contribute to the overall society. This research specifically catered to the health communication sector and based on this, can be further investigated in other areas of a society. This study provided a basis for research of health

related issues within a given population, studying different cultures within a single population. Majority of literature has been provided about health related issues, particularly regarding HIV/AIDS, however, these studies have often discussed outcomes based on either a single society or compared with other countries on a more general scale.

This study went further in researching a single population and took into account cultures within that population. This study could be replicated among other countries that also have large cultural groups living among them, elaborating upon the cultural differences within the given population. In doing so, these types of studies would be able to explore communication gaps and assist in bridging any flaws between two cultures that co-exist within one population. Additional to this, age could also be investigated on a larger scale. Researching the opinions of HIV/AIDS among the greater population beyond students could provide a better general overview of the perceptions of HIV/AIDS within the Dutch population.

5.4 Recommendations

Practical recommendations for future studies regarding this topic would be to allocate time effectively. Taking more time to recruit participants is essential, as this will assist in the completion of the data collection on time. Moreover, ensuring that participants complete the questionnaire truthfully is also a priority, perhaps providing a form of compensation for the completion of the questionnaire would be more ideal. Literature to back up the key concepts which are measured is important as this will help in later stages of the paper i.e. data analysis, thus having literature that covers the concepts in great detail is important. Although no real ethical concerns were encountered during this study, it is important to keep in mind when designing the questionnaire. For this study a consent form was used before the start of a series of questions to ensure the respondent knew what they were agreeing to.

The design of the survey is important to keep in mind for replication of this study. At first it seemed that the scales which were used to measure social stigma and information exposure were well fitting for this study. Although the scales and items did measure both concepts, a factor which was not considered was gender. Gender differences were not the main focus of this study but it was included for investigation. The majority of results which measured the sub-research questions concerning gender were insignificant.

While most studies that look at gender differences, show significant differences between males and females, it was surprising to find no differences in gender for this study. The reason may lie within the scales that were used to measure the concepts. Both scales measure the respective concepts for this study, however, no referral to the differences in gender were made, as such it could be assumed that gender was not a focal point for their study which meant that the scales and items to measure the concepts was not adjusted to cater for gender differences. In some studies, it was noted that no differences were found between genders; however, these studies investigated knowledge in which case is plausible to have no differences among males and females. It is seldom that studies find insignificant differences between males and females but it does occur. After analysing the data collected for this study, it was a surprise at first to find no significant differences among males and females, however it was noted earlier that it is a possibility. Hence, thorough research should be done regarding all concepts that will be measured in a study to avoid any unexpected results.

Additionally, the results did not show significant differences in the concepts that were used for the study. This is possible, given that the students, who were sampled, both thought in similar ways. However, such similar results were assumed unlikely given that both sample groups differed culturally. The scales once again, measured social stigma and information exposure on a single population. Dividing the population into two distinct groups might not have been ideal, sampling two different populations or simply investigating the social stigma perceptions and information exposure within one population could have better explained the results. Dividing groups within one population showed no difference which meant that the study should have looked at populations on a larger scale.

Aside from that, changing the format of the research in terms of questionnaires could potentially assist in more detailed findings. By conducting either interviews or focus group studies among a select group of students that fit the criteria allows for a discussion of the topic where personal opinions can be expressed. Moreover, other factors would then be taken into account such as body language and facial expressions which can be a vital contribution to the concept of social stigma. Perhaps if this study were to be replicated, looking at social stigma and information exposure between Caucasian-Dutch and Asian students would have been better suited. The areas in which this study tried to investigate should have been narrowed down.

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Appendix A: Questionnaire

Dear respondent,

I thank you very much for taking the time to complete this survey. My name is James Dooms and I am a MA Media and Business student studying at Erasmus University Rotterdam, the Netherlands.

This survey is part of my master thesis that investigates the perceptions of social stigma of HIV/AIDS and how students search for information regarding HIV/AIDS.

This survey should take about 10 to 15 minutes of your time. Your answers will be completely anonymous.

Your contribution is highly appreciated and thank you for helping me graduate.

Enjoy your day and week!

James Dooms

Please click next to continue to the consent form and survey.

Consent form

FOR QUESTIONS ABOUT THE STUDY, CONTACT:

James Dooms
Address: Hoogstraat 52D, Rotterdam, the Netherlands, 3011PS
Email: j.dooms@live.nl
Phone: +31623337136

Description
You are invited to participate in a research about social stigma of HIV/AIDS and information exposure. The purpose of the study is to understand how information exposure is related the social stigma of HIV/AIDS among students currently studying in the Netherlands.Your acceptance to participate in this study means that you accept to participate in a survey in general terms,the questions of the survey will be related to information exposure and social stigma of HIV/AIDS. The survey results will be reported in a assumptive manner, so not individual information will be mentioned, and your anonymity is ensured. You are always free not to answer any particular question, and/or stop participating at any point.

Risks and Benefits
As far as I can tell, there are no risks associated with participating in this research. I will use the information from the survey exclusively for academic work, such as further research, academic meetings and publications.

The benefits are that by contributing to this research provides significant social changes which can both directly benefit you and others participating in the survey.

Time involvement
Your participation in this study will take approximately 10-15 minutes. You may interrupt your participation at any time.

Payments
There will be no monetary compensation for your participation. Participants rights if you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty.

You have the right to refuse to answer particular questions. Contacts and Questions If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish Dr. Yuping Mao, Assistant Professor in the Department of Media and Communication at Erasmus University Rotterdam at 010-4082468 or mao@eshcc.eur.nl.

Signing the consent form
By clicking the “next” button, you agree to the consent form and you will be directed to the survey.

Do you have a Dutch citizenship?

- Yes
- No

If **No** Is **Selected**, Then Skip To **End of Survey** Skip Logic

What is your ethnic background?

- Caucasian Dutch (Both parents are Caucasian Dutch)
- Asian-Dutch (Both parents are Asian i.e. from China, Korean, Taiwan, Japan. But you are born in the Netherlands)
- Other

If **Other** Is **Selected**, Then Skip To **End of Survey** Skip Logic

The following statements indicate different perceptions of people living with HIV/AIDS. For each statement, please check the one (ranging from “completely disagree” to “completely agree”) that best reflects your own opinion.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
People living with HIV/AIDS should be ashamed					
People with HIV/AIDS should be isolated from other people					
People who have HIV/AIDS are cursed					
People living with HIV/AIDS deserve to be punished					
A person with HIV/AIDS should be allowed to work with other people					
Families of people living with HIV/AIDS should be ashamed					
It is reasonable for an employer to fire people who have HIV/AIDS					
People with HIV/AIDS are disgusting					
People who have HIV/AIDS deserve compassion					
People with HIV should be allowed to participate fully in the social events in this community					

Page Break

The following statements describe perceived discrimination toward people with HIV/AIDS. For each statement, please check the one (ranging from “completely disagree” to “completely agree”) that best reflects your own opinion.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
People living with HIV/AIDS face neglect from their family					
People living with HIV/AIDS face physical abuse					

	Completely disagree	Disagree	Neutral	Agree	Completely agree
People want to be friends with someone who has HIV/AIDS					
People living with HIV/AIDS face ejection from their homes by their families					
Most people would not buy vegetables from a shopkeeper or food seller that they knew had HIV/AIDS					
People who have HIV/AIDS face verbal abuse					
People living with HIV/AIDS face rejection from their peers					
People who are suspected of having HIV/AIDS lose respect in the community					

The following statements are about how equally people with HIV/AIDS should be treated. For each statement, please check the one (ranging from “completely disagree” to “completely agree”) that best reflects your own opinion.

	Completely disagree	disagree	Neutral	Agree	Completely agree
People with HIV/AIDS should be allowed to participate fully in the social events in this community					
People living with HIV/AIDS should be treated similarly by health care professionals as people with other illnesses					
People who have HIV/AIDS should be treated the same as everyone else					
People with HIV/AIDS do not deserve any support					
People with HIV/AIDS should not have the same freedoms as other people					

The following section contains questions on different sources from which you get information about HIV/AIDS. Please click next to continue with the question(s).

Below is a list of different information sources, please check the box which best reflects the amount of information on HIV/AIDS you get from each source in the past year.

	Nothing	Little	Some	Much	Very much
Newspapers					
Television					
Radio					
Internet websites					
Your doctor					
Governmental agencies					
Consumer or patient interest groups					
Family or Friends					

Please check the option that best describes how much confidence you had in information about HIV/AIDS you got from the following sources in the past year.

	Nothing	Little	Some	Much	Very much
Newspapers					
Television					
Radio					
Internet websites					
Your doctor					
Governmental agencies					
Consumer or patient interest groups					
Family or Friends					

From which sources would you prefer to receive information in case of an outbreak of HIV/AIDS in the Netherlands? Please choose up to three options.

- ☐ Newspaper
- ☐ Television
- ☐ Radio
- ☐ Internet Websites
- ☐ Own doctor
- ☐ Governmental agencies
- ☐ Consumer or patient interest groups

- Family or friends
- Other (please write below)
- × Don't know

The last few questions are general questions about yourself.

What is your age? (years old)

What is your gender?

- Male
- Female
- Other (Please describe)

Which type of schooling are you currently enrolled in?

- University
- Hogeschool

Which degree are you currently studying for?

- Bachelor degree
- Master degree
- Doctoral degree
- Other (Please write below)

Thank you very much for your participation. Please click next to register your results.