

The influence of social capital on the self-esteem of Dutch adolescents

*A study on Dutch adolescents ranging from the age of 15-18, based on the second wave of the Youth
in Europe Study (YES!)*

June 15th, 2018

Utrecht University

Faculty of Social Sciences

Sociology

Maxime Yenga (5740797) & Merlijn Zuiderwijk (5754518)

Individual part: Maxime Yenga

First reviewer: Rense Corten

Second reviewer: Leonie van Breeschoten



Utrecht University

Abstract: The amount of mental health problems among Dutch adolescents is increasing. In a world in which mental health problems are still a sensitive topic, more attention is started to be given, fueled by governmental engagement. Despite this, little research has been done on this topic while future policies can gain substantially from its findings. In this research we specifically focus on self-esteem, a key component of mental health, and an important determinant of mental health issues among adolescents. When looking into this we include three components of the most common predictors of mental health problems, namely network size, amount of perceived social support and ethnic homogeneity. Additionally we look into the interaction between these variables on self-esteem and the consequences of specific levels of self-esteem on deviant behaviour. While doing this, the effects are compared between the Dutch native population and the four biggest ethnic groups in the Netherlands (Antillean, Surinamese, Turkish, and Moroccan). We find a tendency of adolescents for the in-group and a significant effect of self-esteem on deviant behaviour. We do not find a significant relationship between any component of social capital on self-esteem nor for the interaction effects. These findings suggest future policies pay attention to mental health problems as a cause of deviant behaviour of adolescents.

Keywords: social capital, network size, social support, ethnic homogeneity, mental health, self-esteem, adolescents, social identity theory, ethnicity.

Data: Kalter, F., Heath, A. F., Hewstone, M., Jonsson, J., Kalmijn, M., Kogan, I., ... & Brodin Låftman, S. (2013). Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU) – Reduced version. Reduced data file for download and off-site use. GESIS Data Archive, Cologne, ZA5656 Data file Version 2.3.0, doi:10.4232/cils4eu.5656.2.3.0.

Introduction

The Netherlands is one of the happiest countries in the world (Telegraaf, 2018). Despite this, the Dutch population reported that they feel slightly less mentally healthy than they did in previous years (Rijksinstituut voor Volksgezondheid en Milieu, 2016). Additionally, Dutch youth report more mental health issues than they did 15 years ago (Rijksinstituut voor Volksgezondheid en Milieu, 2016). Nowadays, 20 percent of the adolescents between 12 and 16 years old have severe mental health issues, which is an increase from 2005 (16.4%) and 2009 (14.3%) (De Looze, Van Dorselaer, De Roos, Verdurmen, Stevens, Gommans, ... & Vollebergh, 2014). However, this is an average; 24% of the girls in that age group show mental health issues compared to 16% of the boys. Girls who struggle with mental health problems tend to internalize these struggles, whereas boys tend to externalize them as a means of coping. The increase is the result of an increase in reported hyperactivity and emotional problems. Over the same period, behavioural problems and problems with peers decreased. Moreover, Dutch adolescents with a non-western migration background have more behavioural problems and psychotic experiences than their Dutch peers with no migration background (Los, 2013).

While all these numbers are publicized, mental health problems are still a sensitive subject. There are plenty of arguments which emphasize the need to better address mental health problems amongst adolescents (Nederlands Jeugdinstituut, 2018; Omroep Gelderland, 2017). Poor mental health is strongly related to other health and development problems during youth. The most detrimental of these factors include lower educational achievements, substance abuse, violence, as well as both poor reproductive and sexual health (Patel, Flisher, Hetrick & McGarry, 2007). Furthermore, addressing adolescents' mental-health needs is crucial to ensure they have the opportunity to fulfil their potential and contribute fully to the development of their communities (Feldman & Stiffman, 1986). Most observers regard adolescence as one of the most critical stages of human development, especially given the transitions adolescents endure that prepare them for psychological functioning as an adult. It has been argued that many adolescents experience pivotal stress during this period of development. If successfully navigated, such stress can help prepare the adolescent for a happy and productive adult life. If not, it can hamper the adolescent's development and interfere with adaptive functioning in adulthood. Another cause for concern comes from the fact that the mental issues that arise during adolescence can lead to problematic behaviour later in life (Mann, Hosman, Schaalma & De Vries, 2004). For example, personality disorders such as borderline personality disorder and antisocial personality disorder are usually evident in mid-to-late adolescence and become increasingly disruptive throughout early adult life unless adequately treated (Leman, Bremner, Parke & Gauvain, 2012).

Overall, mental health issues can impede the development of adolescents and they can result in dysfunctional adult life. Despite the fact that the national Dutch mental health organisation (GGZ) emphasizes that there is still insufficient attention paid towards mental health problems (Moolenaar, 2017), a shift is starting to take place improve the situation. Increasing numbers of campaigns are starting to focus on mental health problems and it has even become a key factor on the Dutch political agenda (NOS, 2018). However, questions still exist about what is the best way to bring more attention to the issue? Furthermore, are there significant differences in mental health between adolescents? If so, how can different approaches be used for adolescents to tackle their unique issues effectively?

Extensive research has been done to look into the effects of one's social network on mental health (Cullen & Whiteford, 2001; Kawachi & Berkman, 2001; Sartorius, 2003; Thoits, 2011; Rethon, Goodwin & Stansfeld, 2012). This has shown that social ties are one of the main predictors for psychological well-being. Many of these studies have, however, used adults as their observed demographic instead of adolescents. This has led to an overview of the problem but not a specific one for the most vulnerable and affected group.

In relation to this, a vast amount of literature on the topic of mental health can be found from the classic immigration countries (i.e. Canada, the United States, and Australia). Some of these studies look into the relationship between social networks and mental health (Stevens & Vollebergh, 2008), and even into ethnic identification or racial group membership as related to mental health. Other studies look at the consequences of migration, such as stress or a selection-effect. These studies demonstrate that ethnic background can have a significant effect on a specific aspect of mental health,

namely on the self-esteem of an adolescent. This is especially the case where the adolescent is part of an ethnic minority group in their country of residence and is mainly surrounded by ethnic others.

There is less literature on these topics from European origin, as they have become multicultural countries rather quickly in the past 40 years (Heath, Rotheron & Kilpi, 2008; Hooghe, Trappers, Meuleman & Reeskens, 2008). When we look at the Netherlands, it becomes apparent that there is little literature on the relation between one's social network and one's mental health, especially for the adolescent population. Some scholars have looked at the ethnic composition of school classes to explain why children of immigrants often report worse mental health symptoms compared to their native peers (Gieling, Vollebergh & van Dorsselaer, 2010; Vollebergh, ten Have, Dekovic, et al., 2005). However, none of them have looked at the composition of one's network of friends. This explicitly requires further research because these strong peer ties are the most accurate predictors for mental well-being of adolescents (Estell & Perdue, 2013), and mental health could be affected by the ethnic composition of the social network, just like class composition.

Furthermore, a more methodological difference between this study and previous literature can also be highlighted. Literature from the classic immigration countries differs from European literature when it comes to defining the native population (Stevens & Vollebergh, 2008). For example, American studies see third-generation ethnic minorities as part of the native population. Many African-American and Hispanic individuals have lived in the United States for ages and are therefore seen as "native". As European countries do not have as long of a history of immigration, they tend to define the native population and ethnic minorities differently. Moreover, each European country has various ethnic minorities and unique historical relations with these demographics. In essence, each country has a distinct native group and then different ethnic minorities. These unique fluctuations from each country make comparisons even more interesting and doing so can lead to a more representative all-encompassing theory.

Theory

Adolescence and mental health

Adolescents are greatly affected by social, environmental, and cultural factors (Patel et al., 2007). Mental health issues that arise during this period of adolescents' lives can hinder the fulfilment of their potential and their functioning in society during adulthood, as adolescence is often seen as one of the most important phases in human development (Feldman & Stiffman, 1986). This phase in one's life often brings about changes in beliefs, values, expectations, attitudes and behaviour concerning oneself and others (Jessor & Jessor, 1977). For example, during puberty the value of achievement and religiosity decreases. On the other hand, tolerance of deviance, social criticism and the value of independence increases. Furthermore, there is often a decline in parental control and an increase in the importance of friendship support. Also, adolescents go through the phase of puberty during adolescence, although girls enter this phase earlier than boys (Leman et al., 2012). During puberty, adolescents' bodies change due to hormones as they become more sexually mature. All in all, adolescents go through numerous changes as they transform from children into adults. This also means that adolescents start to find out who they really are, and what their role is in the social world (Steinberg & Morris, 2001). Adolescents try to find a sense of identity, however this process might result in role confusion over who and what the individual wants to be (Leman et al., 2012)

Mental health and mental illness can be seen as two different things (Keyes, 2005). Where mental illness is predominately about mental disorders, poor mental health includes people who are not feeling or functioning well, and are free of mental disorders. The U.S. Department of Health and Human Services (1999) defined mental health as *"a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with people, and the ability to adapt to change and cope with adversity."* This term is not only used by social scientists but also by organizations such as the World Health Organization (2012). They define mental health as follows: *"mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community."* In other words, we understand that being healthy mentally entails the ability to be productive in daily life, being able to deal with pressures in life that might cause stress, and being engaged in society and community.

Individuals who are seen as mentally healthy have high levels of emotional, psychological, and social well-being (Keyes, 2005). Psychological and social well-being play, together with subjective well-being, a role in one's mental health. Emotional well-being is seen as one of the indicators of subjective well-being (Keyes, 2000). Firstly, social well-being means that individuals want to feel that they belong to society and they are accepted by their communities. Individuals need to feel that they are contributing to society. Building on this work, Keyes (2002) states that some parts of social well-being can be linked to interpersonal and societal level causes of mental health through for example social support and social networks. Psychological well-being and subjective well-being rather look alike. Social scientists see subjective well-being as the rating individuals would give their lives in positive terms (Diener, 1984; Keyes, 2002; Keyes, Shmotkin & Ryff, 2002; Keyes, 2005). Subjective well-being is often measured in terms of one's happiness or quality of life, other forms of one's life satisfaction, and their emotional state. However, the outcomes rely on what the respondents perceive as a good life. Furthermore, Diener (1984) states that conditions such as health, comfort, virtue and wealth are not part of subjective well-being, but they could have an influence on one's perception of the quality of their lives.

A vast amount of work of these scholars rather focuses on the reliability and validity of these measures (Ryff, 1989). He argues that psychological well-being entails self-acceptance, positive relations with others, autonomy, personal growth, and self-esteem among others. This component of mental health and well-being is of interest to this research as it contains one's self-esteem. Self-esteem refers to one's global evaluation of his/her positive or negative value, based on the ratings a person would give oneself regarding different aspects of his/her life (Mann, Hosman, Schaalma & De Vries, 2004). Self-esteem is formed by processes of reflected appraisal, social comparison, and self-attribution (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). Reflected appraisal constitutes the idea that the way people evaluate themselves is strongly affected by the views others have of them (Cooley, 1912; Mead & Mind, 1934). Similarly, social comparison can be defined as the process whereby people compare themselves to others when there is no objective information about

themselves available for self-evaluation (Festinger, 1954). The process of self-attribution refers to the idea that people attribute the consequences of their actions and the feelings, beliefs, intentions and motives that come with it, to themselves (Rosenberg et al., 1995). The success or failure of one's actions are integrated into one's self-evaluation. Over the course of one's life span, one's self-esteem fluctuates (Robins, Trzesniewski, Tracy, Gosling & Potter, 2002). Where people often evaluate themselves positively during childhood, their self-esteem gradually declines, and during adolescence the decline in self-esteem continues resulting in a substantial drop. Researchers found all kinds of different explanations for this drop in self-esteem during adolescence; puberty and other biological changes (Simmons, Blyth, Cleave & Bush, 1979); contextual developments like changing schools (Simmons et al., 1979; Wigfield, Eccles, Mac Iver, Reuman & Midley, 1991), and cognitive changes in relation to operational thinking (Robins et al., 2002).

Self-esteem is a key element of mental health (Mann et al., 2004). There is a vast amount of literature stating that low self-esteem can lead to poor mental health and behavioural problems (Mann et al., 2004; Rosenberg et al., 1995; Jessor, Van Den Bos, Vanderryn, Costa & Turbin, 1995; Steinberg & Morris, 2001). In other words, low self-esteem is an indicator for poor mental health, but it is also a cause for other mental disorders. Low self-esteem can result in either internalizing problems or externalizing problems. Whether internalizing or externalizing will occur depends on one's personality, self-control and the circumstances surrounding the problem. Internalizing problems is seen as passive, and can be seen in the form of depression, suicidal thoughts, eating disorders and anxiety. On the other hand, externalizing problems is seen as active, and can be seen in the form of violence and substance abuse. Similarly, high self-esteem can function as a protective factor against mental health issues (Mann et al., 2004; Patel et al., 2007). For example, researchers argue that self-esteem can serve as a protective factor against stress that is caused by negative events in life, and specifically protecting against depression (Piko & Fitzpatrick, 2003). All in all, this vast literature has enabled us to come up with a clear definition for self-esteem. Self-esteem can be defined as one's assessment in terms of his/her positive or negative value, based on the value one would give themselves regarding different aspects of life. One's self-esteem is formed through processes of social interaction and can function as either a risk or a protective factor when it comes to mental health.

Additionally, one's ethnic identity can be a protective factor for one's self-esteem as it hands adolescents a solid sense of self (Umaña-Taylor & Updegraff, 2007). Children tend to be able to identify ethnic groups (4-5 years old), or show ethnic awareness, a year or so later than they can identify gender groups, as ethnicity can be a more complex matter than gender (Leman et al., 2012). For ethnic minorities, the identity formation process that takes place during adolescence is rather more complex, as they not only experience the same development as every other adolescent, but also have to accept their minority status within the majority culture and what this means for their identity (Adams, Gullotta & Montemayor, 1992). Ethnic identification can provide positive attitudes - e.g. pride, pleasure, satisfaction - towards their own group (Phinney, 1990). However, this only applies to those who have explored their ethnic identity and have figured out and defined what their ethnic identity means. It has been argued that a strong ethnic identity might serve as a mechanism to protect one's self-esteem when one feels that they are a target for discrimination (Crocker & Major, 1989). Similarly, scholars have also argued that the absence of positive attitudes, or negative attitudes can have a damaging effect on one's self-esteem (Phinney, 1990). Feelings like displeasure, dissatisfaction, feelings of inferiority and no sense of belonging might impact one's self-esteem negatively. These attitudes can be acquired via the aforementioned processes of developing self-esteem. Crocker and Major (1989) argue that stigmatized minorities can develop negative self-esteem through social interaction. When we look at Mead's idea of reflected appraisal (1934), Crocker and Major argue that stigmatized minorities develop negative self-esteem due to interaction with individuals that hold negative attitudes towards them. These negative attitudes are then internalized and adopted into one's self-esteem in a harmful way. Moreover, members of stigmatized groups can be devalued within the wider culture, as expressed in literature and media. In other words, it is safe to say that belonging to an ethnic minority can cause real complications, as the negative stereotypes surrounding their ethnicity can cause lower self-esteem. This in turn can result in mental health issues and behavioural problems.

Adolescence and social capital

The term 'social capital' contains many aspects of our social world; from size (Bourdieu, 1980), strength (Granovetter, 1973) and redundancy (Burt, 2000), to forms of social support; like health (Van Leeuwen, Flap and Tjihuis, 1993; Huijts, 2011), mental and physical support (Lin, Dean, and Ensel, 1986; House, Landis and Umberson, 1988; Moreno et al., 2009). The social support aspect of social capital is especially important for answering our research question and requires further attention. In our investigation, it must be noted that our research only focuses on the relationship between social capital and mental health, and not on social capital and physical health. While this could be potentially challenging due to the close relationship and correlation between mental and physical health, (Penedo & Dahn, 2005), our research has provided ways to distinguish the two. Vast literature has shown that the effect of mental health on physical health is significant (Phelan, Stradins & Morrison, 2001; Penedo & Dahn, 2005; Paluska & Schwenk, 2000), but it is not a reciprocal effect. In essence, a lower levels of physical health do not automatically correlate with lower levels of mental health, allowing us to solely focus on mental health and social capital.

Over the years, many social scientists have tried to come up with theoretical frameworks for social networks. One theory on the topic that is still frequently referenced today is that of Granovetter (1973), which describes weak and strong ties based on time spent together, the intimacy of mutual disclosure, the emotional intensity of the relationship and the reciprocity in services provided to one another. Another important theory is that of Thoits (2011) that describes a measurement of social capital as based on one's contacts with other people, as well as connections through membership of primary - (small sized, intimate, informal) and secondary groups (large, less intimate, formal). Additionally, Lin, Ye & Ensel (1999) used a three layered concept of social ties called "belonging-bonding-binding" representing the outer-, intermediary-, and inner layer of social relations which all have a different effect on mental health. While conducting our research we will focus on strong ties, comparable to both the primary groups of Thoits and the binding relationships of Lin, Ye & Ensel. These strong ties consist of an intimate relationship between the ego and alter in which confident information is shared and interactions occur frequently. More specifically, our research will focus on an adolescent's five best classroom friends, an appropriate sample of strong ties (Ladd, 1990).

The supportive role of social ties is underpinned by the presence of companions and the tendency for people to engage in shared social activities; together these characteristics generate a sense of belonging. While this feeling of belonging is important for one's mental well-being (Rook & Underwood, 2000; Uchino, 2004), it is especially essential for adolescents (Newman, Lohman & Newman, 2007; La Greca & Harrison, 2005). If an adolescent feels like they do not belong, it can cause internal as well as external behavioral problems, similar to the effects of having low self-esteem. There are two distinctions that should be made when addressing the supportive aspect of social ties. The emotional sustenance and active coping assistance from significant others, and the emotional sustenance and active coping assistance from similar others (Thoits, 2011). Significant others can be defined as those who the individual considers their closest ties in their network, such as best friends or family members (Thoits, 2011). Due to the fact that the majority of the close friends are part of the significant others group (primary group), we will focus on the supportive aspects related to this group specifically.

The emotional sustenance aspect from significant others' support is based on showing and expressing concern, caring about the individual's well-being and showing sympathy by listening or accompanying him. This form of support is also known as affective support and comprises a significant portion of the support given by peers (Estell et al., 2013). The active coping assistance aspect of social support is concerned with instrumental assistance. This can include anything type of aid such as money, information, coping encouragement and advice. This form of support is mostly associated with strong ties (such as best friends) because receiving financial aid from weak ties can feel disrespectful or out of place. Furthermore, this form of social support demonstrates the caring nature of the relationship between the individual and the strong tie, which can serve to reinforce the individual's self-esteem (Cohen and Mckay, 1984).

An important distinction that has to be made is that our research focuses on the perceived amount of social support of an adolescent, not the received amount. Vast literature has shown that perceived social support is more related to beneficial mental health outcomes than received social support (Barrera, 2000; Wills & Shinar, 2000; Uchino, 2004). While analysing one's perceived

amount of social support we look into the amount of incoming nominations an adolescent gets for best friend. This aspect does not represent received social support because received social support is measured by actual received support in the past instead of one's perception of it (Uchino, 2009).

Furthermore, another major factor of social capital that influences one's self-esteem is the size of their social network. While some studies have reported a positive effect of the size of one's social network on mental health (Bowling & Browne, 1991; Cohen, Teresi & Holmes, 1985; Lin, Ensel, Simeone & Kuo, 1979; Wilcox, 1981; Williams, Ware & Donald, 1981) others have reported no significant effect (Acock & Hurlbert 1993; Schaefer, Coyne & Lazarus, 1981) or even a negative effect (George, Blazer, Hughes & Fowler, 1989). These contradictory findings highlight the importance of investigating this variable further. Especially because the social network variables predicting mental health, such as a feeling of belonging, social support, loneliness and anxiety are also relevant predictors for an individual's self-esteem.

While the importance of the size of one's social network and the types of social support have been addressed, we have yet to emphasize the important structural characteristics of social networks. These characteristics vary from reciprocity, complexity, density, strength, geographical dispersion and formality to homogeneity. Exactly this last aspect of social networks is together with reciprocal linkages and geographical proximity known for its effective provision of affective and instrumental support (Israel, 1982; Berkman & Glass, 2000). This can partially be explained by the social identity theory (Billig and Tajfel, 1973) which states that people have a stronger preference for people of their in-group (same social identity) than for people of their out-group (others). As mentioned above, people can identify themselves on the basis of their ethnicity. As a result of that, people are more likely to help people out who look more like themselves. This ethnic preference or group bias is based on the need to improve self-esteem. In this sense, ethnic group membership increases one's self-esteem. By viewing oneself positively, a tendency to view the whole in-group positively arises. Consequently, an individual will view individuals of the out-group negatively. This view can lead to a decrease of self-esteem of the members of the out-group, as their group is viewed negatively and their ethnic membership makes that they get confronted with these negative images. The positive effect of the ethnic composition of one's network on self-esteem might differ for the network full of friends we test in our study, that is also why we came up with the following hypotheses:

Hypothesis 1: *Dutch adolescents have a more homogeneous network than Antillean, Moroccan, Surinamese, and Turkish adolescents.*

Hypothesis 2: *There is a difference in the effect of incoming nominations on self-esteem in contrast to outgoing nominations on self-esteem of adolescents.*

Hypothesis 3a: *Adolescents with higher ethnic homogeneity in their network will have higher self-esteem compared to adolescents with less ethnic homogeneity.*

Hypothesis 3b: *The ethnic homogeneity of one's social network does not only affect self-esteem directly, but also in interaction with the size of one's social network.*

Hypothesis 3c: *The size of one's social network does not only affects one's self-esteem directly but also in interaction with ethnic homogeneity of one's social network.*

To summarize, we will be focusing on strong social ties for this study. Specifically, we will analyse best friends in an adolescent's classroom, one of the strongest predictors for this demographics' mental well-being (Ladd, 1990). Additionally, we will look into the effects of size, amount of perceived social support and ethnic homogeneity of a Dutch adolescent's network. Furthermore we will also test for the ethnic background of each respondent, to investigate if these effects differ for specific ethnic groups. Additionally, we will look at to what extent self-esteem affects one's deviant behaviour. This leads to the following hypothesis:

Hypothesis 4: *Adolescents with low self-esteem show more deviant behaviour than adolescents with a high self-esteem.*

Data & Methods

To conduct our research, we used the second wave of the Youth in Europe Survey (YES!). This research started in 2010 with a sample of 14-year old children. It is a cross-country comparative as it is conducted in Germany, the Netherlands, Sweden and the United Kingdom, but this study only focuses on the Dutch questionnaire. Only Dutch adolescents that participated in the second wave are taken into account. This is the case because this wave answers questions about self-esteem and ethnic homogeneity of one's network (CILS4EU, 2016). The Dutch data consists of 3,614 students in total, from which 3,322 of them were reached with in-class questionnaires (CILS4EU, n.d.). Children that changed classes, transferred schools, or were unavailable on the day of the interview were approached by mail or email, so the other 292 were reached by telephone, mail or email, thus interviewed in their home environment (CILS4EU, n.d.). All in all, the overall response rate was 76.1% (CILS4EU, 2016). The sample contains 2,462 (63.1%) students with a Dutch background, while 1,147 (36.4%) adolescents have an immigrant background. This longitudinal survey is designed to gain more insight in various aspects of the lives of adolescents. The scope of this survey focuses among other things on one's educational achievements, working career, friends, relationships, family, beliefs, attitudes, and lifestyle (CILS4EU, n.d.). This survey is conducted every year to see how these specific aspects of an adolescent's life change over time. While doing so, the exact same children are asked to keep on participating in the research. This leads to a clear and trustworthy database full of visible changes in the Dutch adolescents' life.

Self-esteem measurements

First of all, we only looked at adolescents between 15 and 18 years old, as this is an applicable age group for self-esteem questions as they are undergoing the process of adolescence and puberty. The questions posed in the questionnaire somewhat corresponds with Rosenberg's self-esteem scale (1965). There is a vast amount of distinct self-esteem measures, but most researchers make use of face valid self-report scales (Robins, Hendin & Trzesniewski, 2001). Among these self-report instruments, the Rosenberg Self-Esteem (RSE) Scale is the most widely used and found to be highly reliable and internally consistent (Gray-Little, Williams & Hancock, 1997). Furthermore, Gray-Little et al. state that a shortened RSE Scale will not compromise its reliability and internal consistency.

As can be seen in the questionnaire, not all the items that Rosenberg proposes are incorporated. It looks like the items used in the questionnaire are a reduced or summarized version of the real Rosenberg scale. For example, the real RSE Scale contains items like "*I certainly feel useless at times*", "*I feel that I'm a person of worth*", "*At times I think I am no good at all*". This all looks like the item *I feel worthless*", which is part of the YES! survey. As mentioned above, this does not form a complication for further analysis. The questions focus on life satisfaction and the feelings of respondents. We combine these variables in order to come up with one measurement of self-esteem. The first question that we look at is as follows: "*On a scale from 1 to 10, how satisfied are you with your life in general?*". As stated in the question, the respondent has 10 scores to choose from, with 1 being very dissatisfied and 10 being very satisfied. For the other questions, respondents can choose between the following four answers; "*often true*", "*sometimes true*", "*rarely true*", "*never true*". The real RSE Scale has four different answers, too, although they are formulated differently; "*strongly agree*"; "*agree*"; "*disagree*"; "*strongly disagree*". The following statements are used in the combined measure; "*I worry a lot*"; "*I get angry very quickly*"; "*I am often sad*"; "*I feel worthless*"; "*I act without thinking*"; and "*I feel anxious*". After looking at the data, we decide to discard the item "*I feel anxious*" as this item only has missing values. Respondents that didn't answer any questions related to self-esteem were left out; a global self-esteem score cannot be calculated for respondents with no answer on any of the items. This results in forty missing values on the overall self-esteem scale.

As it turns out, the answer categories are different for the life satisfaction question and the emotional feeling questions. To deal with this we calculate the different z-scores first before integrating all the items into one single self-esteem item. This makes the measures more comparable and applicable for integration into one measure. To measure whether the items are internally consistent, we calculated the Cronbach's alpha first. Cronbach's alpha is the most widely used

measure of reliability (Tavakol & Dennick, 2011). The alpha shows to what extent the items in a test measure the same concept or construct. In other words, by using this reliability test, we want to make sure that all the aforementioned items are all measuring self-esteem, and whether these items can be integrated into one single self-esteem measure. The Cronbach's alpha for the self-esteem measure is .731, which is an acceptable value. The items are interrelated and we can therefore use them for constructing the self-esteem variable. The composed z-score for self-esteem is derived from the combined z-scores of each individual item from our self-esteem scale, and shows the average self-esteem scores for each respondent.

Social capital measurements

The social capital aspect of our research consists of three components: the size of one's network, the amount of perceived social support and the amount of ethnic homogeneity. The effects of all these three components are tested in regards to self-esteem. This first aspect is based on the outgoing nominations for best friend in one's classroom, restricted to a maximum of five. The question asked for this variable is as following: "*Answer the following questions about your best friends. You can answer the question from 1 till 5 friends. Do not fill in your boy-/girlfriend. What is his/her name?*". By answering this question for one's best friends, we composed a network for each respondent. While doing so we filtered out the respondents that did not nominate any friends. We made this decision because we cannot compute a network for adolescents that did not nominate anyone, which is not part of the focus of our research. Consequently, one's network size can range from one to five friends. As hypothesis 3c shows, we predict that the size of one's social network also interacts with ethnic homogeneity to affect self-esteem. However, this might lead to the introduction of multicollinearity into the regression equation (Robinson & Schumacker, 2009). That's why the variables that indicate the size of the network and the interaction-term are centred. We used mean centring to centre the variables. This entails subtracting a variable means from each score. This decreases the inter-correlation between the variables, and yields a more meaningful interpretation of the results

The second aspect of social capital is the amount of perceived social support of an adolescent. This was measured by the amount of incoming nominations a respondent got for *best friend*. While there was a maximum amount of outgoing nominations, there was no maximum amount of incoming nominations. Furthermore, the minimum amount of outgoing nominations was equally set to one for incoming nominations. This decision is based on the fact that we look into social networks of adolescents. However, if a respondent does not receive any nominations we cannot look into its social network. As they do not have a network, we cannot measure how their self-esteem is affected. In other words, all the respondents who didn't receive any nominations are excluded from further analysis. This results in 1,262 missing values on this variable. Additionally there are 4 values that seem highly unlikely, these values are, too, excluded from further analysis. In essence, this leads to a variable that tests what effect different amounts of perceived social support have on an adolescent's self-esteem. Resulting in a range from one to thirteen incoming nominations.

Lastly, the ethnic homogeneity of each adolescent's network was tested by looking into the overlap of the respondent's ethnic background and the ethnic backgrounds of its outgoing nominations for best friend. The questions asked were: "*What is your country of origin?*" for the respondent and "*What is his/her ethnic background?*" for each nominated friend. The answer form contained a box tick system consisting of sixteen different ethnic backgrounds for the respondent's ethnic background and only six options for the ethnic background of one's best friends, namely: "*Dutch*", "*Moroccan*", "*Turkish*", "*Suriname*", "*Antillean*" or "*Other background*". To calculate the ethnic homogeneity of each adolescent's network, we let the two questions correspond by adjusting the first answer categories to the six answer categories given in the second question. While doing this we added every background that was not covered in the six answer categories to the "*Other background*" group of the second question. Similarly to hypothesis 3c, hypothesis 3b also contained an interaction-effect. Therefore, ethnic homogeneity is also centred when used in a model with an interaction-variable to avoid multicollinearity.

Calculating the level of ethnic homogeneity of each respondent was done by using the same formula as Bas Hofstra (2017) in his work on predicting ethnicity with first names in online social media networks. This formula looks into the amount of ethnic equals similar to the respondent. When

looking into this, a percentage is calculated. The higher the percentage, the more fully homogeneous one's network. Let's say "respondent A" is Dutch and has nominated three best friends, of which two are Dutch and one is not. We then calculate the ethnic homogeneity of this respondent's network by dividing the amount of outgoing nominations with the same ethnic homogeneity as the respondent by the amount of total outgoing nominations. Leading, in this case, to an ethnic homogeneity percentage of 66% ($3/2=.66$). We have decided to only look from the point of view of the respondent because this is the data we are interested in and need to test our hypotheses. Resulting in the following formula:

$$\text{ethnic homogeneity} = \frac{(\text{amount of nominations with the same ethnicity})}{(\text{total amount of friends nominated})}$$

Because this variable is based on the composed networks used to calculate the size of an adolescent's network, the respondents without outgoing nominations have been left out. This also counts for the respondents that did not fill in the ethnic background of the friends they nominated. Moreover, within our research we do not look into the "Other background" ethnic group. We have made this decision because this group contains people from totally different countries. While some have a German background, others have a Japanese or South-African background. If we would have included this ethnic other group in our research we would not have been allowed to conclude anything about its ethnic homogeneity, because the respondents which are part of it totally differ in their ethnic backgrounds.

Behavioural problems measurements

To measure behavioural problems we look at two different set of questions that both measure behavioural problems. On the one hand, there are questions that look at matters related to substance abuse, and on the other hand there are questions that are more related to aggression. To measure substance abuse, the following three questions are asked: "How often do you drink alcohol?"; "How often do you smoke cigarettes?"; "How often do you use drugs like hash, mushrooms, xtc?". All these questions have the same options to choose from, namely: "every day"; "once or multiple times a week"; "once or multiple times a month"; "not that often"; "never". The questions more related to aggression are concerned with the things respondents did for the past three months. These consisted of: "Broke something on purpose that was not mine?"; "Stole something in a store or stole something that was not mine?"; "Carried a knife or weapon with me?"; "Been seriously drunk?". The answer options were relatively easy, namely: "yes" or "no". Again, we integrate both sets of questions into one item. Similarly to the operationalisation of the self-esteem item, we calculate z-scores first to make the items comparable. To see whether these items measure the same thing, we use the Cronbach's alpha as reliability test again. The Cronbach's alpha for these items is .740. This means that there is sufficient internal consistency between the reported answers, and we can therefore use these items to compute a global deviant behaviour scale. This scale shows the average deviant behaviour z-score for each individual. The respondents that failed to answer any questions are left out of further analysis. We deem any form of deviant behaviour, even if it is only one form of deviant behaviour, enough to classify an adolescent as "deviant". This means that we only have thirteen missing values on the overall deviant behaviour scale.

Methods

For the first hypothesis, we make use of independent t-tests. We calculate the average level of ethnic homogeneity of the social network for each ethnicity. In other words, the numbers that we derive from this to what extent one's social network is homogeneous. These average level of ethnic homogeneity of one ethnicity is then compared with the average level of ethnic homogeneity of another ethnicity with the use of independent t-tests. This means that ten separate t-tests show whether the ethnic homogeneity of Dutch, Antillean, Surinamese, Moroccan, or Turkish adolescents significantly differs from each other. The other hypotheses are tested by means of linear regression analyses. For each hypothesis we conduct a univariable regression analysis first, before we control this relation with a multivariable regression analysis. By doing it in this order, we get a clear view of what values change

when the added variables are taken into account. First, we look whether the amount of nominations one receives affects one's self-esteem. Then, we look at the ethnic homogeneity of one's network and what this means for one's self-esteem. After this, we look whether a lower self-esteem leads to more deviant behaviour. Lastly, we look at the homogeneity of the network of Dutch respondents and compare it to the homogeneity of the networks Moroccan-Dutch, Turkish-Dutch, Surinamese-Dutch, and Antillean-Dutch respondents.

Results

Table 1: Descriptive statistics of Dutch students, 2011/2012

	<i>N</i>	<i>Range</i>	<i>Mean</i>	<i>S.D.</i>
<i>Age</i>	3400	15-18	16.54	.621
<i>Female</i>	3439	0-1	.515	.500
<i>Male</i>	1669			
<i>Female</i>	1770			
<i>Homogeneity (%)</i>	3516	0-1	.658	.391
<i>Network size</i>	3516	1-5	4.493	.986
<i>Received nominations</i>	2348	1-13	4.986	2.059
<i>Self-esteem</i> (<i>Cronbach's Alpha</i> =.731)	3574	-2.62 – 1.36	.000	.654
<i>Deviant behaviour</i> (<i>Cronbach's Alpha</i> =.740)	3601	-.68 – 3.31	.001	.631
<i>Ethnic background</i>	3614			

<i>Dutch</i>	2192	0-1	.607	.489
<i>Antillean</i>	89	0-1	.025	.155
<i>Moroccan</i>	201	0-1	.056	.229
<i>Surinamese</i>	175	0-1	.048	.215
<i>Turkish</i>	210	0-1	.058	.234
<i>Other</i>	747	0-1	.207	.405

Valid N = 2086

Note: Respondents which failed to fill in one or more questions have totally been left out. Furthermore, the percentages of ethnic homogeneity of one's network and ethnic backgrounds are in (x100).

When we look at table 1, we can see that almost all respondents belonged to the age group fitting our research ($M = 16.54$, $SD = .621$). There were slightly more girls than boys taken into account during this research ($M = .607$, $SD = .500$). Furthermore, the majority of our respondents had a Dutch ethnic background ($M = .640$, $SD = .400$, $N = 2192$). The second largest ethnic group in our data is the "Other" group. This group is compiled out of all other ethnic backgrounds that were named in the questionnaire besides the four main non-European ones (Antillean, Surinamese, Moroccan and Turkish). These ethnicities were integrated into one item because each ethnic background consisted of too few cases individually. While we could have made a distinction between Western- and non-Western other backgrounds, we decided not to because this would not correspond with the five ethnic backgrounds of the question: "What ethnic background does this friend have?"

Furthermore, the average percentage of full ethnic homogeneous networks over all ethnic groups combined is 65.8% ($M = .658$, $SD = .391$). Besides, the average amount of nominated classmates was close to the maximum nominations allowed ($M = 4.493$, $SD = .986$). This number was also almost equal to the amount of average nominations for 'best friend' our respondents got ($M = 4.986$, $SD = 2.059$). It is important to note here that we did not include the individuals that did not get nominated at all or did not nominate anyone in our data. We have made this decision because we cannot calculate the homogeneity of one's network if there is no network. This decision explains the starting range from network size as well as received nominations. In addition, there are a few individuals who have received up to 13 nominations, that is also why the maximum received nominations of an individual is set at that particular number.

Finally, the amount of self-esteem and deviant behaviour are based on a self-designed z-score scale. By using this scale we find that the majority of our respondents do not get involved in deviant behaviour ($M = -.001$, $SD = .631$) and have a healthy amount of self-esteem ($M = .000$, $SD = .654$). Lastly, our respondents mainly had a Dutch background ($M = .607$, $SD = .489$). The other major ethnic groups that were taken into account had way less respondents; Antillean ($M = .025$, $SD = .155$), Moroccan ($M = .056$, $SD = .229$), Surinamese ($M = .048$, $SD = .215$), Turkish ($M = .058$, $SD = .234$), Other ($M = .207$, $SD = .405$).

First of all, we expected that Dutch respondents would report more homogeneous social networks compared to respondents with a non-Dutch background.

Table 2: *The percentage of complete homogeneous networks per ethnic background*

Ethnic background of respondent	% of full homogeneous networks
Dutch	67.4
Antillean	4.5
Moroccan	15.4
Surinamese	5.7
Turkish	24.8
Other	-

When we look at Table 2 we can see that Dutch respondents indeed more often have a homogenous network compared to adolescents with other ethnic backgrounds. 67.4% of the social networks reported by Dutch adolescents consist of only Dutch adolescents. After Dutch adolescents, Turkish-Dutch adolescents are the most likely to form complete homogeneous networks. 24.8% of the Turkish-Dutch respondents have a social network that only consists of other Turkish-Dutch adolescents. After that Moroccan-Dutch adolescents (15.4%), the Surinamese-Dutch (5.7%) and finally the Antillean-Dutch (4.5%) adolescents follow. This is an indication that Dutch adolescents are indeed more often part of a network that consists of adolescents with the same ethnic backgrounds as them compared to adolescents with a non-Dutch background.

Table 3: *Ethnic homogeneity of adolescents compared between largest ethnic groups in the Netherlands.*

	Dutch		Antillean		Moroccan		Surinamese		Turkish		
	M	SD	M	SD	M	SD	M	SD	M	SD	t
Homogeneity Dutch vs. ethnic others	.896	.186	.162	.578							26.001***
	.896	.186			.465	.360					16.260***
	.896	.186					.181	.282			32.421***
	.896	.186							.578	.358	12.226***

Homogeneity Antillean vs. ethnic others	.162	.578	.465	.360						-7.894***
	.162	.578			.181	.282				-.526
	.162	.578					.578	.358		- 10.934***
Homogeneity Moroccan vs. ethnic others			.465	.360	.181	.282				8.330***
			.465	.360			.578	.358		-3.072***
Homogeneity Surinamese vs. ethnic others					.181	.282	.578	.358		- 11.777***

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 3 shows that Dutch adolescents ($M = .896$; $SD = .186$) have more homogeneous networks than adolescents with an Antillean background ($M = .161$; $SD = .262$). This difference is significant: $t(90.633) = 26.001$, $p < .001$. Similarly, there is a significant difference in the homogeneity of the social network of Dutch ($M = .896$; $SD = .186$) and Moroccan ($M = .465$; $SD = .356$) adolescents; $t(194.820) = 16.260$, $p < .001$. When we compare the homogeneity of the social networks of Dutch adolescents ($M = .896$; $SD = .186$) and Surinamese adolescents ($M = .181$; $SD = .282$), again, we can conclude that Dutch adolescents have a significantly more homogeneous network compared to their Surinamese peers; $t(179.715) = 32.421$, $p < .001$. Lastly, there is also a significant difference in the social networks of Dutch adolescents ($M = .896$; $SD = .186$) and Turkish adolescents ($M = .578$; $SD = .358$). The social network of Dutch adolescents is more homogeneous than that of Turkish adolescents; $t(201.454) = 12.226$, $p < .001$. When we run the t-test for adolescents with an Antillean background, we can see that some of their networks differ from that of the networks of members of other ethnicities. First, it turns out that the network of Antillean ($M = .161$; $SD = .262$) adolescents is significantly less homogeneous than the networks of Moroccan adolescents ($M = .465$; $SD = .356$); $t(225.852) = -7.894$, $p < .001$. However, if the networks of Antillean adolescents ($M = .161$; $SD = .262$) are compared with those of Surinamese adolescents ($M = .181$; $SD = .282$), we can conclude that there is no significant difference between the two; $t(255) = -.526$, $p = .599$. In contrast, Antillean adolescents ($M = .161$; $SD = .262$) do have a significant less homogeneous network compared to their Turkish peers ($M = .578$; $SD = .358$); $t(224.198) = -10.934$, $p < .001$. Furthermore, Moroccan adolescents ($M = .465$; $SD = .356$) and Surinamese adolescents ($M = .181$; $SD = .282$) do differ significantly in the homogeneity of their networks. Moroccan adolescents have a more homogeneous network than Surinamese networks; $t(347.442) = 8.330$, $p < .001$. Further down Table 3, we can see that there is a significant difference between Moroccan ($M = .465$; $SD = .356$) and Turkish adolescents ($M = .578$; $SD = .358$). Moroccan adolescents have a less homogeneous network than Turkish adolescents; $t(378) = -3.072$, $p < .01$. Lastly, Surinamese adolescents ($M = .181$; $SD = .282$)

have a less homogeneous social network than Turkish adolescents ($M = .578$; $SD = .358$). This difference is significant: $t(356.179) = -11.777$, $p < .001$.

Table 4.1: Components of social capital of Dutch adolescents to predict self-esteem

	Self-esteem											
	Model 1			Model 2			Model 3			Model 4		
	b	S.E.	t	b	S.E.	t	b	S.E.	t	b	S.E.	t
Constant	-.022	.037	-.595	-.043	.368	-.116	-.021	.014	-1.477	-.147	.367	-.402
Received nominations	.001	.007	.088	.007	.007	1.010						
Size of network							.011	.014	.773	.020	.013	1,474
Ethnic homogeneity												
Female				-.295	.028	-10.532***				-.295	.028	-10,541***
Age				.008	.022	.360				.016	.022	,734
Ethnic background												
<i>Antillean</i>				.053	.097	.551				.057	.096	,598

<i>Moroccan</i>	.264	.060	4.368***	.291	.062	4,702***
<i>Surinamese</i>	.146	.066	2.215*	.171	.066	2,600**
<i>Turkish</i>	.086	.060	1.426	.083	.061	1,362

Ethnic homogeneity * Size of network

Size of network * Ethnic homogeneity

Adjusted R ²	.000	.057	0.000	.060
-------------------------	------	------	-------	------

* p < 0.05. ** p < 0.01. *** p < 0.001

Table 4.2

	Self-esteem											
	Model 5			Model 6			Model 7			Model 8		
	b	S.E.	t	b	S.E.	t	b	S.E.	t	b	S.E.	t
Constant	-.145	.367	-.395	-.021	.014	-1.516	-.200	.369	-.543	-.197	.369	-.534
Received nominations												
Size of network	.019	.013	1.453									
Ethnic homogeneity				.006	.036	.170	.063	.038	1.668	.062	.038	1,624
Female	-.294	.028	-10.526***				-.293	.028	-10.494***	-.293	.028	-10,482***
Age	.016	.022	.727				.019	.022	.862	.019	.022	,854
Ethnic background												

<i>Antillean</i>	.058	.096	.601	.089	.098	.913	.089	.098	.909
<i>Moroccan</i>	.290	.062	4.681***	.303	.062	4.845***	.302	.063	4,820***
<i>Surinamese</i>	.172	.066	2.614**	.199	.069	2.902**	.199	.069	2,904**
<i>Turkish</i>	.084	.061	1.376	.087	.061	1.418	.087	.061	1,426
Ethnic homogeneity * Size of network	-.013	.031	-.416						
Size of network * Ethnic homogeneity							-.009	.031	-.301
Adjusted R ²		.060		.000		.060		.060	

* p < 0.05. ** p < 0.01. *** p < 0.001

Table 4.3

	Self-esteem					
	Model 9			Model 10		
	b	S.E.	t	b	S.E.	t
Constant	-.069	.076	-.904	-.373	.380	-.981
Received nominations	-.001	.007	-.077	.005	.007	.780
Size of network	.010	.014	.764	.021	.013	1.545
Ethnic homogeneity	.006	.036	.159	.064	.038	1.693
Female				-.295	.028	-10.561***
Age				.020	.022	.900
Ethnic background						

<i>Antillean</i>	.091	.098	.929
<i>Moroccan</i>	.310	.063	4.946***
<i>Surinamese</i>	.206	.069	2.999**
<i>Turkish</i>	.091	.061	1.482

Ethnic homogeneity * Size of network

Size of network * Ethnic homogeneity

Adjusted R ²	-0.001	.061
-------------------------	--------	------

* p < 0.05. ** p < 0.01. *** p < 0.001

Table 4 shows the results from the regression analyses that have been conducted regarding *H2*, *H3a*, *H3b*, and *H3c*. Due to the size of Table 4, the table is divided into Table 4.1, Table 4.2, and Table 4.3, making referring clearer. The results are shown in the *models 1 to 10*, where *model 1* till *model 4* show whether hypothesis 2 can be confirmed or not. Furthermore, the results regarding hypothesis 3a can be found in *model 6* and *model 7* in Table 4.2. The results regarding hypothesis 3b and 3c can be found in *model 3* till *model 8* displayed in Table 4.1 and Table 4.2. These tables also show the interaction effect of ethnic homogeneity on the relationship between size on self-esteem in *model 5* and the interaction effect of size on the relationship between ethnic homogeneity and self-esteem in *model 8*. Finally, *model 9* and *model 10* in Table 4.3 show the results of the comparison between received nominations, the size of one's self-nominated network, and the ethnic homogeneity of one's social network on an adolescent's self-esteem.

The second hypothesis entailed the expectation that there would be a difference in effect on self-esteem between received nominations and the size of a respondent's network. As Table 4.1 shows nor the amount of received nominations ($b = .001$; $t = .088$; $p = .930$) nor the size of the social network ($b = .011$; $t = .773$; $p = .440$) has a significant effect on self-esteem separately. After controlling the relation between received nominations and self-esteem for the independent variables *age*, *female*, *Antillean*, *Moroccan*, *Surinamese*, and *Turkish*, the influence of received nominations on self-esteem remains insignificant ($b = .007$; $t = 1.010$; $p = .313$). This also counts for the *age* of the respondents which does not have a significant effect on the relation between received nominations and self-esteem ($b = .008$; $t = .360$; $p = .719$). However, it turns out that *female* does have a significant effect on the relation between received nominations and self-esteem ($b = -.295$; $t = -10.532$; $p < .001$). This means that the effect of received nominations on self-esteem is less strong for female adolescents than for male adolescents. Moreover, both *Moroccan* ($b = .264$; $t = 4.368$; $p < .001$) and *Surinamese* ($b = .146$; $t = 2.215$; $p < .05$) have a significant impact on the relation between received nominations and self-esteem. This means that the effect of received nominations on self-esteem is stronger for adolescents with a Moroccan or Surinamese background. Adolescents with an *Antillean* ($b = .053$; $t = .551$; $p = .582$) or *Turkish* ($b = .086$; $t = 1.426$; $p = .154$) background do not show a significant effect.

Looking at the effect of the size of one's social network on self-esteem after controlling this relation in *model 4*, it can be concluded that there is no significant effect ($b = .020$; $t = 1.474$; $p = .141$). Which means that we can reject *hypothesis 3c*. Again, it turns out that the age of the respondents does not have an effect on the relation between received nominations and self-esteem ($b = .016$; $t = .734$; $p = .463$), which means that being older does not affect the importance of the amount of received nominations. It is also again the case that *female* does have a significant effect on the relation between received nominations and self-esteem ($b = -.295$; $t = -10.541$; $p < .001$). This means that the effect of the amount of received nominations is less strong for female adolescents compared to male adolescents. Similarly as before, we find evidence that both *Moroccan* ($b = .291$; $t = 4.702$; $p < .001$) and *Surinamese* ($b = .171$; $t = 2.600$; $p < .01$) adolescents report a significant impact on the relation between received nominations and self-esteem. This indicates that the effect of received nominations is stronger for adolescents with a Surinamese or Moroccan background compared to adolescents with another ethnic background. For example, this effect does not hold for adolescents with an *Antillean* ($b = .057$; $t = .734$; $p = .550$) or *Turkish* ($b = .083$; $t = 1.362$; $p = .173$) background.

Moving onto *models 6, 7 and 8*, we can see the effects of ethnic homogeneity of one's social network on self-esteem. In *hypothesis 3a* we expected that higher ethnic homogeneity in an adolescents network would lead to higher self-esteem. If we look at *model 6*, we can see that this is not the case ($b = .006$; $t = .170$; $p = .865$). Even when we test this relationship with the independent variables, visible in *model 7*, it becomes clear that ethnic homogeneity still does not show a significant effect on self-esteem of adolescents ($b = .063$; $t = 1.668$; $p = .096$). This is, however, not the case for the *female* ($b = -.293$; $t = -10.494$; $p < .001$), *Moroccan* ($b = .303$; $t = 4.845$; $p < .001$) and *Surinamese* ($b = .199$; $t = 2.902$; $p < .01$) group. Meaning that the effect from a fully heterogeneous network to a fully homogeneous network has significantly less effect for females than for males and for Moroccan and Surinamese adolescents. Despite this, we still have to reject *hypothesis 3a* due to the insignificant effect of ethnic homogeneity on self-esteem.

Further, *hypothesis 3b* and *hypothesis 3c* also require us to look into the interaction effects of ethnic homogeneity and network size. Looking into the effect of the interaction of homogeneity with size, displayed in *model 5*, no significant results are shown ($b = -.013$; $t = -.416$; $p = .677$). Even so in *model 8*, no significant effect can be found on the effect of the interaction between size and ethnic homogeneity on self-esteem ($b = -.009$; $t = -.301$; $p = .764$). These results makes us to reject the interaction effects of *hypothesis 3b* and *hypothesis 3c*.

Lastly, *Models 9* and *10*, test the combined effect of the amount of nominations one got, the size of one's network and the ethnic homogeneity of one's network. There is no hypothesis linked to this model, but it was still interesting to see whether the three main independent variables have a significant impact on self-esteem after controlling for each other. As *model 9* shows, the independent variables do not have a significant impact on self-esteem. Like we have seen in previous models, the amount of received nominations does not have a significant effect on self-esteem ($b = -.001$; $t = -.904$; $p = .938$). Similarly, the size of a social network has not had a significant effect on self-esteem before and now, after controlling for received nominations and ethnic homogeneity, it still does not have a significant effect ($b = .010$; $t = .764$; $p = .445$). Even so, does ethnic homogeneity not have a significant effect on self-esteem when it is controlled for incoming nominations and network size ($b = .006$; $t = .159$; $p = .874$). When the other controlling variables are added to the model, neither received nominations ($b = .005$; $t = -.981$; $p = .327$), nor size of the social network ($b = .021$; $t = 1.545$; $p = .091$), nor ethnic homogeneity of one's social network ($b = .064$; $t = 1.693$; $p = .091$) has a significant effect on self-esteem. Just like we have seen in the other models, the effect of the independent variables is less strong for female adolescents ($b = -.295$; $t = -10.651$; $p < .001$). Additionally, the effects of the independent variables are stronger for adolescents with a Moroccan ($b = .310$; $t = 4.946$; $p < .001$) or Surinamese ($b = .206$; $t = 2.999$; $p < .01$) background. Age ($b = .020$; $t = .900$; $p = .368$) or being from Antillean ($b = .091$; $t = .929$; $p = .353$) or Turkish ($b = .091$; $t = 1.482$; $p = .138$) descent does not have a significant effect.

While we have only looked into the causes of specific levels of self-esteem of Dutch adolescents, we will also pay attention to the consequences of self-esteem. More specifically, deviant behaviour, reported in Table 5 below.

Table 5: Regression analysis to predict the effect of self-esteem on deviant behaviour of Dutch adolescents

	Deviant behaviour					
	Model 1			Model 2		
	b	S.E.	t	b	S.E.	t
Constant	-.005	.010	-.473	-1.931	.270	-7.163***
Self-esteem	-.161	.016	-9.921***	-.211	.016	-13.124***
Female				-.295	.021	-14.208***
Age				.127	.016	7.822***
Ethnic background						
<i>Antillean</i>				-.097	.064	-1.507
<i>Moroccan</i>				-.169	.044	-3.822***
<i>Surinamese</i>				-.015	.047	-.314
<i>Turkish</i>				-.172	.044	-3.950***
Adjusted R ²		.028			.108	

N = 3366

* p < 0.05. ** p < 0.01. *** p < 0.001

The results indicate that self-esteem affects deviant behaviour significantly (b=-.161; t= -9.921; p < .001). In other words, adolescents with higher self-esteem tend to show less deviant behaviour. This means that an individual is less likely to smoke, drink alcohol, do drugs, or vandalise. Moreover, after

controlling the relation between self-esteem and deviant behaviour for *female*, *age*, and the *ethnic background* of the respondent, it turns out that this relation remains significant ($b = -.211$; $t = -13.124$; $p < .001$). *Female* affects this relation significantly ($b = -.295$; $t = -14.208$; $p < .001$), which indicates that the influence of self-esteem on deviant behaviour is stronger for men than for women. Secondly, *age* also has a significant impact ($b = .127$; $t = 7.822$; $p < .001$). Thus, self-esteem has a stronger influence on deviant behavior for older adolescents than for younger ones. When we look at the ethnic background of the respondents, we can see that the effect of self-esteem on deviant behaviour is significant for *Moroccan* ($b = -.169$; $t = -3.822$; $p < .001$) and *Turkish* ($b = -.172$; $t = -3.950$; $p < .001$) adolescents. This means that a low self-esteem increases the amount of committed deviant behaviour for *Moroccan* and *Turkish* adolescents. This is not the case for adolescents with an *Antillean* ($b = -.097$; $t = -1.507$; $p = .132$) or *Surinamese* ($b = -.015$; $t = -.314$; $p = .754$) background, meaning that a lower level of self-esteem will not affect their amount of deviant behaviour compared to Dutch adolescents. All in all, we can conclude that these results are in line with *hypothesis 4*. Adolescents with higher self-esteem tend to show less deviant behaviour than their peers with lower self-esteem. Moreover, this is all true for the female, age, and two ethnic backgrounds of the respondent.

Conclusion

Earlier, we discussed the importance of a good mental health during adolescence. During adolescence, adolescents develop into adults who are expected to be productive and contribute to its community in daily life. Mental health issues can hinder this process and might be the cause of problems individuals might endure later in their lives. This study revolves around self-esteem, as this is a crucial component of one's mental health. Extensive research has proven that one's self-esteem is not only dependent on other predictors, but it can also function as predictor. Earlier studies have proven that one's self-esteem can be impacted by class composition, migration, ethnic group membership, or one's social network. Also, other studies have shown that self-esteem can function as either a risk or a protective factor, and thus can predict the mental health or behavior of individuals. Built upon this existing literature, we have decided to look at self-esteem both as a predicted and predictor factor; self-esteem can be predicted by one's social network, and it can also predict the behavioural problems that might occur among adolescents. We have drawn up several hypotheses that looked at the effect one's social network might have on one's self-esteem.

After the statistical analysis, it can be concluded that some hypotheses can be confirmed, but there are also a few that can be rejected. First of all, the first hypothesis can be confirmed. According to the social identity theory, individuals tend to have a preference for people that are similar to them. Therefore, we expected that adolescents with a Dutch background have a more ethnic homogeneous network compared to adolescents with an Antillean, Moroccan, Surinamese, or Turkish background. Moreover, every other ethnic group differs significantly between themselves when it comes to the ethnic homogeneity of their network. However, this was not the case when we compared the ethnic homogeneity of the members of the Antillean group with the members of the Surinamese group. On the contrary, hypothesis 2 can be rejected. We expected that there would be a difference in the effect of the amount of received nominations and the amount of outgoing nominations on self-esteem. However, it turns out that neither received nominations nor out-going nominations has a significant effect on self-esteem, despite the fact that out-going nominations has a higher effect on self-esteem.

Our third hypothesis was threefold; first, it was expected that the ethnic homogeneity of one's social network would significantly impact one's self-esteem; secondly, it was expected that the ethnic homogeneity of one's social network does not only affect self-esteem directly, but also interacts with the size of one's network to impact self-esteem; and thirdly, it was expected that the size of one's social network does not only affects one's self-esteem directly, but also interacts with ethnic homogeneity of one's social network to have an effect on self-esteem. Hypothesis 3a appeared to be confirmed at first, but after integrating the control variables into the model, the significant effect of ethnic homogeneity of the social network disappears. Additionally, hypothesis 3b can also be rejected. The effect of the size of the network does not change when the ethnic homogeneity of the social network increases. Lastly, the size of the network does not have a direct effect on self-esteem and it also does not have an effect when it interacts with ethnic homogeneity. When the size of one's network increases, the effect of ethnic homogeneity decreases. We can therefore reject hypothesis 3c. Our last hypothesis looked at the effect of self-esteem on deviant behaviour among adolescents. It turns out that a low self-esteem will lead to more deviant behaviour like smoking, drinking alcohol and vandalism. This result is in line with existing literature.

Although quite a few hypotheses were confirmed, this study does have some shortcomings. First of all, the data didn't completely fit the our study. The distribution of respondents without a migration background and adolescents with a migration background looks good at first, but when we delved deeper into the data, we noticed something that might have affected the results. The second largest ethnic minority in this data set is the "other" group. This "other" consists of ethnicities from all over the world (e.g. Germany, Japan, South-Africa). We decided to group all these ethnicities together, because each ethnicity has not enough cases to have any significant impact. However, this group constitutes 20.7% of the data based on ethnic background. In contrast, the amount of respondents from any the four biggest ethnic minorities in the Netherlands looks pale in comparison to the "other" group. Antillean respondents constitute only 2.5%, which makes them the smallest ethnic minority of the "Big 4". Turkish adolescents were the biggest ethnic minority but they only

constitute 5.8% of the data. The “other” group was excluded, because their ethnic homogeneity cannot be calculated as they all have a different ethnic background. This exclusion means that more than half of our cases with a migration background is lost. This leaves us with a very large native Dutch group compared to the Antillean group, Moroccan group, Surinamese group, and the Turkish group. As the results have shown, there can already be found differences between Dutch adolescents and members of ethnic minorities. This only fuels the argument that even more interesting results could have been found if there were more cases for the Big 4.

When it comes to the operationalisation of the variables, some other drawbacks can be found. Firstly, it can be argued that someone’s social network exceeds the number of only five best friends. It turns out that 72.9% respondents could name five best friends. This indicates that they might have been able to name more than five best friends. For this study, an increase in the amount of best friends might lead to other results, as the effect of the size of the social network on self-esteem changes. Another thing that turned out to be a problem were the respondents who didn’t receive any nominations. We used received nomination as a indicator of perceived social support. All the respondents that didn’t receive any nominations were omitted from further analysis. This led to a decrease of over thousand cases on the variable received nominations. It could be argued that a lot of information is lost and the that the results might have been different if we didn’t take them out. However, this study looked at to what extent one’s social network affects self-esteem. We’ve argued in this study that we deem respondents with no received nominations as individuals with no network. In other words, from a theoretical standpoint, as these respondents do not have a social network, this study’s focus is not on them. Thus, their omission is not as bad as it seems.

This study builds upon previous work from other scholars, but it also adds something that hasn’t been done before. This study elaborates on previous work on self-esteem and mental health, but also on the work of Granovetter (1973) and the social identity theory of Billig and Tajfel (1973) because it corresponds with the idea that strong ties are more likely to have the same specifications (i.e. ethnic background). Researchers theorised that self-esteem could be a risk factor. Similarly, this study found the same thing: a low self-esteem leads to a higher chance to act norm-deviant. Although, it is interesting to see that all the effects were less strong for females. We mentioned in the introduction that girls tend to have more mental health issues than boys. So, it came as a surprise to see that the relation between self-esteem and deviant behaviour is less strong for females than for boys. This is contradicting existing theory that a lower self-esteem will lead to more behavioural problems. Moreover, the the theory of Billig and Tajfel is not upheld completely. We can see that especially Dutch adolescents and, to some extent, Turkish adolescents tend to form homogeneous groups. The result of Dutch adolescents shouldn’t come as a surprise as they have more opportunities to meet other Dutch adolescents in their “homeland”. Furthermore, there is also quite a difference between the homogeneity of Moroccan and Turkish adolescents on one side, and the Surinamese and Antillean on the other side. An explanation could be that the Turkish and Moroccan community has a distinct culture compared to the Dutch culture, whereas Surinamese and Antillean adolescents are more like their Dutch peers. For example, Turkish parents are not fond of their children making interethnic friendships (Munninksma, 2013). They prefer intra-ethnic friendships as this will make sure cultural norms, values, and attitudes are persevered.

Dutch researchers already looked at the self-esteem of adolescents and compared this between different ethnic backgrounds. They looked at possible causes like perceived discrimination and class composition, but not at one’s social network. Self-esteem is proven to be critical component of one’s mental health, especially during adolescence. A low self-esteem could lead to further mental health and physical health issues during adolescence and later in life. Therefore, further research with a similar scope is advised. However, there are some things one should take into account, depending on the study’s scope. If a similar study is conducted it is first of all advised to find more data on the largest ethnic minorities in the Netherlands. This study shows that a small amount of cases of these minorities does not have enough statistical power to find clear results. Furthermore, it is also advised to broaden the name generator in the questionnaire. It appears that most adolescents can name more than five best friends. By extending the name generator to ten best friends, for example, might give

more information and this might lead to answers that this study could not provide. This might lead to a better insight in the mental health of the youth.

In the introduction it was mentioned that Dutch adolescents with a non-western migration background have more behavioural problems and psychotic experiences than their Dutch peers with no migration background (Los, 2013). The results have shown that Moroccan and Turkish adolescents tend to exhibit deviant behaviour, and that the effect of our independent variables on self-esteem is significantly stronger for ethnic minorities. It should be advised that policymakers should focus more on self-esteem. First of all, talking about mental health issues should be normalised as it can impact one's life. Los argued that there needs to be paid more attention to the mental issues Moroccan adolescents need to deal with. Based on this study, it should be advised to include other ethnicities, too. Furthermore, to increase the well-being of adolescents, ethnically diverse friendships are beneficial (Munninksma, 2013). Interethnic friendships lead to a decrease in feelings of loneliness, an improved well-being, and an increase in academic performance. A good way to promote interethnic friendships is through schools according to Munninksma, but we would like to other organisation or associations, like sport clubs or musical societies. Policies that promote ethnic diversity are a gateway to a better well-being for the youth in the Netherlands.

References

- Acock, A. C., & Hurlbert, J. S. (1993). Social networks, marital status, and well-being. *Social Networks, 15*(3), 309-334.
- Adams, G. R., Gullotta, T. P., & Montemayor, R. E. (1992). *Adolescent identity formation*. Sage Publications, Inc.
- Atzaba-Poria, N., & Pike, A. (2005). Why do ethnic minority (Indian) children living in Britain display more internalizing problems than their English peers? The role of social support and parental style as mediators. *International Journal of Behavioral Development, 29*(6), 532-540.
- Barrera, M. (2000). Social support research in community psychology. In *Handbook of community psychology* (pp. 215-245). Springer, Boston, MA.
- Berkman, L. F., & Glass, T. (2000). Social integration, social networks, social support, and health. *Social epidemiology, 1*, 137-173.
- Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium☆. *Social science & medicine, 51*(6), 843-857.
- Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology, 3*(1), 27-52.
- Bourdieu, P. (1980) Le capital social. Notes provisoires. *Actes de la Recherche en Sciences Sociales 3*:2-3.
- Burt, R. S. (2000). The network structure of social capital. *Research in organizational behavior, 22*, 345-423.
- CILS4EU. (2016). *Children of Immigrants Longitudinal Survey in Four European Countries. Codebook. Wave 2 – 2011/2012, v2.3.0*. Mannheim: Mannheim University.
- CILS4EU. (2016). *Children of Immigrants Longitudinal Survey in Four European Countries. Technical Report. Wave 2 – 2011/2012, v2.3.0*. Mannheim: Mannheim University.
- CILS4EU. (n.d.). Design. Retrieved June 4, 2018, from http://www.cils4.eu/index.php?option=com_content&view=article&id=7&Itemid=3
- CILS4EU. (n.d.). Overview. Retrieved June 4, 2018, from http://www.cils4.eu/index.php?option=com_content&view=article&id=5&Itemid=57&
- CILS4EU. (n.d.). Study topics. Retrieved June 4, 2018, from http://www.cils4.eu/index.php?option=com_content&view=article&id=4&Itemid=4
- Cohen, S. (2004). Social relationships and health. *American psychologist, 59*(8), 676.
- Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. *Handbook of psychology and health, 4*, 253-267.
- Cooley, C. H. (1912). Valuation as a social process. *Psychological Bulletin, 9*(12), 441.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological review, 96*(4), 608.

- Cullen, M., & Whiteford, H. (2001). The interrelations of social capital with health and mental health. *Canberra: Commonwealth of Australia.*
- De Looze, M., Van Dorsselaer, S., De Roos, S., Verdurmen, J., Stevens, G., Gommans, R., ... & Vollebergh, W. (2014). *Gezondheid, welzijn en opvoeding van jongeren in Nederland.* Utrecht University.
- Diener, E. (1984). Subjective well-being. *Psychological bulletin*, 95(3), 542.
- Estell, D. B., & Perdue, N. H. (2013). Social support and behavioral and affective school engagement: The effects of peers, parents, and teachers. *Psychology in the Schools*, 50(4), 325-339.
- Feldman, R. A., & Stiffman, A. R. (Eds.). (1986). *Advances in adolescent mental health: Mental health disorders in adolescence.* Greenwich, Connecticut: Jai Press Inc..
- Festinger, L. (1954). A theory of social comparison processes. *Human relations*, 7(2), 117-140.
- George, L. K., Blazer, D. G., Hughes, D. C., & Fowler, N. (1989). Social support and the outcome of major depression. *The British Journal of Psychiatry*, 154(4), 478-485.
- Gieling, M., Vollebergh, W., & van Dorsselaer, S. (2010). Ethnic density in school classes and adolescent mental health. *Social psychiatry and psychiatric epidemiology*, 45(6), 639-646.
- Granovetter, M. (1973). *The strength of weak ties.* *American Journal of Sociology* 78: 1360-380.
- Granovetter, M. S. (1977). The strength of weak ties. In *social networks* (pp. 347-367).
- Heath, A. F., Rethon, C., & Kilpi, E. (2008). The second generation in Western Europe: Education, unemployment, and occupational attainment. *Annu. Rev. Sociol*, 34, 211-235.
- Gray-Little, B., Williams, V. S., & Hancock, T. D. (1997). An item response theory analysis of the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin*, 23(5), 443-451.
- Hooghe, M., Trappers, A., Meuleman, B., & Reeskens, T. (2008). Migration to European countries: A structural explanation of patterns, 1980–2004. *International Migration Review*, 42(2), 476-504.
- House, J.S.; Landis, K.R.; Umberson, D. (1988) Social relationships and health. *Science* 241:540–545.
- Huijts, T. H. M. (2011). *Social ties and health in Europe: Individual associations, cross-national variations, and contextual explanations.* [SI: sn].
- Israel, B. A. (1982). Social networks and health status: Linking theory, research, and practice. *Patient counselling and health education*, 4(2), 65-79.
- Jessor, R., & Jessor, S. L. (1977). Problem behavior and psychosocial development: A longitudinal study of youth.
- Jessor, R., Van Den Bos, J., Vanderryn, J., Costa, F. M., & Turbin, M. S. (1995). Protective factors in adolescent problem behavior: Moderator effects and developmental change. *Developmental psychology*, 31(6), 923.
- Kalter, F., Heath, A. F., Hewstone, M., Jonsson, J., Kalmijn, M., Kogan, I., ... & Brodin Låftman, S. (2013). Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU) – Reduced version. Reduced data file for download and off-site use. GESIS Data Archive, Cologne, ZA5656 Data file Version 2.3.0, doi:10.4232/cils4eu.5656.2.3.0.

- Karlsen, S., & Nazroo, J. Y. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *American journal of public health*, 92(4), 624-631.
- Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban health*, 78(3), 458-467.
- Keyes, C. L. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of health and social behavior*, 207-222.
- Keyes, C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of consulting and clinical psychology*, 73(3), 539.
- Keyes, C. L. M. (1998). Social well-being. *Social psychology quarterly*, 121-140.
- Keyes, C. L. M. (2000). Subjective change and its consequences for emotional well-being. *Motivation and Emotion*, 24(2), 67-84.
- Keyes, C. L. M., & Ryff, C. D. (1999). Psychological well-being in midlife. In *Life in the middle* (pp. 161-180).
- Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of personality and social psychology*, 82(6), 1007.
- Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children's early school adjustment?. *Child development*, 61(4), 1081-1100.
- La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression?. *Journal of clinical child and adolescent psychology*, 34(1), 49-61.
- Leman, P., Bremner, A., Parke, R. D., & Gauvain, M. (2012). *Developmental psychology*. Maidenhead, United Kingdom: McGraw-Hill Education.
- Lin, N., Dean, A., Ensel, W. (1986) Conceptualizing social support. Pp.17–30 in: Lin, N.; Dean, A.; Ensel, W. (eds.) "Social support, life events and depression". New York: Academic Press.
- Lin, N., Ensel, W. M., Simeone, R. S., & Kuo, W. (1979). Social support, stressful life events, and illness: A model and an empirical test. *Journal of health and Social Behavior*, 108-119.
- Lin, N., Ye, X., & Ensel, W. M. (1999). Social support and depressed mood: A structural analysis. *Journal of Health and Social behavior*, 344-359.
- Los, V. (2013). *Internaliserende problemen van allochtone leerlingen in het voortgezet onderwijs*. Retrieved on March 13th, 2018, from: <https://www.vn.nl/waarom-allochtone-kinderen-meer-psychische-problemen-hebben/>
- Mann, M. M., Hosman, C. M., Schaalma, H. P., & De Vries, N. K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health education research*, 19(4), 357-372.
- Mead, G. H., & Mind, H. (1934). *Self and society*. Chicago: University of Chicago, 173-175.
- Moolenaar, Y. (April 7th, 2017). *Wereldgezondheidsdag: aandacht voor depressie*. Retrieved on March 13th, 2018; from: <http://www.ggznederland.nl/actueel/depressie--groot-probleem-volksgezondheid>

Moreno, C., Sánchez-Queija, I., Muñoz-Tinoco, V., de Matos, M. G., Dallago, L., Ter Bogt, T., ... & Rivera, F. (2009). Cross-national associations between parent and peer communication and psychological complaints. *International Journal of Public Health*, 54(2), 235-242.

Nederlands Jeugdinstuut. (2018). Participatie van jongeren met psychische problemen. Retrieved from <https://www.nji.nl/nl/Producten-en-diensten/Publicaties/Participatie-van-jongeren-met-psychische-problemen>

Newman, B. M., Lohman, B. J., & Newman, P. R. (2007). Peer group membership and a sense of belonging: Their relationship to adolescent behavior problems. *Adolescence*, 42(166), 241.

NOS. (January 9th, 2018). 'Hey': campagne om depressies bespreekbaar te maken. Retrieved on March 10th, 2018; from: <https://nos.nl/artikel/2211161-hey-campagne-om-depressies-bespreekbaar-te-maken.html>

Omroep Gelderland. (2017, February 2). Onderzoeker: meer aandacht voor mentale gezondheid jongeren. Retrieved June 4, 2018, from <https://www.omroep gelderland.nl/nieuws/2127098/Onderzoeker-meer-aandacht-voor-mentale-gezondheid-jongeren>

Paluska, S. A., & Schwenk, T. L. (2000). Physical activity and mental health. *Sports medicine*, 29(3), 167-180.

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: a global public-health challenge. *The Lancet*, 369(9569), 1302-1313.

Penedo, F. J., & Dahn, J. R. (2005). Exercise and well-being: A review of mental and physical health benefits associated with physical activity. *Current Opinion in Psychiatry*, 18(2), 189-193. DOI: 10.1097/00001504-200503000-00013

Phelan, M., Stradins, L., & Morrison, S. (2001). Physical health of people with severe mental illness: can be improved if primary care and mental health professionals pay attention to it. *BMJ: British Medical Journal*, 322(7284), 443.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: review of research. *Psychological bulletin*, 108(3), 499.

Rijksinstituut voor Volksgezondheid en Milieu. (2016). Percentage personen dat zich psychische gezond voelt 2010-2016. Retrieved June 4, 2018, from <https://www.volksgezondheidszorg.info/onderwerp/psychische-gezondheid/cijfers-context/trends#node-trends-prevalentie-psychische-gezondheid>

Piko, B. F., & Fitzpatrick, K. M. (2003). Depressive symptomatology among Hungarian youth: A risk and protective factors approach. *American Journal of Orthopsychiatry*, 73(1), 44.

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and social psychology bulletin*, 27(2), 151-161.

Robins, R. W., Trzesniewski, K. H., Tracy, J. L., Gosling, S. D., & Potter, J. (2002). Global self-esteem across the life span. *Psychology and aging*, 17(3), 423.

Robinson, C., & Schumacker, R. E. (2009). Interaction effects: centering, variance inflation factor, and interpretation issues. *Multiple Linear Regression Viewpoints*, 35(1), 6-11.

- Rook, K. S., & Underwood, L. G. (2000). Social support measurement and interventions. *Social Support Measurements and Intervention*, 311-34.
- Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance and commitment therapy. Measures package*, 61, 52.
- Rosenberg, M., Schooler, C., Schoenbach, C., & Rosenberg, F. (1995). Global self-esteem and specific self-esteem: Different concepts, different outcomes. *American sociological review*, 141-156.
- Rossi, P.H. (1966) Research strategies in measuring peer group influence. Pp.190–214 in: Newcomb, T.M.; Wilson, E.K. (eds.) “College peer groups”. Chicago: Aldine.
- Rothon, C., Goodwin, L., & Stansfeld, S. (2012). Family social support, community “social capital” and adolescents’ mental health and educational outcomes: a longitudinal study in England. *Social psychiatry and psychiatric epidemiology*, 47(5), 697-709.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of personality and social psychology*, 57(6), 1069.
- Sartorius, N. (2003). Social capital and mental health. *Current Opinion in Psychiatry*, 16, S101-S105.
- Schaefer, C., Coyne, J. C., & Lazarus, R. S. (1981). The health-related functions of social support. *Journal of behavioral medicine*, 4(4), 381-406.
- Simmons, R. G., Blyth, D. A., Van Cleave, E. F., & Bush, D. M. (1979). Entry into early adolescence: The impact of school structure, puberty, and early dating on self-esteem. *American Sociological Review*, 948-967.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual review of psychology*, 52(1), 83-110.
- Stevens, G.W.J.M. & Vollebergh, W.A.M. (2008). Mental health in migrant children. *Journal of Child Psychology & Psychiatry*, 49, 276-294.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53.
- Telegraaf. (2018, March 14). We zijn het op vijf na gelukkigste land van de wereld. Retrieved June 4, 2018, from <https://www.telegraaf.nl/nieuws/1790777/we-zijn-het-op-vijf-na-gelukkigste-land-van-de-wereld>
- Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of health and social behavior*, 52(2), 145-161.
- Uchino, B. N. (2004). *Social support and physical health: Understanding the health consequences of relationships*. Yale University Press.
- Uchino, B. N. (2009). Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on psychological science*, 4(3), 236-255.
- Umaña-Taylor, A. J., & Updegraff, K. A. (2007). Latino adolescents’ mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of adolescence*, 30(4), 549-567.

U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services.

Van Leeuwen, S.; Tjihuis, M.; Flap, H. (1993) Cohesie in de Nederlandse samenleving. De relatie tussen integratie, heterogeniteit en sociale steun. [Cohesion in Dutch society. The relationship between integration, heterogeneity, and social support.] *Tijdschrift voor Sociale Wetenschappen* 36:23–43.

Vega, W. A., & Rumbaut, R. G. (1991). Ethnic minorities and mental health. *Annual Review of Sociology*, 17(1), 351-383.

Vollebergh, W. A., ten Have, M., Dekovic, M., Oosterwegel, A., Pels, T., Veenstra, R., ... & Verhulst, F. (2005). Mental health in immigrant children in the Netherlands. *Social psychiatry and psychiatric epidemiology*, 40(6), 489-496.

Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational and Organizational Psychology*, 63(3), 193-210.

Wigfield, A., Eccles, J. S., Mac Iver, D., Reuman, D. A., & Midgley, C. (1991). Transitions during early adolescence: Changes in children's domain-specific self-perceptions and general self-esteem across the transition to junior high school. *Developmental psychology*, 27(4), 552.

World Health Organization. (2012). Adolescent Mental Health. Retrieved on April 12th, 2018; from: http://apps.who.int/iris/bitstream/10665/44875/1/9789241503648_eng.pdf

Williams, A. W., Ware Jr, J. E., & Donald, C. A. (1981). A model of mental health, life events, and social supports applicable to general populations. *Journal of health and Social Behavior*, 324-336.

Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. *Social support measurement and intervention: A guide for health and social scientists*, 86-135.