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Who influences the gender norms of adolescents?

A comparison between parental and peers' gender norms effect on the gender norms of adolescents

Abstract

The social environment has an influential impact on the development of gender norms, however previous research has not found to what extent the influences of parent's and peers' gender norms on adolescents' gender norms differ in effect. Using CILS4EU data, the parental and peers' gender norms effect on gender norms of adolescents between 14 and 18 are analysed with a multivariate regression while adding two moderators; time spent with parents and amount of friends. The CILS4EU data provides this study with a large sample size of 2308, and next to data on the adolescents it provides data collected directly from the parents and peers. The hypotheses in this article are derived from commonly used explanations for norm development, namely gender socialization, social learning theory and social identity theory. The results show that parental and peers' gender norms have significant positive effects on adolescents' gender norms, however parental influence is bigger. Furthermore, time spent with parents has a positive effect on the parental influence on adolescents. Amount of friends is not found to be a significant moderator of the effect that peers' gender norms have.

Keywords: Parental influence; peer influence; gender norms; time spent with parents; gender norm development; amount of friends; CILS4EU

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1.1 Introduction

Over the last few decades researchers have been examining aspects of adolescents gender norm development. This thesis aims to explain how the social environment of adolescents influences their gender norms. Next to that, it aims to contribute to the existing knowledge by comparing the effect of parental and peers' gender norms. Moreover, this thesis uses data that interviewed the parents directly instead of measuring the gender norms through their children which makes the information on their gender norms more reliable.

It is essential to create a better understanding on how the gender norms of adolescents are developed since the gender norms influence boys and girls in serious matters. As young people grow up, this is when they construct their gender-based understanding of what it means to be a boy or a girl. Gender norms have more consequences for boys and girls than people may realize. The consequence for girls all over the world include child marriage, early school leaving, pregnancy and depression (Blum, Mmari, & Moreau, 2017). While boys die more frequently from unintentional injuries, are more prone to substance abuse and suicide and their life expectancy is shorter than for women. These differences are not biologically determined, but socially (Blum et al., 2017). Therefore, it is important to gain more knowledge on gender norm development.

When studying gender norms it is key to focus on the social environment that adolescents live in, since it is a developmental period that entails substantial changes in their behaviour and environment (Somerville, Jones & Casey, 2010; Blum et al., 2017). The social environment of adolescents consists among others of family and peers. Multiple studies have shown that parents are an important factor in the construction and the socialization of the gender norms of their children (Epstein & Ward, 2011; Halpern & Perry-Jenkins, 2015; Leaper, 2000; Tenenbaum & Leaper, 2002; Witt, 1997). Gender norms are generally learned in the home first and are then reinforced by the child's peers, school experience, and the media (Golshirazian, Dhillon, Maltz, Payne & Rabow, 2015; Witt, 2000). Some studies argue that the family has the most powerful influence on the development of a child's gender norms, in comparison with other influential factors in their social environment (Kaplan, 1991). However, the peer group becomes consequential as a child's social world becomes more broader than just their family

(Golshirazian et al., 2015). The peer influence starts at the age of three and continues through their school-time. As children develop friendships, they continue to develop new gender norms and receive reinforcement of previously learned gender norms (Witt, 2000). Children reinforce each other to exhibit similar interests in gender-typed activities, hence children strengthen each other's tendency to differentiate between gender. Thus, children themselves are a primary influence in promoting gender-typical behaviour (Golshirazian et al., 2015). According to these studies, parents and peers are the most prominent influences on the gender norms development of adolescents, therefore this thesis will focus on parents and peers.

Most studies either look at the parental or the peer influence on an individual's gender norms. However, a study that has been focused on both, found that parents together with peers, are especially central in shaping an individual's gender norms (Kågesten et al., 2016). However, in their study they did not include a comparison of the parental and peer effect. Yet, this is interesting to focus on since parents and peers are the most influential factors of the social environment of adolescents (Larson, 1972). In order to gain a better understanding on the constructing of adolescents' gender norms it is beneficial to know which has a greater influence on their gender norms. The scientific debate on whose influence on adolescents behaviour and development is greater, has been going on for some time (Petersen, 1988). While some argue peer influence to be stronger, others counter these claims by suggesting that parents have more influence (Steinberg & Morris, 2001). In order to contribute to this scientific debate, the aim of this study is to focus on a specific part of adolescents behaviour and development, to be precise their gender norm development. No prior quantitative studies have focused on the comparison of the effects of parental and peers' gender norms on the gender norms of adolescents. Therefore, this study is essential to contribute to the scientific debate, additionally it can clear up ambiguity on which influence has more effect on gender norm development; parental or peers' gender norm.

Since the measurement of personal gender norms across settings is variable, it is critical to clearly state the definition that is used in this study (Kågesten et al., 2016). In this thesis gender norms are defined as the social expectations for the appropriate behaviour of men and women (Pulerwitz & Barker, 2008). There are two types of gender norms that will be discussed

in this thesis. First, there is 'progressive' gender norms which entails the belief that men and women are equal, while people with 'traditional' gender norms believe that the differences between the genders should be maintained (Stark, 1991). Children will learn at an early age to differentiate and label themselves and others based on gender (Witt, 2000). They are able to recognize attributes, attitudes and behaviour that are suited for each gender, thus they learn what is seen as appropriate and to avoid what is not (Fagot, Rodgers, & Leinbach, 2000). Think about the strict division of colours, pink is for girls thus boys will avoid this colour at an early age since they redeem it as not appropriate. Individuals internalize these gender norms in the development of their identities, behaviour, attitudes and beliefs. This is known as gender socialization (Chandra-Mouli, Plesons & Amin, 2018).

Even though gender socialization starts at birth, this thesis will focus on the stage of life where the most changes occur; adolescence, which is from 10 to 19 years old. Adolescence is a particularly important window of opportunity to address gender socialization (Blum et al., 2017; Chandra-Mouli et al., 2018; Tenenbaum & Leaper, 2002). This is a critical point of progress in personal gender norms, as puberty is a period where the expectations for boys and girls to follow socially constructed and often stereotypical norms increases (Kågesten et al., 2016). In early adolescence, a difference in social outcomes emerges between the two genders, which can not be explained by biological differences alone (Chandra-Mouli et al., 2018). Thus, it is relevant to study adolescents in a period of change. Besides, one of the strengths of the CILS4EU data that will be used is the broad knowledge of adolescents and their social environment since it consists of questionnaires on the lives of the adolescents, of parents and their peer network.

When there is more knowledge on how microsystems like family and peer influence the construction of gender norms, we may be able to influence the macro outcome that is gender equality. This process can be altered by fostering gender-equitable approaches and policies that have the potential to improve the well-being of boys and girls in the long term. To add to the scientific debate on whether parents or peers have a greater influence on an adolescent, this thesis aims to find the greatest influence on adolescents' gender norms. This will be studied with a quantitative approach, with the following research question: *To what extent do the influences of parental and peers' gender norms on adolescents' gender norms differ in effect?*

Theoretical framework and hypotheses

2.1 Parents and peers

The following paragraph aims to illustrate the theories and prior work, on which the hypotheses in this thesis are based on. According to gender socialization, the social learning theory and the social identity theory, both parental and peers' gender norms influence the gender norms of an adolescent. How the above-mentioned theories are able to explain the influence of parents and peers, will be illustrated in this section.

According to the socialization theory, the social environment one lives in has a big influence on the norms of an individual (Stockard, 2006). The socialization theory argues that influence on the adolescent comes from internalizing pressure of an exterior person; thus what used to be the parents' or peers' pressure, turned into an expectation that is accepted by the adolescent for his or her own conduct (Biddle, Bank & Marlin, 1980). However, what is relevant for this paper is a more specific type of socialization, which is gender socialization. This refers to learning the behaviour and attitudes that are considered to be appropriate for a given sex (Chandra-Mouli etl., 2018). Thus, this theory suggests that people acquire gender norms through learning from their social environment. In conclusion, through the process of gender socialization adolescents will internalize pressure from their own social environment. Since the social environment of adolescents exists of parents and peers, gender norms of adolescents will be influenced by the gender norms of their parents and peers.

The identity of a person is formed by learning to respond to social stimuli and to the expectations of others according to social learning theory (Bandura & Walters, 1977). People are not capable of basing their actions solely on their own conduct, therefore most human behavior is learned observationally through modeling what others do. Later, this coded information gained by observation functions as a behavioural guide (Bandura, 1997). Components that are underlying to observational learning are attention, observer characteristics, retention and motor reproduction. These four conditions are necessary to model behaviour through observing. An individual must pay attention to the exhibited behaviour, must remember the witnessed behaviour, must be physically and mentally able to copy the behaviour and lastly, it must be

motivated to imitate the behaviour. Individuals are more likely to adopt a modeled behaviour or norm if it will result in beneficial outcomes (Bandura, 1997).

This theory implies that if your parents reward certain behaviour, you are more likely to model that behaviour since the reward makes the behaviour functional. For example, if a father has traditional gender norms that are influencing the behaviour of his daughter, he is more likely to reward behaviour that fits in his conservative gender norm ideology. This argument has been confirmed, a study found that when parents have more traditional views regarding gender norms, their children are more likely to also think in more traditional terms (Epstein & Ward, 2011). The rewarding mechanism they tested were the explicit and implicit messages adolescents received from their parents. Thus for example, greater exposure to parental messages promoting toughness was found to lead to more traditional gender beliefs of the adolescents (Epstein & Ward, 2011). Additionally, parents with more traditional gender norms were more likely to influence the gender norms of their offspring than parents with progressive gender norms (Tenebaum & Leasper, 2002).

Concluding, based on the social learning theory, adolescents are influenced by the gender norms of their parents since they model functional behaviour. For instance, toughness as a boy since it is evaluated positively by parents with traditional gender norms. Likewise, adolescents will be influenced by the gender norms of their peers since adolescents model norms that will result in valued outcomes like friendship. Leaper's (2000) study confirmed this with their study that highlighted the importance of role modeling of parents in the socialization of gender, where they found that children learn by observing the behaviour of their mothers, fathers, and other community members like their peers. In conclusion, through the process of social learning adolescents will model the gender-related behaviour of their parents and peers thus the type of parental and peer gender norms will result in similar adolescents' gender norms.

The social identity theory suggests that peer group membership plays a critical role in the self-evaluation of adolescents (Smith & Leaper, 2006). This group membership is so important that an individual is motivated to create and maintain the norms of the group in order to achieve a positive identity (Tajfel, 1972). Social identity is based on the realization that one belongs to a social category and the positive or negative evaluation associated with this membership. People

tend to categorize others into these social categories based on certain traits like age, race or gender (Tajfel, Billig, Bundy & Flament, 1971). The categorization of gender is one of the most fundamental components of a society's symbolic system (Prieur, 2002). Thus, even at a young age like adolescence, the difference between the two genders is essential. For instance, a girl will be categorized in the social category 'female', her out-group would be the social category 'male'. An adolescent that is part of a group must adhere to the gender norms of this group. When a girl does not act 'lady-like' she will be negatively evaluated by the rest of the in-group and risk a negative self-evaluation. This is in line with the findings of Smith and Leaper (2006) who found that adolescents who do not feel typical for their gender will have a generally negative view of the self. Not only will peers remind an individual of the social groups, parents who both have different genders will also emphasise this. The study from Witt (1997) suggests that more progressive gender norms of parents can influence the self evaluation process of adolescents which is based on conforming to the ingroup norms. Their study found that non-typical gender role orientation makes it visible for adolescents that strict coherence to the ingroup norms is not always necessary, and thus self evaluation does not have to be based on this. Concluding, the social identity theory suggests that the gender norms of adolescents will be influenced by their social environment since they adjust their norms and behaviour to their social group. This would indicate that the type of parental and peers' gender norms have an influential role in the development of gender norms of adolescents.

To conclude, the social learning mechanism suggests that the type of parental and peers' gender norms will result in similar gender norms of an adolescent. Furthermore, according to the social identity theory, parental and peers' gender norms have an influential role on the gender norms of adolescents. This suggested influence of parents is confirmed by the study that Tenenbaum and Leaper (2002) conducted, which examined whether parents' gender norms are related to their childrens' gender norms. They found a significant and positive correlation between parent gender norms and offspring gender norms (Tenenbaum & Leaper, 2002). The expected influence of peers has also been suggested by prior work. The study from Golshirazian et al. (2015) analyzed how peers influence each other's gender norms, using reports provided by students. This study found that peer groups can be considered a primary influence on gender

construction among children and adolescents. Therefore, based on the gender socialization, social learning theory, social identity theory, and prior work, the following hypotheses can be derived:

H1: The type of parental gender norms will result in similar adolescents' gender norms.

H2: The type of peers' gender norms will result in similar adolescents' gender norms.

2.2 Parents or peers: most influential?

Earlier conducted studies show that it is evident that parents and peers play an important role in the construction of gender norms of adolescents (Larson, 1972). However, there is no unambiguous answer in the literature on which of the two influences is the most influential. The scientific debate on whether the influence of parents or peers on adolescents development is greater, has been going on for quite some time (Steinberg & Morris, 2001). Some argue that the family has the most powerful influence on the development of a child's gender norms (Kaplan, 1991). While others contradict this claim by suggesting that during adolescence peers' gender norms are more influential (Witt, 2000). One study that studied both influences was the study from Kågesten et al. (2016) which used a mixed-methods systematic review to explore factors that shape gender norms in early adolescence. Their findings highlight that interpersonal influences like family and peers are important influences on the construction of the gender norms of a young adolescent. However, this was a qualitative study and was not able to compare both effects. This thesis aims to compare the effects that parental and peers' gender norms have on the gender norms of adolescents to contribute to the scientific debate.

Parents

In this paragraph two arguments will be presented, on which the expectation is built that parental influence is greater. First, parental influence will be more significant through the mechanisms of applying pressure through normative standards. Second, parental norms are more likely to be modeled since they have an admired status.

At a young age children internalize gendered expectations shown by their social environment (Bem, 1985). The social environment influences adolescents through the pressure

of normative standards and the modeling of behaviour (Biddle et al., 1980). Pressure through normative standards occurs when someone expresses notions about what the adolescent should do or not. Modeling occurs when parents or peers exhibit appropriate behaviour and adolescents copy this. Biddle et al. (1980) found that parents have more impact by means of their norms than peers, while peers are more likely to influence adolescents through modeling. In order to be part of a peer group, adolescents are more likely to copy peers' behaviour. While parental influence is more strongly exerted through norms, when parents express notions about how the adolescent should behave it will be more influential than when peers would. Thus, linking this towards gender norms adolescents are more likely to be more influenced by the gender norms of their parents than of their peers.

Another mechanism that suggests parental influence to be greater, is the social learning theory which also suggests that a person models behaviour from people in their social environment. Individuals are more likely to adopt modeled behaviour if the one that displays this behaviour has an admired status, like parents have to their offspring (Atkinson, 1989). Since adolescents have no formal power over their peers and vise versa, interaction among peers is based on the principle of equality. Adolescents learn to befriend based on equality (Meeus & Dekovic, 1995). Given that parents possess an admired status that peers do not have, it can be hypothesised that adolescents are more likely to model the behaviour of their parents than of their peers. A study that confirmed this expectation, found that parents and their children had more similar values and attitudes than adolescents and their peers (Kandel & Lesser, 1972).

Peers

As children develop friendships they will continue to develop gender norms that are influenced by a larger social environment, like their peers. Peers will reinforce the gender norms that are seen as familiar, since they recognize it from the family context (Golshirazian et al., 2015). Adolescents are in a time of their life where the influence of parents will decline and peer influence will increase (Meeus & Dekovic, 1995). This transition period results in an increase in youths' time spent with peers as compared with parents (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). This indicates that at the age of adolescents the influence of peers has the

possibility to be greater than the influence of the parents. This paragraph will explain the underlying mechanisms that suggest that peers will be more influential since they have strength in numbers.

According to the complex contagion theory, most social norms emerge through multiple social contact (Centola & Macy, 2007). Social networks are the pathways along which these social contagions occur, this entails that behaviour and norms spread through contact in a network. However, social norms that are costly, risky or controversial to adopt, need 'complex contagion' to spread. This entails that the adoption of norms depends on interaction with multiple persons with the same norms. The complex contagion theory claims that social norms are contagious under a few conditions; a person needs strong social reinforcement provided by additional contacts. According to Centola and Macy (2007) people are more likely to adopt social norms if they are displayed by a 'strong tie' which can be for example a good friend. Thus for social norms to spread, you would need social reinforcement provided by multiple strong ties who have the same norms. This suggests that this mechanism could explain both parental and peer influence, however an individual is more likely to be influenced if the amount of people displaying a certain norm is higher (Centola & Macy, 2007). Thus, peer networks that consist of more than two people will have a higher influence on the adolescents than the parents, assuming the peers are strong ties with similar norms. To be able to base a hypothesis on the complex contagion theory, the following assumption must be drawn; adolescents have similar gender norms as their peers. This assumption is based on the homophily argument, which is a term used for the tendency people have to seek out people who are similar to themselves. Studies found that adolescents' friendships are more likely to dissolve if there's more dissimilarities in behaviour and norms (Kandel, 1978). This suggests that the assumption that peers have similar gender norms can be made, however this will be checked in the data.

In conclusion, parental influence will be more significant through mechanisms like applying pressure through normative standards and having an admired status. Yet peers will be more influential because they have strength in numbers. As stated before, the literature suggests both parents and peers have a very influential role. Yet, since the lack of prior work on this specific comparison of effects, there is not an excessive amount of literature to base the

hypotheses on. The social learning theory suggests that the influence of parents is greater, while the complex contagion theory suggests that peer influence will be greater. Therefore, the most fitted solution is to formulate two conflicting hypotheses since existing theories suggest that both hypotheses have the possibility to be confirmed. Thus the analysis of competing hypotheses will be applied and thus the following hypotheses can be derived:

H3a: The effect that parents have on the gender norms of an adolescent will be bigger than the effect the gender norms of a peer will have.

H3b: The effect that peers have on the gender norms of an adolescent will be bigger than the effect the gender norms of the parents will have.

Moderators

Both theories on which the above mentioned hypotheses are based, make assumptions on the context of the situations that the adolescents are in. Therefore, these assumptions must be tested as a moderator in order to make reliable statements on the earlier formulated hypotheses.

The social learning theory suggests that the parental influence will be more significant through mechanisms like applying pressure through normative standards and having an admired status. However, the above mentioned theories are based on the assumption that adolescents spent a regular amount of time with their parents. Yet in order to be able to make any statement on how parents influence their adolescents, it is important to take into account the time an adolescent spends with their parents. Evidence has been found that suggests that the amount of time spent with family is indeed capable of reducing and even eliminating peer influence (Warr, 1993). In conclusion, it is important to take into account the effect of the amount of time an adolescent perceives to have spent with their parents, could have on the relation between parental gender norms and adolescents' gender norms. Therefore, the following hypothesis will be added to test this moderator:

H4: The more time an adolescents spends with their parents, the more influence the parental gender norms will have on the adolescents' gender norms.

A second assumption that is intertwined in the theory is located in the reasoning of the complex contagion theory. It suggests that a higher amount of strong ties will make it more likely for an adolescent to adopt a social norm. Since, peer groups consist of multiple good friends who each will reinforce their own norms, their influence will be more influential than parental influence.
However, this rationale makes the assumption that adolescents all have a peer group that consists of multiple good friends who all have the same norms. Thus, in order to make statements on whether peers or parents are more influential, the assumptions that adolescents have more than two friends must be taken into account. The amount of friends an adolescent has can have an influential effect on the relation between gender norms peers and gender norms adolescents. This is an important moderator since the complex contagion theory can only be applied as a mechanism that explains the peers' gender norms influence to be stronger than parents, under the condition that the adolescent has more than two friends (Centola & Macy, 2007). Therefore, an additional hypothesis will be added to test this moderator:
H5: The more friends an adolescents has, the more influence the peers' gender norms will have on the adolescents' gender norms.

Methods

3.1 Data Description and Selection

In order to answer the research question, the following data will be used: the first-wave sample of the "CILS4EU", which is short for, "Children of Immigrants Longitudinal Survey in Four European Countries" (Kalter et al., 2013). CILS4EU is a longitudinal sample among school students living in The United Kingdom, The Netherlands, Germany or Sweden. The sample included children of immigrants from 14 to 18 years old, that were first or second-generation as well as a native reference group. They included both, to make an effective comparison between children of immigrants and children of natives. The data is recruited by school surveys. A strength of this data is that they included interviews with parents, teachers and classmates. Parental questionnaires were available in several nonnative languages at the request of students. When the parents did not respond, they were sent a reminder and were ultimately contacted by phone if possible.

The data was collected by using a three-stage sampling design which entails that three selection moments took place during the sample. In the first phase, schools were selected proportionally by size. In the second phase, classes within these schools were randomly sampled and in the third phase, the students within these classes were questioned. Approximately 500 schools were visited and above 18.000 students in the four countries were interviewed. After the interview process, responses were processed and converted into a digital dataset (CILS4EU, 2020). The CILS4EU is a longitudinal dataset with multiple waves, this thesis only uses the Duttch first-wave since this is accessible. The first-wave sample contains more information due to the sample failure of longitudinal surveys. The dropout ratio in longitudinal surveys remains a successive dropout at each time point. Therefore, the first-wave sample will contain the most data in comparison with subsequent waves. Since the first wave of the Dutch data contains a large sample, the fact that this is the only accessible data for this study does not put any constraints on the study.

The first-wave sample was conducted in 2010/2011 and the response rates among students in the Netherlands was 91.1% (CILS4EU, 2014). The response rates amongst the parental and teacher survey were a bit lower with a percentage of 74.7 in the Netherlands (CILS4EU, 2014). The lower response rate of the parents in comparison to the students' response rate will result in a lower sample size. Three different questionnaires were used from the first wave sample, the questionnaire of the adolescents, the parents and a separate questionnaire on the classmates. The information in the separate datasets was linked through the unique youth identification number each student had. Respondents that answered '*do not know*' or '*will not tell*' on one of the questions that were used for this analysis, were identified as missing and deleted from the analysis. For the gender norms scale construction the requirements were less stringent, only if you had missing answers on three or more of the four questions you were excluded from the analysis. People without friends were excluded from the analysis since for them peer influence could not be measured. All classes were included in the analysis, since there was no reason found to exclude certain classes.

3.2 Operationalisation

Dependent variable

Adolescent gender norms. The gender norms of the adolescents are essential to the analysis. To measure adolescents' gender norms, a scale is constructed using the answers to questions on whether women or men equally should be responsible for certain tasks. The agreement with four items on the division of labour was measured by the question, "*Who do you think should do the following tasks?*" The tasks presented were: taking care of children, cooking, earning money, and cleaning the house. Response categories were "*mostly the man*", "*mostly the woman*", and "*both about the same*". For the more "feminine" tasks – taking care of children, cooking, and cleaning – respondents who answered ''*mostly the women*'' were assigned a score of 2, ''*both about the same*'' were assigned a score of 1 and "*mostly the man*" got a score of 0. The contrary scores were used for the more "masculine" item which was earning money. Higher scores in this scale indicate more traditional gender norms, while lower scores indicate more progressice gender norms. The gender norm score was created by merging the four answers and calculating an average score. Respondents that had a missing score on three questions or more were excluded from the analysis, the rest was taken into account (te Grotenhuis & Visscher, 2009). Since average scores were calculated it was possible to keep respondents with only a few missing in the analysis, this was essential since otherwise the number of missings would increase with such a high rate the analysis would no longer be reliable. This method has been used with every gender norm scale that has been created, and resulted in a final sample of 2308 respondents for further analyses.

This specific operationalization of gender norms has been done by prior studies studying gender norms as well. Multiple studies used the same first four questions from the CILS4EU data on the division of labour to measure gender norms (van der Vleuten, Jaspers, Maas & van der Lippe, 2016; van der Vleuten, Steinmetz & van der Werfhorst, 2018). This indicates that these four questions combined, make a well established scale and therefore is a great way to operationalize gender norms. Even though the scale has been used to measure gender norms before, it is best to test the four questions with Cronbach's Alpha. The scale consisting of four questions with the missing excluded, has a Cronbach's Alpha of 0.658. According to the

Chronbach's Alpha the internal consistency of this scale is too low due to the α >.7-rule. Since this low α can be explained by the fact that each question measures a different aspect of household responsibility and this can lead to different answers. However, this scale has been used before and the α is questionable, however it is still considered acceptable for research purposes. Therefore, the decision has been made to keep the scale unaltered.

Independent variable

Parental gender norms. A strength of this data is that all parents had to answer their own questionnaire, which made it possible to construct *parental gender norms* out of the exact same four questions as *adolescents gender norms* and thus measure it with the same reliable and valid scale. The scale rates from 0 to 2 and is identical to the adolescents' scale, where high values indicate more traditional gender norms. Just like the adolescent gender norm scale, the answers to the four questions were merged and the averages were calculated. The parents answered the same questions yet in a separate questionnaire, thus before proceeding the Cronbach's Alpha for their gender norm scale has to be tested as well. Their scale consisting of four questions with the missing excluded, has a Cronbach's Alpha of 0.737. Which, according to the general rule of thumb Chronbach's Alpha with α >.7 is a good scale.

Peer gender norms. Since, all adolescents were asked about their gender norms it is possible to construct the peers' gender norms variable out of the same four questions. In the dataset whole classes participated, which results in access to the gender norms of the respondents peer group. Thus, every question that adolescents had to answer in wave 1, their peers have answered as well. This makes it possible to measure the gender norms of adolescents, parents and peers in the same way. As stated before, the four answers on the question, "*Who do you think should do the following tasks?*" will be used. The four tasks presented were taking care of children, cooking, earning money, and cleaning the house. The index was scaled in the same manner as the adolescents from 0 to 2, where higher scores indicate more traditional gender norms and lower scores indicate more progressive gender norms. Since this variable is constructed from the same information as the adolescents' gender norms, the Cronbach's Alpha

test was not required. To be able connect peers to the right adolescent, the question ‘‘*Who are your best friends in class?*’’ was used. The respondents were able to name five or less friends. The student identification numbers were used to identify the gender norms of the peers.

Moderators

Number of friends. The variable *number of friends* is constructed using the same question that was used to construct the peers' gender norms variable. The respondents could answer the question ‘‘*Who are your best friends in class?*’’ with five or less friends. If a respondent answered with a student identification number, it would count as one friend. The sum of the five answers were used to count the number of friends of the adolescents. Respondents that did not answer were reported missing, only 34 adolescents did answer ‘‘*not applicable*’’ which suggested that they had no friends. These respondents had to be reported missing since it is not possible to measure the influence amount of friends has on the peer influence if an adolescent has no peers.

Time spent with parents. The moderator variable *time spent with parents* will be measured through the questions ‘‘*How often do you usually see your father?*’’ and ‘‘*How often do you usually see your mother?*’’. The possible answers were ‘‘*Every day*’’, ‘‘*Once or several times a week*’’, ‘‘*Once or several times a month*’’, ‘‘*Less often*’’ or ‘‘*Never*’’. Both questions were combined into an average score. The scale went from 1 to 5, where high scores indicate more time spent with parents. Thus, this variable is measured through self perceived time spent by adolescents themselves.

Control variables

Sex. Multiple studies have indicated differences between male and female occur in the influence of gender norms by their social environment (Chandra-Mouli et al., 2018; Blum et al., 2017). Evidence found that gender socialization processes are different for boys and girls (Kågesten et al., 2016). Hence, it is important to control for sex. The following question will be

used: ‘‘*Are you a boy or a girl?*’’. Sex is a dichotomous variable consisting of girls (1) and boys (0).

Age. Another fitting control variable would be age, since at a young age children internalize gendered expectations shown by their social environment (Bem, 1985). Adolescents are in a time of their life where their social environment changes, the influence of parents will decline and peer influence will increase (Meeus & Dekovic, 1995). Age was measured, using the respondent´s year of birth. Combining this information with the day the data was collected (January 2011), the age of the respondents could be calculated.

Occupational status Parents. A potential explanation for different gender norms amongst adolescents could very well be the occupational status of their parents. In several studies adolescents from higher-income backgrounds and/or with higher educated parents usually express more progressive gender norms (Kågesten et al., 2016). Furthermore, studies indicate that social class might influence the opportunities that are available to adolescents, which can shape their gender norms (Kågesten et al., 2016). To measure the occupational status of the respondent parents, the following question was used: ‘‘*Think about your father’s job. If he is not currently working, think about his last job. What is the name of his job? Additionally, please describe what he does in his job.*’’. The same question for mother’s was used, and based on this question an index was created by Ganzeboom, De Graaf and Treiman (1992), where they look at each occupation as an intervening variable between education and income. The parental occupational status index which is based on the above mentioned question was not constructed manually since the dataset already provided it. The scores of both parents will be merged and the mean score will be used. It is important to include both parents in this variable since not just the fathers occupational status but specifically the mothers occupational status will influence gender norms of the adolescent as well. Furthermore, in the case of missing data from one of the parents, the score of the other parent was used.

3.3. Descriptive Statistics

Table 1 shows the descriptive statistics of each variable used in this thesis. The mean gender norms of adolescents lean towards progressive side rather than the traditional side since they are

below the median (*M* = 1.386; *SD* = 0.344). The mean gender norms of the parents is lower than of adolescents which indicates that they are more progressive than their children (*M* = 1.267; *SD* = 0.350). As expected is the mean score of adolescents' and peers' gender norms equal, since both groups consist of the same students (*M*= 1.386; *SD* = 0.224). The average number of friends is higher than two, which is the amount of parents thus it could have moderating effects as suggested by the complex contagion theory (M= 3.927; SD = 1.202). As you can see in table 1 below, the definitive sample size of this thesis is 2308.

Table 1. *Descriptive statistics of the variables.*

Name	N	Min.	Max.	Mean	SD.
(y) Gender Norms Adolescent	2308	0.25	2.00	1.386	0.344
(x1) Gender Norms Parents	2308	0.25	2.00	1.267	0.350
(x2) Gender Norms Peers	2308	0.75	2.00	1.386	0.224
(x3) Time Spent with Parents	2308	1.00	5.00	4.917	0.305
(x4) Number of friends	2308	1.00	5.00	3.927	1.202
(z) Sex (Girls=1)	2308	0.00	1.00	0.514	-
(z) Age	2308	14.00	18.00	15.487	0.619
(z) Occupational Status Parents	2308	11.56	88.83	46.24	17.524

3.4. Analytical strategy

This paragraph is going to clarify which analytical strategy has been applied to answer the research question. Given the multileveled nature of the data due to it being collected in schools and classes, the data will be clustered and this violates the assumption of independent observations. A consequence of nested data is that the standard error will be smaller than regular regression standard errors (Miksza & Kalpus, 2018). Ideally the standard errors would be adjusted by either class or school, however adjusting the standard error was out of the scope of this study. Therefore, the standard errors must be interpreted with caution. Before the tests were conducted, the multicollinearity was checked. This was tested by analyzing the VIF's, to see

whether my dependent variables violated the independence of my model. Every VIF was below 10, except the interaction variable that was created from the amount of friends and peers' gender norms, thus this interaction variable was centered in order to reduce multicollinearity (Robinson & Schumacker, 2009). Furthermore, to check the complex contagion assumption, that assumes that the peers of adolescents have similar norms, the individual standard deviation was plotted (see Appendix A). When standard deviations are above 1 or -1, they are considered to be high variance whereas those between 1 or -1 are considered to be low-variance. Therefore, the assumption that peers' gender norms are alike can be made.

Based on the hypotheses in this thesis, the best fitting analysis method for is a combination of a univariate and multivariate linear regression analysis. First, the correlation between the dependent variable and the independent variables were checked in two single regressions (Model 1 and 2). Then, in Model 3 the dependent variable was tested with just the control variables. In Model 4 and 5, the independent variables were added in order to test hypotheses 3a and 3b using the R-square change of these models. Additionally, the standardized coefficients of parental and peers' gender norms of the complete model were compared for hypotheses 3a and 3b (Model 6). Model 6 will also be used to test the two moderators from hypotheses four and five. In this multivariate linear regression the independent variables, control variables and the moderator variables will be added, next to the interaction variables that have been created.

4.1 Results

This results section examines the parental and peer's influence on the gender norms of adolescents. To test these effects, six different regression analyses were performed. In all models an alpha of .05 was used. In order to see whether the independent variables reliably predict the dependent variable when used together, the overall significance of the complete model has been tested (Model 6). Model 6 which includes all variables has been found to be significant, $F(9, 2298) = 65.950$ with an alpha of $<.001$. The value of the R-square variable is 20.5%. This indicates that the independent variables reliably predict the dependent variable, thus the analysis can proceed.

Table 2. *Single regressions (Model 1 & 2) Multiple regression (Model 3 -6). Regression β-slope (SE).*

	Model 1 (single regression)		**Model 2** (single regression)		**Model 3** (multiple regression)		**Model 4** (multiple regression)		**Model 5** (multiple regression)		**Model 6** (multiple regression)	
	B	***β***	**B**	***β***	**B**	***β***	**B**	***β***	**B**	***β***	**B**	***β***
Constant	0.890** (0.026)	-	0.941** (0.045)	-	1.734** (0.184)	-	1.173** (0.174)	-	1.371** (0.188)	-	1.312** (0.256)	-
(x1) Gender norms parents	0.391** (0.019)	0.387	-	-	-	-	0.361** (0.019)	0.357	-	-	0.418** (0.026)	0.413
(x2) Gender norms peers	-	-	0.321** (0.032)	0.203	-	-	-	-	0.244** (0.032)	0.154	0.196** (0.033)	0.124
(x4) Time spent with parents	-	-	-	-	-	-	-	-	-	-	-0.093 (0.035)	-0.080
(x3) Amount of friends	-	-	-	-	-	-	-	-	-	-	0.001 (0.006)	0.005
(x5) Gender norms parents* time spent	-	-	-	-	-	-	-	-	-	-	-0.064** (0.016)	-0.139
(x6) Gender norms peers* friends	-	-	-	-	-	-	-	-	-	-	0.018 (0.022)	0.016
(z) Sex	-	-	-	-	-0.138** (0.014)	-0.195	-0.122** (0.013)	-0.172	-0.116** (0.014)	-0.164	-0.109** (0.016)	-0.144
(z) Age	-	-	-	-	-0.008 (0.012)	-0.014	-0.006 (0.011)	-0.011	-0.008 (0.011)	-0.014	-0.006 (0.013)	-0.005
(z) Occupational status parents	-	-	-	-	-0.002** (0.000)	-0.167	-0.002** (0.000)	-0.095	-0.003** (0.000)	-0.150	-0.002** (0.000)	-0.082
R^2	0.149		0.041		0.064		0.186		0.087		0.205	
N	2308		2308		2308		2308		2308		2308	

**p<.001 *p<.05

Table 2 - Model 1 shows that the direct effect of parental gender norms on the gender norms of adolescents, without controls taken into account, has been found positively significant (b=0.391, t=20.125, p<.001). As can be seen in Model 2, the effect that peer's gender norms have on the gender norms of adolescents has also been found positive significant (b=0.321, t=9.964, p<.001). Shown in Model 4, when controlled for sex, age and occupational status parents, the effects of parental gender norms remains significant (b=0.361, t=18.574, p<.001). In Table 2 - Model 5 you can see that the same occurs when peers' gender norms are controlled for sex, age and occupational status parents (b=0.244, t=7.547, p<.001). Therefore, these results suggest that parental and peers' gender norms have a positive effect on the gender norms of adolescents, this suggests evidence is found in support of the first hypothesis: *The type of parental gender norms will result in similar adolescents' gender norms.* Simultaneously, there is evidence in support of the second hypothesis as well: *The type of peers' gender norms will result in similar adolescents' gender norms.* The null hypotheses can be rejected in favour of the alternative hypotheses.

To be able to make any statements on hypotheses 3a and 3b, the R-square change and the standardized regression coefficients will be examined. In Table 2 - Model 3, a regression has been conducted where merely the control variables were added to the model. Looking at the R^2 change makes it possible to see the variation in the dependent variable explained upon adding the independent variables. For Model 3, the proportion of explained variance is 6.4% with an alpha level of <.001. In Model 4 gender norms parents was added, which resulted in a R^2 change of 12.2%. In model 5 the R^2 change, compared to the 6.1% of model 3, is 2.3%. Each R^2 change that has been reported here is found to be significant with a significant F change of <.001. Thus, when you compare parental and peers' gender norms R^2 change, parents gender norms have an explained variance of 9.9% higher than peers' gender norms. When comparing the standardized regression coefficients, the complete model will be used (Model 6). The standardized coefficient of parental gender norms is 0.413, while the standardized coefficient of peer's gender norms is 0.124. Since both the proportion of explained variance and the standardized coefficient of parental gender norms is bigger, the effect that parental gender norms have on the gender norms of adolescents suggests to be more influential than the effect of peers' gender norms. Based on

these results, there has been evidence found in support of hypothesis 3a: *The effect that parents have on the gender norms of an adolescent will be bigger than the effect the gender norms of a peer will have*. Simultaneously, there is no evidence found in support of hypothesis 3b: *The effect that peers have on the gender norms of an adolescent will be bigger than the effect the gender norms of the parents will have.*

Table 2 - Model 6 shows that the effect that the gender norms have on the gender norms of adolescents, with addition of the interaction variables both remains significant for parents (b=0.418, t=16.062, p<.001) and peers (b=0.196, t=6.023, p<.001). Next to that, the interaction variable including gender norms parents and time spent with parents has been found significant in this test (b=-0.064, t=-4.083, p<.001). This suggests that time spent with parents has a moderating effect on the relation between gender norms parents and gender norms adolescents. Thus, the null hypothesis is rejected in favour of the alternative hypothesis: *The more time an adolescents spends with their parents, the more influence the parental gender norms will have on the adolescents' gender norms*. Moreover, the interaction variable including peers' gender norms and amount of friends has not been found as a significant predictor for gender norms adolescents (b=0.018, t=0.818, p>.005). Since there is no evidence found in support of the fifth hypothesis, the following alternative hypothesis can not be accepted: *The more friends an adolescents has, the more influence the peers' gender norms will have on the adolescents' gender norms.*

In four of the six models the same control variables were taken into account; sex, age and occupational status parents. In each model, sex and occupational status remain significant while age remains insignificant in all. As you can see in the complete model (Model 6), sex is found to be negative significant (b=-0.102, t=-7.481, p<.001). Thus, being a girl has a negative influence on the gender norms of adolescents and therefore girls have less traditional gender norms than boys. The occupational status has been found to have a negative significant effect, shown in Model 6 (b= -0.002, t=-4.256, p<.001). That means that the higher the occupational status of your parents is, the less traditional your gender norms will be.

In short, for the first two hypotheses support has been found. The gender norms of parents and peers do have an influence on the gender norms of adolescents. Furthermore, the effect of parental gender norms is found to be stronger than the effect of peers' gender norms on

the gender norms of adolescents. Lastly, time spent with parents is found to be a significant moderator while amount of friends is not a significant moderator.

5.1 Conclusion and Discussion

The goal of this thesis was to examine to what extent the influences of parent's and peers' gender norms on adolescents' gender norms differs in effect. Based on gender socialization, social learning theory and social identity theory the expectation was formulated that parental and peer gender norms influence the gender norms of adolescents. This study focused on the difference between these effects, however since the literature suggested both effects had the possibility to have a greater influence than the other, two contradicting effects were formulated. Parental gender norms would be more influential, based on the social learning theory and through pressure of normative standards that the study from Bidle et al. (1980) suggested. Simultaneously, peers' gender norms were expected to have a more influential effect on adolescents based on the complex contagion theory, since peers have strength in numbers. Next to these expectations, two assumptions in the theories were tested by adding two moderators. First, the expectation was formulated that the time an adolescents spends with their parents will have an influence on the effect that parental gender norms have on adolescents' gender norms. Second, if peers' gender norms would have more influence than parental gender norms, the adolescents would need more than two friends based on the complex contagion theory. Therefore, the amount of friends were expected to have an effect on the influence that peers' gender norms have on adolescents' gender norms.

First, the actual influence of parental and peer's gender norms was tested. Both parental and peers' gender norms influence the gender norms of adolescents in a positive way, even when the controls; sex, age and occupational status are taken into account. Therefore, these findings are in line with recent literature on gender norm developments (Kågesten et al., 2016; Halpern & Perry-Jenkins, 2015; Epstein & Ward, 2011; Leaper, 2000; Tenenbaum & Leaper, 2002; Witt, 2000). Furthermore, these findings indicate that gender socialization, the social learning theory and the social identity theory are possibly the underlying mechanisms that explain the relation between parental and peers' gender norms on the gender norms of adolescents.

The found results on the difference between the parental and peer influence, suggest that there is an actual difference between the two influences. The parental gender norms indicate to have more influence on the gender norms of adolescents than the gender norms of peers. Therefore, the results carefully indicate that the parental influence does have more influence through mechanisms like applying pressure through normative standards and having an admired status. These results are in line with the results of an earlier conducted study that focused on children, that found that family has the most powerful influence on the development of a child's gender norms (Kaplan, 1991). However, based on this thesis only conclusions can be drawn for the parental influence on adolescents in the Netherlands since this is where the sample has been collected. Before other studies build upon these results the study must be reproduced, possibly in a larger scale, in order to be able to make a more firm conclusion, than the shy indication this thesis is.

Furthermore, the amount of time spent with parents is found to have a significant effect on the effect that parental gender norms have on the gender norms of adolescents. This indicates that when adolescents spend more time with their parents, the influence the gender norms of the parents have on the adolescents gender norms will be bigger. Yet, what has not been studied is whether the amount of time spent with parents not only makes the parental influence stronger but simultaneously decreases the influence of peers. To see whether this could be relevant for future studies, the influence that time spent with parents could have on the relation between gender norms peers and adolescents was tested. Yet, this was not found significant. Even though future work could focus more on the integrated influences that time spent with parents has on the gender norms development of adolescents, the amount of time spent with parents suggests to have no effect on peer influence.

The second moderator, that expected that peers' gender norms would have a bigger influence was mostly based on the complex contagion theory, which suggested that the amount of persons with the same norms influence the norms of an adolescent. Parents merely consist of two persons, while a peer group in general is bigger thus the expectation was that peers are more influential. The results showed this was not the case. A possible explanation for this theory not holding up, is that two assumptions had to be met in order to work. First, all peers had to have

the same gender norms, next to that the adolescents peer network had to consist of more than two peers. Even though these were checked, these high demands could have resulted in this theory not holding up in this study. Moreover, in the data that was used the respondents were only able to name five or less friends. Yet, if there was no maximum on the amount of friends a respondent could name, the influence of peers could be greater since this hypothesis was based on the size of the peer group. Next to that, there must be taken into account that since the respondents without friends had to be excluded from the analysis this could have influenced the results since adolescents with fewer friends have lower self esteem and are more easily influenced (Bishop & Inderbitzen, 1995). Another explanation for the amount of friends not being a significant moderator, could also be the constricted amount the respondents were allowed to answer. In order to contribute to the knowledge of development of adolescent gender norms, follow up research could focus more on peer groups without a limited number of friends.

According to the found results, the effect of peers' gender norms is smaller than the parental gender norms effect. This indicates the possibility that parental gender norms could be a moderator or mediator of the effect that peers' gender norms have on adolescents' gender norms. To back this statement, the correlation between gender norms parents and gender norms peers was tested and found significant. This suggests parents could influence the gender norms of the peers. Since gender norms are generally learned first in the home, it could be possible that parents actually have influence on the type of gender norms of their child's peers through the selection argument (Golshirazian et al., 2015; Witt, 2000). This entails that parents create the gender norms of adolescents and this influences how the adolescent selects their peers, resulting in peers with similar gender norms as their parents. This could be a plausible explanation for the smaller effect yet significant effect of peers, thus conducting follow up research on this topic is recommended.

The results of this thesis are interesting and contribute to existing knowledge on gender norms. However, before accepting the results completely, a few more limitations of this study must be discussed. First, the small amount of attention the type of gender norms of the peers got could be a cause for worry. Complex contagion occurs when multiple persons in your environment have the same norms, yet this was merely tested by plotting the standard deviations

of the peers' gender norms and it was not added as a moderator like was done with the assumption amount of friends. This could be one of the reasons why the influence of peers was fewer, moreover this could be an explanation why the amount of friends variable was not found significant. If complex contagion only occurs when multiple friends have the same norms, the amount of friends does not matter if their norms are not similar. Thus, follow-up research could focus more on whether all friends have the same norms instead of merely plotting it. Another issue in this thesis was the clustered data, and even though it was mentioned and kept in mind during the analysis, ideally the model would be adjusted by clustering the standard errors to cope with the nested data. The last limitation of this study, would be that divorced parents, single parents or other reconstituted families were not taken into account. Steph-parents could very well influence the gender norms of the adolescents, without it showing in this study. This could also have an effect on the moderator amount of time spent with parents. It is recommended in future studies on adolescents, to take this into account, possibly as a control.

Concluding, this thesis expected an effect of parental and peers' gender norms on the gender norms of adolescents, which was found for both. The results of this thesis suggest that parents have more influence than peers on adolescents. Therefore, future policies that aim to change the negative effects of gender norms can become more effective based on these findings, by targeting parents instead of peers. Next to that, the time that an adolescent spends with their parents is a significant moderator. This is an interesting contribution to the process of understanding the gender norms development of adolescents. In conclusion, this research has contributed to the existing knowledge by studying the influence of the social environment on gender norm developments of adolescents. Instead of confirming what was already known, this thesis has compared two effects and has found that parental gender norms are more influential than peers' gender norms in the process of gender norm development of adolescents. Hopefully this research contributed to social sciences ongoing development in the field of gender norm development among adolescents, by focusing more on the role of parents than peers.

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Appendix A:

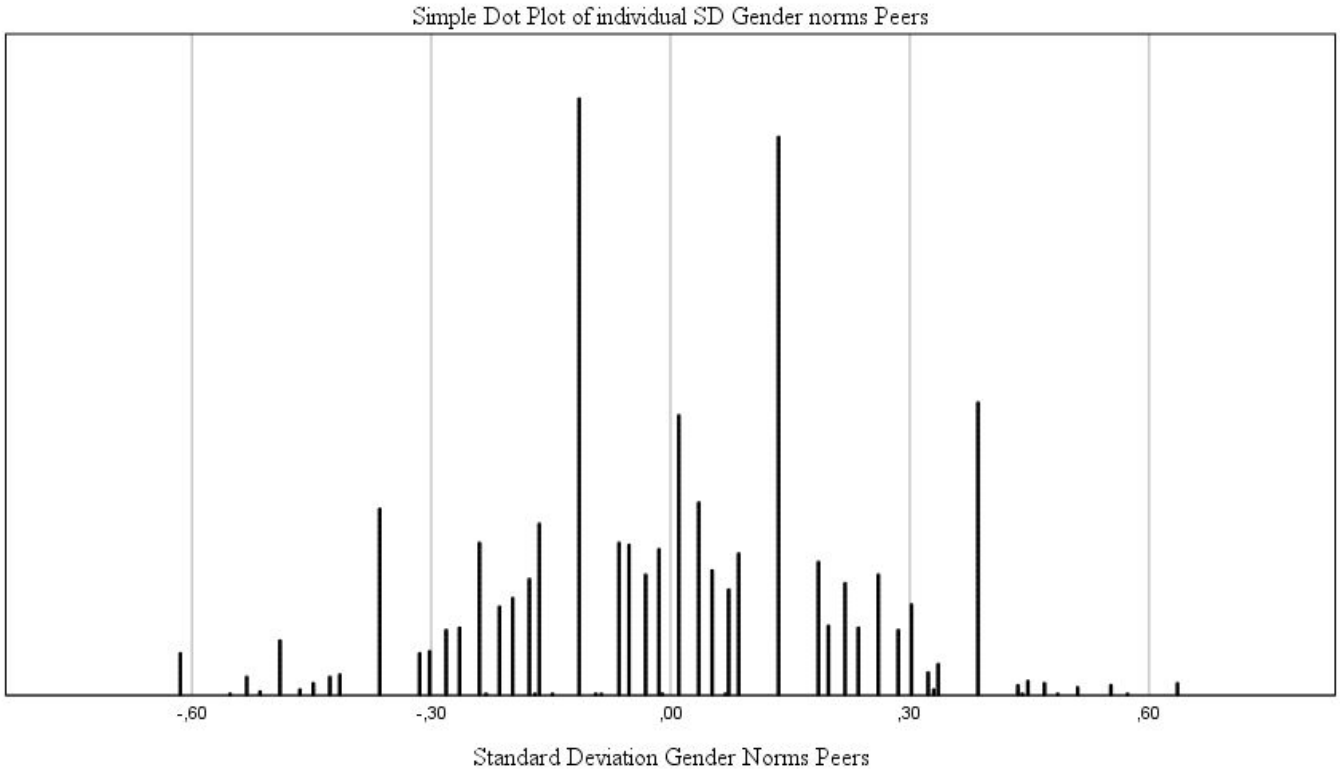

Figure 1. *Dot Plot of the standard deviation of peers gender norms.*