The changes in the parent-child relationship during the transition from adolescence to young adulthood

A longitudinal study

Master thesis

T. M. van Zijl

ANR: 610602

SNR: 2108568

Master Thesis Sociology

Track: health, wellbeing & society

Tilburg University

School of Social and Behavioral Sciences

December 2023

Supervisor: Prof. dr. Jolanda Mathijssen

Second reader: Ass. Prof. dr. Mine Kühn

Abstract

The aim of this thesis was to find out how the parent-child relationship changes during the transition from adolescence to young adulthood. This aim was elaborated on with two sub questions: *'Does gender make a difference in the change in the parent-child relationship during the transition from adolescence to young adulthood?'* and '*How does the child leaving the parental home contribute to this possible change in the parent-child relationship?'.* The research question was answered through a quantitative longitudinal study using data from the the LISS panel administered by Centerdata. Data of 164 respondents over a 7-year time period were included. Over these 7 years, there were 3 measurement moments. The data was based on the parent's reports at all three times of measurement.

The results showed that in the parents' perception the parent-child gets better (becomes less negative) when the children go from adolescence to young adulthood. However, this change in the relationship only occurs in the negative aspects of the parent-child relationship (conflicting feelings, irritation, anger, unstable relationship and embarrassment). The parent child relationship was found to become less negative from adolescence (15-18 years old) to young adulthood (22-25 years old). And even from late adolescence (18-21 years old) to young adulthood (22-25) a decrease was found in the negative aspects of the parent-child relationship. The study shows no difference in the positive aspects of the parent-child relationship (being fond, having a close relationship and feeling closely connected) during the transition from adolescence to young adulthood. No evidence was found in this study that the gender of either the parent or the child had an effect on the change in the parent-child relationship during the transition from adolescence to young adulthood. Also, whether the child lives at the parental home or not did not show to affect the change in the parent-child relationship during the transition from adolescence to young adulthood.

Keywords: parent-child relationship, adolescence, young adults

Table of contents

Introduction

Among the numerous unique and enduring relationships that individuals form throughout their lives, the relationships between parents and their children are among the most significant, if not the most impactful (Birditt & Fingerman, 2012; Mihalec-Adkins, 2020).

However, just like parents and children have an individual life course, one can also describe a life course of the parent-child relationship. The transition to young adulthood is a period of significant transformations in family relationships (Tsai et al., 2013). This thesis aims to examine how the parent-child relationship changes during the transition from adolescence to young adulthood.

Over the past few decades there has been a growing significance placed on intergenerational relationships within families (Punch & Vanderbeck, 2017). This shift can be attributed to several factors (Lam, 2019). Firstly, the overall life expectancy has increased, resulting in a longer overlap of adult years among multiple generations of family members (Antonucci et al., 2011; Putney & Bengtson, 2003). In many cases, these two generations coexist for over 50 years (De Jong-Gierveld & Dykstra, 2008). Additionally, the transition to adulthood has become more prolonged, characterized by extended periods of education, delayed marriages, and career uncertainty. As a result, many young adults find themselves relying on their families for support for a longer duration (Furstenberg, 2010; Settersten & Ray, 2010).

As children grow older and become young adults, the dynamic between parents and children undergoes a transformation as individuals are separating from their parents, strive for independence and gaining greater individuality. This transformation leads to a redefinition of the parent-child relationship from the child depending on their parents to a mature relationship between two adults (Longmore et al., 2013; Scheinfeld & Worley, 2018). Young adults typically tend to have fewer interactions with their parents compared to their adolescent years, and this trend continues into emerging adulthood, during which they continue to interact less frequently (Parra et al., 2013).

In this thesis, the focus is on how parents experience the changes in the parent-child relationship during the transition to young adulthood. This is because very little is known about the parents' perception regarding this topic and because parents may experience a range of emotions during the

transition from adolescence to young adulthood (Tsai et al., 2013). On one hand, they might feel a sense of loss or emptiness as their child becomes more independent. On the other hand, they might also feel a sense of pride and accomplishment as they see their child successfully navigate the challenges of young adulthood.

Studying the changes in the parent-child relationship during the transition from adolescence to young adulthood from the parent's perspective has several societal implications. The transition to young adulthood can be a challenging time not just for the young adults, but also for their parents (Laursen & Collins, 2009). Understanding their experiences can help in developing strategies to support their well-being during this period. Next to that, for many parents the relationship with their young adult children is associated with their psychological and physical well-being (Thomas et al., 2017). A good parent-child relationship increases the chances of future well-being while a diminishing parent-child relationship on the other hand can forecast an increase in parents' psychological distress over time. (Reczek & Zhang, 2016). If research shows that the parent-child relationship diminishes over time, it may be necessary to look at how the well-being of the parents can be maintained. Also, parents play a crucial role in the lives of their young adult children (Fingerman, 2017). Understanding their perspectives can provide valuable insights into the dynamics of the parent-child relationship during this transitional period (Laursen & Collins, 2009). The questionnaire used in this thesis was, therefore, completed by the parents.

From a theoretical perspective, studying the parent-child relationship during this phase holds significant importance because the children transitioning from adolescence to young adulthood go through crucial life changes that alter their social roles and responsibilities. The key transitions in young adulthood, such as entering the workforce and moving out of the parental home involve a gradual shift from dependence on parental resources to an independent position (Setterston, 2007).

During childhood and adolescence, parents play a central role in the social lives of children and teenagers. However, when individuals enter the phase of young adulthood, there is a notable shift in their social networks, with peers and romantic partners gaining increasing significance (Tanner, 2006). Consequently, researchers have been actively investigating the influence of peers and romantic relationships on the lives of young adults (e.g. Chow et al., 2012; Furman & Winkles, 2012).

Nonetheless, there is limited knowledge about how parent-child relationships evolve over time as young people make the transition from adolescence to young adulthood. While there has been a considerable amount of research on the parent-child relationship during childhood and adolescence, there is a lack of empirical focus on the transition from adolescence to young adulthood (Galambos & Kotylak, 2011; Lindell & Campione-Barr, 2017).

Even though in this period the social networks of young individuals undergo a change, with an increased emphasis on peers and romantic partners, parents continue to be significant sources of support in their lives (Lindell & Campione-Barr, 2017). While there is a decrease in the relative need for parent-child interaction during growing adulthood and maintaining this relationship becomes more voluntary compared to earlier developmental periods (Aquilino, 2006). Research has shown that there are still substantial levels of both parental involvement and dependency on parents (Fingerman & Yahirun, 2015). Many young adults remain at least partially financially dependent on their parents (Padilla-Walker et al., 2012). Next to financial resources, also emotional support from parents plays a crucial role in helping children navigate through adulthood (Settersten & Ray, 2010). Therefore, for many young adults, the family remains an important part of their social environment.

The main concern revolves around how the growing independence, autonomy and assumption of adult roles of young adults affects their relationships with their parents since those are the key factors in the transition to young adulthood (Estefanía et al., 2020).

This thesis seeks to contribute to the existing body of knowledge by performing a longitudinal study to gain more insight in how the parent-child relationship changes over time. In this way it is expected to gain a clearer view on how the parent-child relationship changes during the transition from adolescence to young adulthood.

Therefore, the research question of this thesis is: *'How does the parent-child relationship change moving from adolescence to young adulthood?'.*

According to Fang et al. (2021) the gender of both the parent as the child were related to differences in the parent-child relationship as well as to changes in this relationship, therefore gender is seen as a moderator in this study. A moderator is a variable that affects the relationship between two other variables (Field, 2018). In the case of this study, gender is expected to affect the parent-child relationship

during the transition from adolescence to young adulthood. Also, whether the child still lives with its parents or not is seen as a moderator since leaving the parental home is seen as the first important step towards autonomy, independence and adulthood (Mulder, 2009; Tosi, 2017). Leaving the parental home emerges as a significant transition that may affect previous relationship dynamics (Aquilino, 1997). This transition marks a shift in the parent-child relationship from daily, face-to-face interaction to less frequent contact, often mediated through technology or during visits (Leopold, 2012). Parents may experience a shift from a caretaking role to a more advisory or supportive role (Tosi, 2017).

Therefore, two sub questions to elaborate on the research question are: *'Does gender make a difference in the change in the parent-child relationship during the transition from adolescence to young adulthood?'* and '*How does the child leaving the parental home contribute to this possible change in the parent-child relationship?'*.

These questions were examined using longitudinal data from the the LISS (Longitudinal Internet studies for the Social Sciences) panel administered by Centerdata (Tilburg University, The Netherlands). The data are based on the parent's reports at the three times of measurement.

Theoretical framework and state of the art

Family life course perspective

The parent-child relationship's life course is inherently intergenerational since it is influenced by the individual life journeys of both the parent and the child (Bucx, 2009). It begins with the birth of the younger generation and typically lasts until the death of one, often the older generation. The lives of parents and their children remain closely associated as long as both generations are alive since the two generations share a significant portion of their lives together.

A theoretical framework that takes this into account is the family life course perspective by Elder (1984). The family life course perspective is a conceptual framework that centers on the interconnected lives of family members and how they evolve over time (Roy & Settersten, 2022). This framework is a longitudinal framework, matching the longitudinal design of this thesis. The perspective emphasizes the interconnectedness of family members' life histories and acknowledges the potential for both continuity and change in family interactions throughout life (Castrén et al., 2021). Continuity within family interactions are roles, relationships and traditions that remain constant (Jerrome, 1994). For example, the role of a parent stays relatively constant throughout live. Changes are in family structures due to marriage, divorce or a newborn or changes in the relationship due to aging, relocation or personal circumstances.

The life course perspective takes into account the individual and family experiences, interactions, and transitions that occur throughout the lifespan. The framework suggests that family relationships evolve in response to the individual developmental paths of family members (Roy & Settersten, 2022). Simultaneously, evolving patterns of family interaction shape the trajectories of individuals' lives.

Key concepts of this framework are; a) Life events, such as leaving the parental home, are considered critical moments that can significantly alter the course of one's relationships (transitions and turning points). b) The active decision-making and control that young people have in shaping their own future. c) Individuals' life paths are interconnected with the lives of others, creating "linked lives." d) Personal development is influenced by various contextual factors, including historical era, culture, and family upbringing (Elder & Johnson, 2002; Johnson et al., 2011).

Concepts a (transitions and turning points) and c (linked lives), which are elaborated on below, are the most relevant to the current study. Therefore, in this thesis the focus lies on those two concepts of the life course perspective.

- <u>Transitions and Turning Points</u>: The life course perspective focuses on critical transitions and turning points in family development. These can include events such as marriage, moving out, childbirth, career changes, and loss of loved ones. These transitions can have long-lasting effects on individuals and families, shaping their subsequent trajectories.

- <u>Linked Lives</u>: This concept highlights the interconnectedness of individuals within families and across generations. The experiences and decisions of one family member can influence the lives of others. For example, children moving out of the parental home does not only affect the childrens' lives but also has an impact of the parents' lives.

These two concepts show that parents and children rely on each other throughout their longer lifespan and interconnected relationships, and that personal developments and modifications take place within the framework of a family. When one individual experiences a transition, it can impact other family members by modifying their relationship, possibly through altering their level of closeness in terms of physical distance or emotional bonds due to changing needs and patterns of support (Connidis, 2010).

Overall, the life course perspective provides a comprehensive framework for understanding how families evolve over time. It emphasizes the dynamic nature of family development, the interconnectedness of family members, and the impact of social and historical factors on individuals and families.

According to the life course perspective, the parent-child relationship is characterized by both continuity and discontinuities (Castrén et al., 2021). While the significance of the parent-child relationship remains intact throughout one's life, transitions experienced by both generations such as aging or relocation can lead to shifts in the dynamics of this relationship (Jerome, 1994).

Parent-child relationship

The term "parent-child relationship" indicates a special bond between a parent and a child. Legally, the parent-child relationship is defined as the relationship between an individual and their biological offspring or between an individual and a child he or she has legally adopted (Mihalec-Adkins, 2020). However, the parent-child relationship is much more than just DNA; interactions and bonds between parents and children are also involved.

The parent-child relationship represents the initial and earliest bond that an individual experiences in their life (Wang, 2020). It is also one of the closest relationship people have in their lifetime (Leidy et al., 2009). Parent-child relationships are central in both the parents 'and the children's lives and are intensive across large periods of their life (Birditt & Fingerman, 2012; Thornton et al., 1995). The parent-child relation is, as every other family relation, a dynamic relationship, meaning it is prone to change over time. There are different aspects to the parent-child relationship such as the number of conflicts and irritations or the amount of contact and how close the relationship is. These aspects are often separated in positive aspects (contact, closeness) of the parent-child relationship and the negative aspects (irritations, conflicts) (Nelson et al., 2015; Parra et al., 2013; Smokowski et al., 2015).

Transition from adolescence to young adulthood

The transition from adolescence to young adulthood is an interesting period where many changes take place. These changes include significant transformations in family relationships, such as the parent-child relationship (Tsai et al., 2013). During adolescence, the parent-child relationship already experiences a transition towards a more equal and balanced dynamic, leading to a decrease in power disparities (De Goede et al., 2009). The young individuals encounter numerous transitions and they often depend on their parents for guidance during decision-making processes and during times of financial uncertainty (Fingerman et al., 2009). Studies show that during this stage of life, there is empirical support for increased autonomy and a longing for independence from parents, while still maintaining a supportive and positive relationship (Parra et al., 2013; Lindell & Campione-Bar, 2017).

After adolescence comes young adulthood, young adulthood represents a critical phase characterized by significant developmental tasks and transitions in various aspects of life, including

establishing a separate household, completing education, entering the job market, forming romantic relationships, and starting a family (Bertogg & Szydlik, 2016; Setterston, 2007). These transitions mark a shift from relying on parental support and being part of the family of origin to becoming independent.

Throughout this period, individuals become more devoted to their work, romantic partners, and possible children. However, it is also a time characterized by exploration and instability, as young adults' experiment with different options before making long-term commitments and choices. Since there are no rigid societal expectations during this life stage, young adults typically explore various alternatives before settling on permanent commitments and decisions (Arnett, 2015).

Generally, the parent-child relationship is perceived as good during (young) adulthood (Galambos & Kotylak, 2011). Young adults typically tend to have fewer interactions with their parents compared to their adolescent years, and this trend continues into emerging adulthood, during which they continue to interact less frequently (Parra et al., 2013). However, despite children having fewer interactions with their parents in young adulthood compared to their adolescent years, young adults generally perceive their relationships to be better (Parra et al., 2013; Lindell & Campione-Bar, 2017). The improvements are evident in a decline in conflict as they transition to emerging adulthood (Nelson et al., 2015), especially when they are no longer living with their parents (Whiteman et al., 2011).

In short, during the transition from adolescence to young adulthood, interactions between parents and their children tends to become less frequently (Parra et al., 2013) and there is a decline in conflict (Nelson et al., 2015). Generally, these changes are perceived as positive by the child (Parra et al., 2013; Lindell & Campione-Bar, 2017). However, most of these studies used the child's perspective while this thesis uses the parents' perspective. Since the parents' perception is unknown, this thesis will tell whether parents perceive the same changes in their relationship with their young adult children.

Since the only information available from previous studies are based on the child's perception, the hypothesis for the parents' perception is based on this information. The expectation is that parents will perceive the same changes in the parent-child relationship as the children. *Therefore, the hypothesis is that changes will occur in the parent-child relationship during the transition from adolescence to young adulthood and that these changes will be perceived as improving the relationship. The main change is expected to be in the reduction of irritations and conflicts.*

Gender

One of the sub questions in this thesis is whether gender affects the change in the parent-child relationship during the transition from adolescence to young adulthood. This because men and women value relationships differently (Zhang & Grant, 2023). Mothers tend to engage in more positive and supportive interactions with their children, while fathers are more inclined to emphasize discipline and instrumental support. Women tend to invest more in family relationships, assuming family responsibilities and providing informal services when necessary (Silverstein et al., 2006).

Research suggests that parent-child relationships in emerging adulthood are notably intimate and significant (Steele & McKinney 2018). According to Fang et al. (2021) the gender of both the parent as the child were related to differences in the parent-child relationship as well as to changes in this relationship. Despite contact between parents and their children in general decreases when children transition from adolescence to young adulthood. This decrease in contact seems to be lower among daughters and their parents compared to sons and their parents (Fang et al., 2021; Sneed et al., 2006). At an age of 17 daughters tend to be closer to their parents compared to sons (Fang et al., 2021; Sneed et al., 2006). Also, mothers maintain a closer relationship with their young adult children compared to fathers (Fang et al., 2021; Laursen & Collins, 2009).

Although the relationship among daughters and their parents are emotionally closer compared to the relationship between sons and their parents, they do report slightly more conflicts (Fang et al., 2021). The same goes for mothers, mothers seem to have more conflicts with their young adult children compared to fathers. Overall, the number of conflicts between parents and their children decrease during the transition to young adulthood. However, this decrease seems to be bigger amongst fathers and their children compared to mothers and their children (Fang et al., 2021). This could be explained by mothers having more contact compared to fathers and thus more possibilities for conflicts.

Overall, even though the amount of contact between parents and their children reduces during the transition from adolescence to young adulthood, this reduction seems to be larger between fathers and their children compared to mothers and their children. The same goes for sons, their contact with their parents seem to reduce more during the transition to young adulthood compared to the contact between daughters and their parents. Also, the number of conflicts decreases during the transition to

young adulthood, however, this reduction is bigger between fathers and their children or sons and their parents compared to mothers and their children or daughters with their parents.

The hypotheses are that the gender of both the parent as the child makes a difference in how the parent-child relationship changes during the transition from adolescence to young adulthood. The main difference is expected in the number of conflicts. Mothers are expected to maintain more conflicts with their children compared to fathers, just as daughters are expected to maintain more conflicts with their parents compared to sons. It is also expected that mothers will maintain more contact with their children, just as daughters are expected to maintain more contact with their parents. However, the concept of contact is not measured in the parent-child relationship scale in this study.

Child leaving the parental home

Young adulthood is a period characterized by significant transformations. One of the transformations young adults go through is leaving their parental home. Leaving the parental home is the first important step towards autonomy, independence and adulthood (Mulder, 2009; Tosi, 2017). Transition periods create possibilities for altering established patterns. In early adulthood, leaving the parental home emerges as a significant transition that may affect previous relationship dynamics (Aquilino, 1997). Looking at it from a life-course perspective, the act of moving out of the parental home is a developmental milestone that has an impact not only on the young adults themselves but on the entire family (Akin et al., 2020).

When children leave the parental home, it lessens the intensity of the parent-child relationship and brings about both positive and negative effects (Leopold, 2012). There often is a shift from daily face-to-face interaction to less frequent interaction. The parent-child relationship and its dynamics might change, parents may experience a shift from a caretaking role to a more advisory or supportive role (Tosi, 2017).

As children grow older and transition out of their family homes, parents may decrease their level of control, while the offspring may reduce their dependency (Fang et al., 2021). Parents tend to become less engaged in directly controlling their daily activities, thereby minimizing the likelihood of interactions that may lead to conflicts (Fang et al., 2021). Moreover, the manner in which parents

exercised control over their children during adolescence becomes less significant after they have moved out of the family home (Aquilino, 1997; Whiteman et al., 2011).

Moving out of the parental home is associated with changes in both contact as conflict (Fang et al., 2021). For numerous families, there is a natural reduction in communication between children and parents as young individuals move out of the parental home while at the same time there tends to be a notable increase in emotional closeness and a decrease in conflicts, leading to good parent-child relationships (Fang et al., 2021).

Leopold et al. (2012) performed a retrospective study on how parents experienced their children leaving the parental home and found that 'late home leavers' maintained more contact compared to their siblings who moved out earlier. They also found that the 'late home leavers' lived closer to their parents and both provided and received more support. They suggest that 'late home leavers' would have a better parent-child relationship, however, the quality of the relationship itself was not measured (only the characteristics distance, contact and support).

From the child's perspective, 78% of young people who moved away to college reported changes in their parent-child relationship, with over 62% of the young people describing these changes as improving the relationship, such as feeling closer to their parents, more open communication, and fewer arguments (Lefkowitz, 2005). The most frequently mentioned change that was mentioned in this study is an improvement in the quality of the relationship. Next to that, more children mentioned feeling closer to their parents compared to those mentioning feeling less close after leaving the parental home. Another change that was mentioned often was a reduction in contact. Likewise, O'Connor and colleagues (1996) found that the child leaving the parental home was associated with a better parent-child relationship compared to them staying at the parental home.

Overall, leaving the parental home presents an opportunity for potential changes in the parent-child relationship. According to previous studies, the quality of the parent-child relationship would improve after the child leaves the parental home (O'Connor et al., 1996; Lefkowitz, 2005). The power dynamics change (Aquilino, 1997; Whiteman et al., 2011; Tosi, 2017) and there is a reduction in contact but also in a reduction in conflict (Fang et al., 2021). *Therefore, the hypothesis is that the parent-child*

relationship would improve when children leave their parental home during the transition from adolescence to young adulthood.

Control variables

To increase the internal validity of this study control variables were added to the analysis. Adding control variables helps to separate the effects from the control variables from the relationship between the variables of interest. This way the influence of confounders was limited (Dusetzina et al., 2015).

The first control variable that will be added in this thesis is the kind of parent. Legally, the parents are just the biological parents or parents who have legally adopted a child (Mihalec-Adkins, 2020). However, this relationship could not only exist with biological or adoption parents but also with stepparents or foster parents (Mihalec-Adkins, 2020). These parents may not be biologically related to the child but can still have a strong bond with them (Haslanger, 2009). There are many factors that could affects the parent-child relationship and the kind of parent is one of them (Dalgaard et al., 2022). Therefore, the kind of parent is controlled for in this study.

Another control variable that will be added the number of children in the household. Parents with several children often have to divide their time between them. This, especially when the children live away from their parental home, can lead to less contact than desired (Fokkema et al., 2004). This could possibly lead to a somewhat weaker relationship. It is not sure if the number of children in the household also affects the changes in the relationship or just the relationship itself. But to make sure it is accounted for, the number of children in a household will be controlled for in this study.

The last control variable added to this study will be the parents' age. According to Aquilino (1997) was an older age of the parent found to be associated with a better parent-child relationship. While, on the contrary, Fokkema et al. (2004) indicate that an older age of the parent may have a negative effect on the parent-child relationship as their ideas and expectations are more likely to differ due to the generation gap. This emerges mainly when children get older and more independent and start having more ideas and opinions of their own.

Data & methods

To answer the research question *'How does the parent-child relationship change moving from early adolescence to young adulthood?'* a quantitative, longitudinal approach was used. Quantitative research is considered the most appropriate method for this study as it allows for comprehensive insights to be gained from a wide range of participants and statistical evidence. The main purpose of this research is to test hypotheses and generalise findings to a wider population (Field, 2018). Given the focus on hypothesis testing, this study is categorised as explanatory. The hypotheses were tested using measurements from three points in time. The first moment was in 2015 where the children included were 15-18 years old (adolescence), the second moment was in 2018 where the included children were between 18 and 21 years old (late adolescence) and the third moment in time was in 2022 where the included children were between 22 and 25 years old (young adults).

Data

The data used in this thesis came from the LISS (Longitudinal Internet studies for the Social Sciences) panel administered by Centerdata (Tilburg University, The Netherlands). "The LISS panel is a representative sample of Dutch individuals who participate in monthly internet surveys. The panel is based on a true probability sample of households drawn from the population register. Households that could not otherwise participate are provided with a computer and internet connection. A longitudinal survey is fielded in the panel every year, covering a large variety of domains including health, work, education, income, housing, time use, political views, values and personality." (Centerdata research institute, 2023)

To answer the research question the family and household survey was selected from this database, this survey focuses on family and household dynamics. From the survey, which is conducted every year, three waves were selected for this study. The included respondents have filled out the survey in all three waves. Meaning the study follows the same people and thus the same relationships over time. Therefore, the analysis did not look at differences between cohorts but at differences within parent-child relationships, so between the same parent-child relationships at different points in time.

To compare three moments in time wave 8, wave 11 and wave 15 were selected. These waves were selected because wave 15 was the most recent wave conducted in 2022 so this wave provided the most up-to-date information. Wave 8 (conducted in 2015) was chosen as the first wave for two reasons; at first, the period between wave 8 and wave 15 represents 7 years. This gave a broad period reflecting the transition from adolescence to young adulthood. Second, this was the first wave in which the parent-child relationship was measured hence this data was not available from any previous years.

A third moment of measurement between these was wave 11, which was included in the study because having a third measurement point could provide more insight into at what point in the transition from adolescence to young adulthood the potential change in the parent-child relationship occurs. This middle wave represents an age of 18-21. The age range that is seen as young adulthood can vary between studies. Since, 18 years is legally considered an adult in the Netherlands, the age range 18-21 was included. However, because the transition to adulthood has been prolonged somewhat by, among other things, education (Settersten & Ray, 2010) also the age group 22-25 years old was included in this study. The surveys were internet-based and aimed at respondents aged 16 years and older. To ensure maximum participation, a reminder was sent twice to non-respondents (Centerdata research institute, 2023).

The family and household study wave 8: This study commenced on September 7, 2015 and concluded on October 27, 2015 (Centerdata research institute, 2023). A total of 7.081 household members were selected to participate in the survey. The nonresponse rate for the study was 13.8%, with 980 individuals choosing not to participate in the survey. This means that the response rate was 86.2%, meaning there were 6.101 participants. A majority of 85.6% provided complete responses. A small percentage of respondents, 0.6%, provided incomplete responses, totalling 40 individuals.

The family and household study wave 11: This study commenced on September 3, 2018 and concluded on October 30, 2018 (Centerdata research institute, 2023). A total of 6.637 household members were selected to participate in the survey. The nonresponse rate for the study was 14.5%, with 961 individuals choosing not to participate in the survey. This resulted in a response rate of 85.5%, meaning there were 5.676 participants. A majority of 85.1% provided complete responses. A small percentage of respondents, 0.4%, provided incomplete responses, totalling 27 individuals.

The family and household study wave 15: This wave commenced on September 5, 2022, and concluded on October 31, 2022 (Centerdata research institute, 2023). The selected number of household members included in the survey was 7.147. The response rate for the survey was 83.1%, with a total of 5,941 individuals providing their responses. This means that there was a non-response rate of 16.9%, accounting for 1,206 individuals who did not participate in the survey. 82.7% of the people completed the survey in its entirety, indicating a high level of engagement and thoroughness. Only a small percentage, 0.4%, provided incomplete responses, totalling 29 individuals.

Sample

This study had a valid N of 164 respondents (parents), of whom 54.3% was female (mother) and 45.7% male (father). No one indicated 'other' as gender. These were respondents who filled out the survey at all three points in time (2015, 2018 & 2022) without any missings on the parent-child relationship. The parents age ranged between 30 and 64 in 2015 with a mean of 47.32 years old. All of these parents had between 1 and 5 children (with a mean of 1.99) and they all had an oldest child born aged between 15 and 18 in 2015 (mean: 16.656, std. deviation: 1.105). Among these children, 57.3% was a boy (son), 42.7% a girl (daughter) and no one indicated 'other' as gender. In 2015 14.6% of these children have left the parental home compared to 32.9% in 2018 and 58.5% in 2022. Most of the respondents were biological parents of their oldest child (94.5%), 4 respondents indicated being a stepparent and 5 respondents are adoptive parents to their oldest child.

Operationalization

The number of household members encrypted was used to combine the results of the three surveys side by side in order to assign the responses of all three surveys to one respondent, to the researcher the respondents stayed anonymous.

Whether a respondent had any children was used to filter out everyone without children since they were not relevant in this study. Respondents could answer to this question with 1: yes or 2: no.

Next, the first child's age was used to exclude everyone whose first child does not fit within the target group, which was 15-18 years old for wave 8 (2015). Since the child's age was measured through birthyear, a new variable was created: agechild = year - birthyear.

Parent-child relationship

The parent-child relationship was measured through a pre-existing scale. The parent-child relationship was a variable made out of 9 items. The items were measured through a 7-point Likert scale where 1 was not applicable and 7 was totally applicable. A factor analysis was performed and the reliability was checked using the Cronbach's alpha score (α). The Cronbach's alpha was used to assess the consistency of measurements for a given characteristic across a collection of items (Field, 2018). A Cronbach's alpha above 0.7 is needed to be reliable but the higher the score the better (Pallant, 2006). After this, new variables representing the mean of the items were created, defining the parent-child relationship.

Gender

For the analysis the gender of both the parent as the child were included. Gender was measured with a multiple-choice question with 2 answer options in 2015 & 2018; male or female. In 2022 an extra option was added namely, 'other'. Since no one changed their answer and no one selected 'other' in 2022, only the answers from 2015 were included in this study. To make the interpretation clearer, for the parent's gender female was recoded into mother and male was recoded into father. As for the child's gender, boy was recoded into son and girl was recoded into daughter. A dummy was created for the gender of both the parent and the child, where for the parents' fathers were the reference category (father =0) and for the child son was the reference category (son =0).

Child living at the parental home or not

Whether the child lives with the respondent or not was measured using a multiple-choice question. There were two possible answers to this question: 1: living at home, 2: living independently. The codebook of the survey explained that by 'living independently' they meant that the child stays at

the respondent's home for less than 4 days a week. This child could live independently or with an ex-partner of the respondent. Note that there is no separate answer option for when children do not live at home but also not independently. This means that as long as the child does not live with the respondent for at least 4 days a week, every other option (e.g. child living independently, with a relative or with an ex-partner) is categorised under living independently.

For this variable a dummy was made where living at the parental home was the reference category (living with the respondent =0, living independently=1).

Control variables

The first control variable that was added in this thesis is the kind of parent. In the survey there were four answer options to kind of parent; 1. Biological parent, 2. Step parent, 3. Adoptive parent, 4. Foster parent. For this a dummy was created with biological parent as reference category (=0).

Another control variable was the number of children in the household. The number of children within a household was measured through an open question were the

respondent fills out the number of children.

The last control variable added to this study was the parents' age, this was answered by filling out their birthyear.

Analytical strategy

To analyse the data for this study, the statistical program IBM SPSS statistics 29 was used. The three Centerdata datasets on family and household were combined based on respondent number.

Before anything could be analysed the data had to be cleaned. First of all, the missing values were removed. Every 'no answer' and 'don't know' were seen as missing values and thus removed. Only respondents who answered the questions on the parent-child relationship at all three measurement times were included in this study, resulting in a valid N of 164.

The variables were recoded to make the data interpretation easier and dummies were created for the gender of the parent and the child, living at the parental home or not and the kind of parent.

Next, the descriptive statistics were looked at. Key characteristics of the sample, such as age, gender, etc were checked to see if the sample is representative of the target population. In addition, the descriptive statistics such as means, standard deviations and percentages were tabulated. These were used to explore the basic characteristics of the variables in the dataset.

Then an exploratory unrotated factor analysis was done on the parent-child relationship to see how many factors there are and whether the communalities are high enough (above .40) (Field, 2018). In this study, the correlation matrix, as well as two statistical measures, namely Barlett's test and the Kaiser-Meyer-Olkin (KMO) measure, were used to assess the suitability of the data. Pallant (2016) suggests that the Barlett's test should yield a significant result at $p < 0.05$, and the KMO measure should be at least 0.60. Additionally, Pallant (2016) states that the correlation matrix should have a minimum value of $r = 0.3$. Furthermore, the scree plot and Kaiser's criteria (Eigenvalue of >1.0) were employed to determine the appropriate number of factors to retain. This was then checked using the explained variance, the variance of the factors added up should be above 50%. After this a rotated factor analysis was performed to gain a clear structure of the factors and its items. The Oblimin rotation was used since the items are correlated with each other. A reliability analysis was performed to see whether the factors were reliable.

Repeated measures ANOVA was used to see if significant changes have occurred between measurement times (Field, 2018). It is also known as within-subjects ANOVA or within-groups ANOVA. This type of ANOVA is specifically designed for situations where data is collected from the same participants at multiple time points or under different conditions. Next to a table with within-subjects result, the repeated measures ANOVA also produces an output of the between-subjects results. So, in the case of this study, next to seeing the differences within respondents over time, there is also an output with differences between respondents. This could for example show the differences between sons and daughters in the parent-child relationship, however it does not show the differences within the same respondents over time.

Before starting the repeated measures ANOVA, first the sphericity assumption was tested. This was done by running Mauchly's test of sphericity, where a p-value greater than .05 is needed to meet the assumption of sphericity. If sphericity was not assumed, a correction was necessary in order to obtain

the results. When a correction was necessary there were two options, the Greenhouse-Geisser correction or the Huynh-Feldt correction (Field, 2018). When the estimated epsilon is below .75 ($\varepsilon < .75$), the Greenhouse-Geisser correction should be used. An estimated epsilon above .75 ($\varepsilon > .75$) means that the Huynh-Feldt correction should be used (Abdi, 2010).

When significant differences were found, a post hoc pairwise comparison using the Bonferroni test was used to gain some more information about which groups differ statistically significant from each other.

The moderators and confounders were added separately to the repeated measures ANOVA to see the effects without allowing them to affect each other. This allows to gain a clearer picture of the different effects and increases the statistical power (Field, 2018). It also allows to check the assumptions of the analysis for each factor separately.

Crosstabs were used to explore the changes within the moderators and control variables over the three waves. For the moderators' gender of the parent and gender of the child, the first wave (2015) was used.

For the moderator living at the parental home or not (living) there were some changes of people moving during the timeframe of this study. Therefore, groups were created, with a score from 0 to 3 for 'total living' to include the change in the analysis. These became four groups in which 0 = lived at the parental home in all three waves; 1 = did not live with the respondent in one of three waves; 2 = did not live with the respondent in two of three waves; 3 = did not live with the respondent in all three waves.

The confounders were added to the repeated measures ANOVA as covariates.

Sample descriptives

Table 1

Sample descriptives

	N	Min	Max	Mean	%	Std. Deviation
Mother	89				54.3%	
Father	75				45.7%	
Age parent 2015	164	30	64	47.32		5.366
Age parent 2018	164	33	67	50.32		5.366
Age parent 2022	164	37	71	54.32		5.366
Total number of children	164	1	5	1.99		.818
Age child 2015	164	15.00	18.00	16.656		1.105
Age Child 2018	164	18.00	21.00	19.656		1.105
Age Child 2022	164	22.00	25.00	23.656		1.105
Gender first child	164	1	2			
Daughter	70				42.7%	
Son	94				57.3%	
Not living in parental home 2015	24				14.6%	
Not living in parental home 2018	54				32.9%	
Not living in parental home 2022	96				58.5%	
Biological parent	155				94.5%	
Step parent	4				2.4%	
Adoptive parent	5				3.0%	
Valid N	164					

Descriptives dependent variable

The following Table (Table 2) shows the descriptives of the parent-child relationship over the years (2015, 2018 and 2022).

Table 2

Descriptives of the parent-child relationship in 2015, 2018 and 2022

	N	Min	Max	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
				2015		2018		2022	
Fond of child	164	1	7	6.59	.806	6.45	1.098	6.48	1.030
Close relationship	164	1	7	6.04	1.258	5.87	1.249	5.98	1.275
Conflicting feelings	164	1	7	2.27	1.864	2.20	1.644	2.13	1.759
Behavior irritates	164	1	7	2.66	1.599	2.59	1.642	2.23	1.520
Closely connected	164	1	7	5.64	1.782	5.83	1.513	6.01	1.405
Feel guilty	164	1	7	2.57	1.699	2.49	1.693	2.34	1.659
Angry	164	1	7	2.65	1.542	2.47	1.572	1.91	1.342
Unstable relationship	164	1	7	2.32	1.705	2.34	1.700	1.91	1.475
Feel embarrassed	164	1	7	1.85	1.371	1.90	1.415	1.71	1.291
Valid N	164								

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Results

Factor analysis

The analyses started with a factor analysis, before running a rotated factor analysis an exploratory unrotated factor analysis was performed. The unrotated factor analysis showed a KMO value above .60 (Table 3) which is needed for a factor analysis to be useful (Pallant, 2016). Also, the Barlett's test was significant in every year. It could thus be concluded that performing a factor analysis would be useful.

Table 3

KMO-values of the factor analysis for each year

	KMO -Value
2015	.823
2018	.837
2022	.864

Note: a KMO-value above .60 is needed for a factor analysis to be useful (Pallant, 2016).

Looking at the eigenvalues, there were two factors with an eigenvalue above 1. According to the Kaiser Rule, this should be the number of factors then (Braeken & van Assen, 2017). Also, the scree plot showed that there were two points much higher than the rest. Based on these two approaches, the number of factors should be two. This was checked using the explained variance, the variance of the factors added up should be above 50% (Field, 2018), which is the case in this study. So, the number of factors in this analysis is two.

The communalities of the unrotated factor analysis in 2022 and 2015 showed that all items have a communality above .40, suggesting that the items fit the scale well (Table 4). In 2018 the item 'guilty18' showed a communality below .40 (.287). This suggests that guilty18 does not fit the scale well and should be deleted (Field, 2018). In 2015 and 2022 guilty does score clearly lower than the other items.

Table 4

Communalities of the unrotated factor analysis

	Communalities		
	2015	2018	2022
Fond	.795	.787	.690
Close	.778	.758	.718
Conflict	.482	.554	.531
Irritate	.686	.695	.600
Connected	.618	.667	.664
Guilty	.414	.287	.473
Angry	.559	.614	.643
Unstable	.600	.696	.717
Embarrassed	.626	.598	655

Since the unrotated factor analysis does not give a clear structure (multiple items load on both factors) it can't be interpreted substantively. That is why a rotated factor analysis was performed, an Oblimin rotation was used since the items were correlated. In this rotated factor analysis, the item 'guilty' was deleted for multiple reasons, it showed a too low communality in 2018 and in the other two years the communality was barely enough, also the reliability analysis showed that the Cronbach's alpha would increase when guilty was deleted (this is elaborated on later). This rotated factor analysis showed that all communalities were above .40 and every item loaded high on one of the two factors (Table 5).

Table 5

Factor loadings of the separate items in the parent-child relationship

Item	Factor loading					
	2015		2018		2022	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Fond		.844		.899		.823
Close		.826		.785		.778
Conflict	.698		.710		.649	
Irritate	.776		.887		.731	
Connected		.812		.843		.833
Angry	.743		.811		.736	
Unstable	.691		.843		.734	
Embarrassed	.774		.642		.852	

Note: Rotated factor analysis, using an Oblimin rotation. The item of feeling guilty was deleted.

The first factor loads all of the negative formulated statements:

- I have conflicting feelings about my son/daughter

- my son/daughter's behaviour irritates me

- I sometimes feel guilty towards my son/daughter

- quite often I am angry with my son/daughter

- the relationship with my son/daughter is quite unstable, sometimes it is very positive, sometimes very negative

- I sometimes feel embarrassed because of what my son/daughter says or does

The second factor loads all of the positive formulated statements:

- I am very fond of my son/daughter

- my son/daughter and I have a close relationship

- I feel closely connected to my son/daughter

The reliability analysis showed a Crohnbach's alpha above .70 in every year for the positive formulated factor (Table 6) and even above .80 for the negative formulated factor (Table 7). According to Field (2018) a Crohnbach's alpha above .70 is acceptable and a Crohnbach's alpha above .80 is preferable, suggesting the factors in this study were reliable.

Table 6 *Crohnbach's alpha positive factor*

	Crohnbach's alpha
2015	.737
2018	.808
2022	.770

Table 7 *Crohnbach's alpha negative factor*

	Crohnbach's alpha
2015	.824
2018	.845
2022	.851

Note: a Crohnbach's alpha above .70 is acceptable and a Crohnbach's alpha above .80 is preferable

Repeated measures ANOVA

Since the factor analysis showed that there were two theoretically driven factors representing the parent-child relationship together, two different repeated measures ANOVAs were executed. One for the factor consisting of positive formulated statements (called positive) and one for the factor consisting of negative formulated statements (called negative).

Starting with the positive factor, the descriptives for the positive factor are represented in Table 8.

Table 8

Descriptives of the positive factor

	Mean	Std. Deviation
2015	6.087	1.086
2018	6.051	1.103
2022	6.157	1.031

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the positive factor presented in Table 8 are made visual in figure 1.

Figure 1

Visual representation of the descriptives of the positive factor
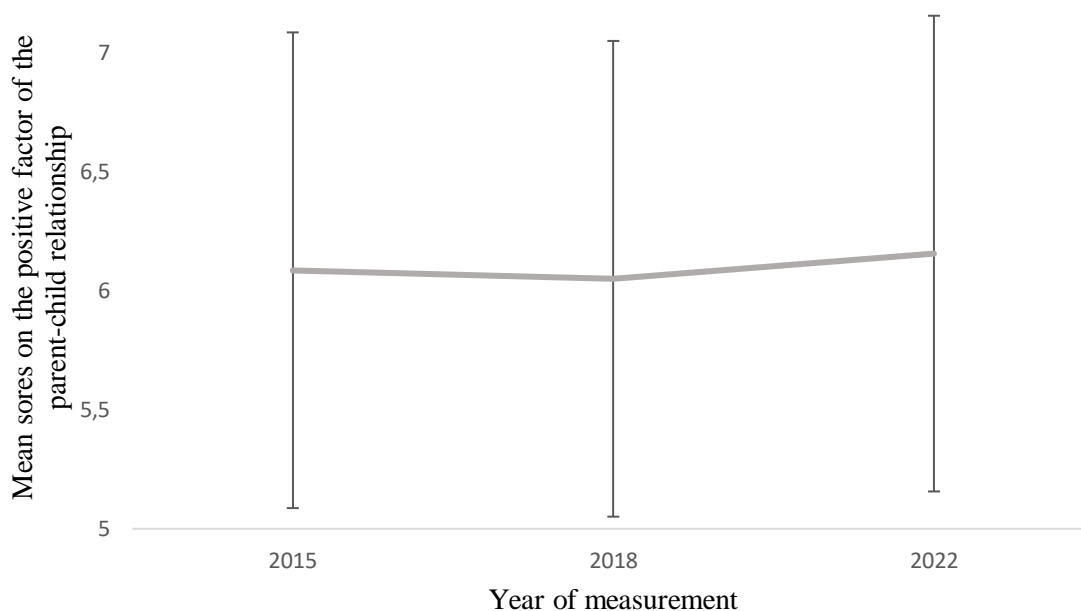
Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was not met (p = .004). Meaning a correction was needed. Since $\varepsilon > .75$ ($\varepsilon = .938$) the Huynh-Feldt correction was used (Table 9).

Table 9

The changes in the positive factor of the parent-child relationship over time

		df	Mean square	F	Sig.
Positive	Sphericity assumed	2	.472	.894	.410
	Huynh-Feldt	1.898	.498	.894	.405

*p ≤ .05

Note: the assumption of sphericity was not met (p < .05), therefore, the results should be obtained from the 'Huynh-Feldt row'.

A repeated-measures ANOVA determined that the mean scores on the positive formulated statements did not differ significantly across the three waves ($F(1.898, 309.314) = .894$, $p = .405$).

Proceeding with the negative factor, the descriptives of the negative factor are tabulated in Table 10.

Table 10
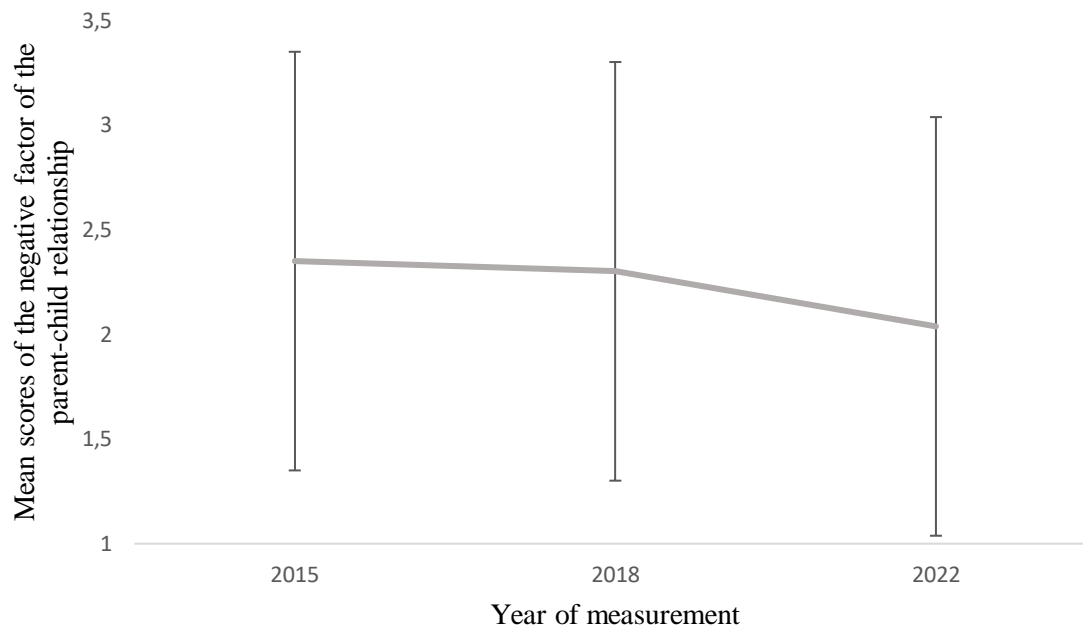
Descriptives of the negative factor

	Mean	Std. Deviation
2015	2.350	1.255
2018	2.301	1.269
2022	2.038	1.148

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the negative factor presented in Table 10 are made visual in figure 2.

Figure 2

Visual representation of the descriptives of the negative factor

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was met (p = .183). This means that no correction was needed so, the results should be obtained from the 'sphericity assumed' row (Table 11).

Table 11

The changes in the negative factor of the parent-child relationship over time

		df	Mean square	F	Sig.
Negative	Sphericity assumed	2	.4.632	6.474	.002*

*p ≤ .05

A repeated-measures ANOVA determined that the mean negative scores differed significantly across the three waves (F(2, 326) = 6.474, p = .002).

A post hoc test was performed to determine between which of the years (waves) the difference was significant (Table 12).

Table 12

Post hoc test that shows between which of the years (waves) the difference was significant

Negative (I)	Negative (J)	Mean difference (I-J)	Std. Error	Sig.
1	2	-.049	.095	1.000
	3	-.312	.098	.005*
2	3	-.264	.087	.008*

p ≤ .05

Looking at a significance level of .05, the post hoc pairwise comparison using the Bonferroni correction showed that the difference in the mean negative score between 2015 and 2018 was not statistically significant (p = 1.000). However, the decrease in the mean negative score did reach significance when comparing 2015 to 2022 (p = .005). Also, the decrease in the mean negative score between 2018 and 2022 showed significant (p = .008).

Child's gender as moderator

The second moderator that was added was the child's gender. The descriptives of the positive factor with the child's gender as moderator can be found in Table 13.

Table 13

*Descriptives of the positive factor for sons and daughters*

		Mean	Std. Deviation	N
2015	Son	5.997	1.098	94
	Daughter	6.210	1.067	70
2018	Son	5.954	1.100	94
	Daughter	6.181	1.101	70
2022	Son	5.997	1.134	94
	Daughter	6.371	.835	70

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the positive factor for sons and daughters presented in Table 13 are made visual in figure 3.

Figure 3

Visual representation of the descriptives of the positive factor for sons and daughters
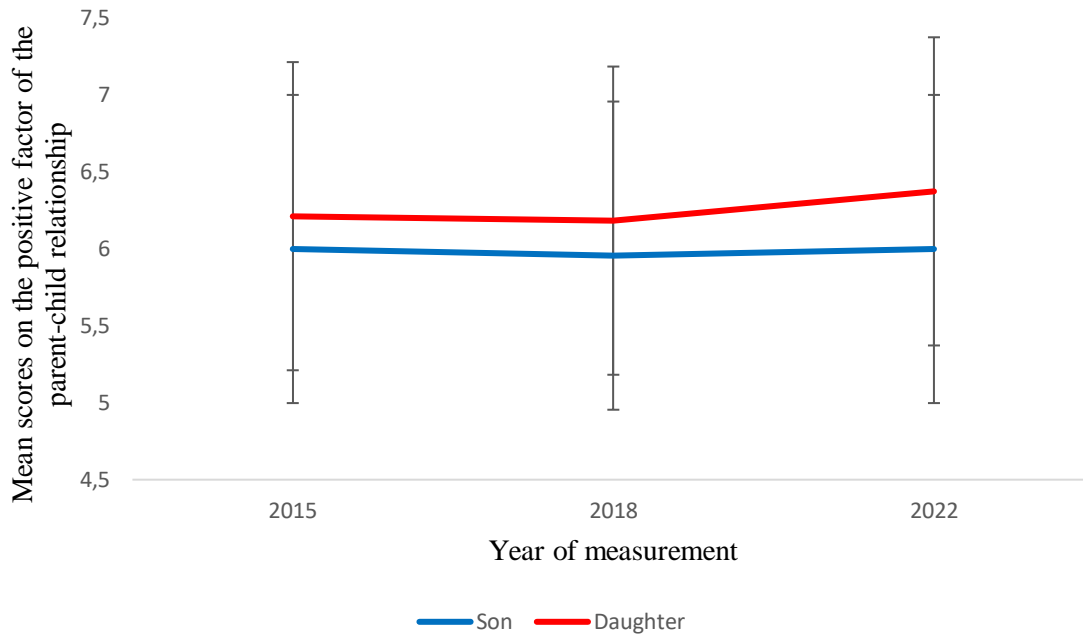
Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was not met (p = .005). So, a correction was needed. $\varepsilon > .75$ ($\varepsilon = .939$) meaning that the Huynh-Feldt correction was used (Table 14).

Table 14

Within-subjects and between-subjects effects of the positive factor of the parent-child relationship when the child's gender is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Positive	Sphericity assumed	2	.572	1.080	.341
		Huynh-Feldt	1.912	.599	1.080	.339
	Positive*gender child	Sphericity assumed	2	.323	.609	.544
		Huynh-Feldt	1.912	.338	.609	.537
Between-subjects	Daughter		1	8.885	3.758	.054

*p ≤ .05

Note: the assumption of sphericity was not met (p < .05), therefore, the results should be obtained from the 'Huynh-Feldt row'.

The repeated-measures ANOVA showed that the main effect of the positive aspects of the parent-child relationship was still not significant during the transition from adolescence to young adulthood (p >.05). Next to that, no significant difference was found between de different groups of living situation across the three waves (F(1.912, 309.723) = 1.080, p = .339). The interaction effect positive*gender child also did not differ significantly across the three waves (F(1.912, 309.723) = .609, p = .537). The test of between-subjects effect showed no significant difference in the positive aspects of the parent-child relationship depending on the child's gender (F(1, 162) = 3.758, p = .054). However, since the p-value was greater than 0.05 (not significant), but less than 0.10, it could be suggested that there is a so-called 'trend' in the data. This means that the evidence is not strong enough to say that the result is statistically significant but there may be an interesting trend or pattern going on. In this case the trend would be indicating that parents are more positive about the parent-child relationship with daughters compared to sons.

In Table 15 the descriptives of when the child's gender was added as a moderator to the negative factor are tabulated.

Table 15

Descriptives of the negative factor for sons and daughters

		Mean	Std. Deviation	N
2015	Son	2.304	1.368	94
	Daughter	2.411	1.092	70
2018	Son	2.387	1.255	94
	Daughter	2.186	1.288	70
2022	Son	2.080	1.170	94
	Daughter	1.981	1.123	70

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the positive factor for sons and daughters presented in Table 15 are made visual in figure 4.

Figure 4

Visual representation of the descriptives of the positive factor for sons and daughters
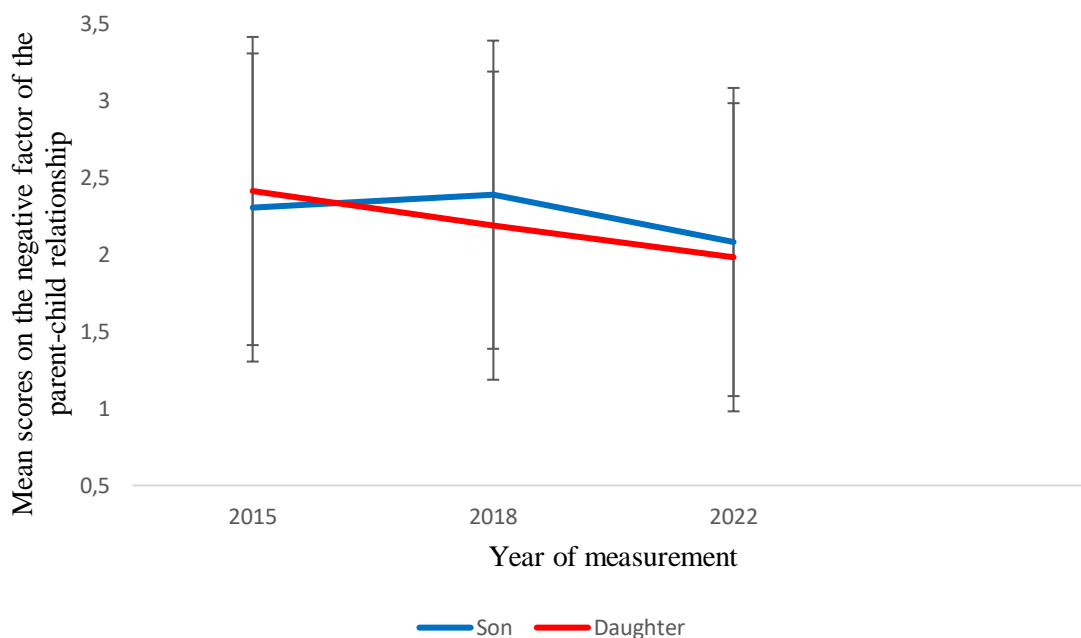
Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was met (p = .201). So, no correction was needed and the results were obtained from the 'sphericity assumed' row (Table 16).

Table 16

Within-subjects and between-subjects effects of the negative factor of the parent-child relationship when the child's gender is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Negative	Sphericity assumed	2	4.749	6.667	.001*
	Negative*gender child	Sphericity assumed	2	.992	1.389	.251
Between-subjects	Daughter		1	.499	.162	.688

p ≤ .05

A repeated-measures ANOVA determined that the mean scores on the main effect of the negative formulated statements when the childs' gender was added as a moderator did differ significantly across the three waves ($F(2, 324) = 6.667$, $p = .001$). The mean scores of the interaction effect negative*gender child did not differ significantly across the three waves ($F(2, 324) = .992$, $p = .251$). The test of between-subjects effect showed no significant difference in the negative aspects of the parent-child relationship depending on the child's gender ($F(1, 162) = .162$, $p = .688$).

***Parents' gender as moderator***

The last moderator included in this study is the parents' gender. Table 17 shows the descriptives when the parents' gender were added as a moderator to the positive factor.

Table 17

Descriptives of the positive factor for father and mother

		Mean	Std. Deviation	N
2015	Father	5.842	1.202	74
	Mother	6.289	.942	90
2018	Father	5.870	1.184	74
	Mother	6.200	1.014	90
2022	Father	6.054	1.034	74
	Mother	6.241	1.028	90

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the positive factor for fathers and mothers presented in Table 17 are made visual in figure 5.

Figure 5

Visual representation of the descriptives of the positive factor for fathers and mothers
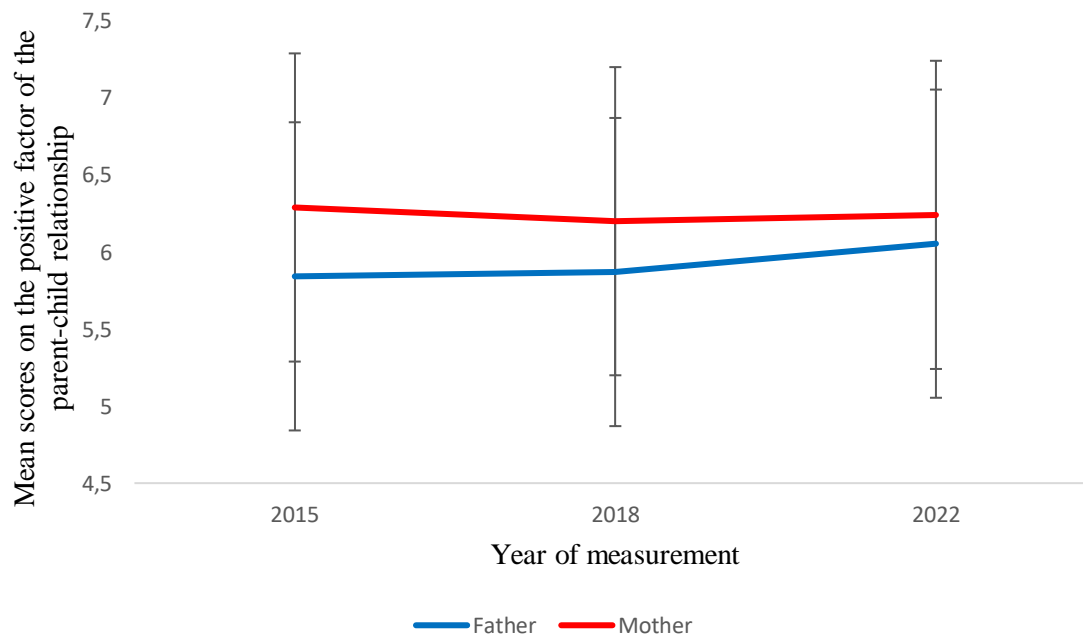
Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was not met (p = .005). Meaning that a correction was needed. Since ε > .75 (ε =.941) this correction was the Huynh-Feldt correction (Table 18).

Table 18

Within-subjects and between-subjects effects of the positive factor of the parent-child relationship when the parent's gender is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Positive	Sphericity assumed	2	.551	1.044	.353
		Huynh-Feldt	1.914	.576	1.044	.351
	Positive*gender parent	Sphericity assumed	2	.688	1.304	.273
		Huynh-Feldt	1.914	.719	1.304	.272
Between-subjects	Mother		1	12.576	5.371	.022*

*p ≤ .05

Note: the assumption of sphericity was not met (p < .05), therefore, the results should be obtained from the 'Huynh-Feldt row'.

A repeated-measures ANOVA determined that the mean scores on the main effect of the positive formulated statements when the parents' gender was added as a moderator did not differ significantly across the three waves (F(1.914, 310.133) = 1.044, p = .351). The mean scores of the interaction effect positive*gender parent also did not differ significantly across the three waves (F(1.914, 310.133) = 1.304, p = .272). The test of between-subjects effect showed that there was a significant difference in the positive aspects of the parent-child relationship depending on the parent's gender (F(1, 162) = 5.371, p = .022), indicating that mothers are more positive about the parent-child relationship compared to fathers.

In Table 19 the descriptives of the parents' gender as a moderator of the negative factor are tabulated.

Table 19

Descriptives of the negative factor for father and mother

		Mean	Std. Deviation	N
2015	Father	2.346	1.114	74
	Mother	2.353	1.366	90
2018	Father	2.189	1.121	74
	Mother	2.393	1.379	90
2022	Father	1.984	1.042	74
	Mother	2.082	1.233	90

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

The descriptives of the positive factor for fathers and mothers presented in Table 19 are made visual in figure 6.

Figure 6

Visual representation of the descriptives of the positive factor for fathers and mothers
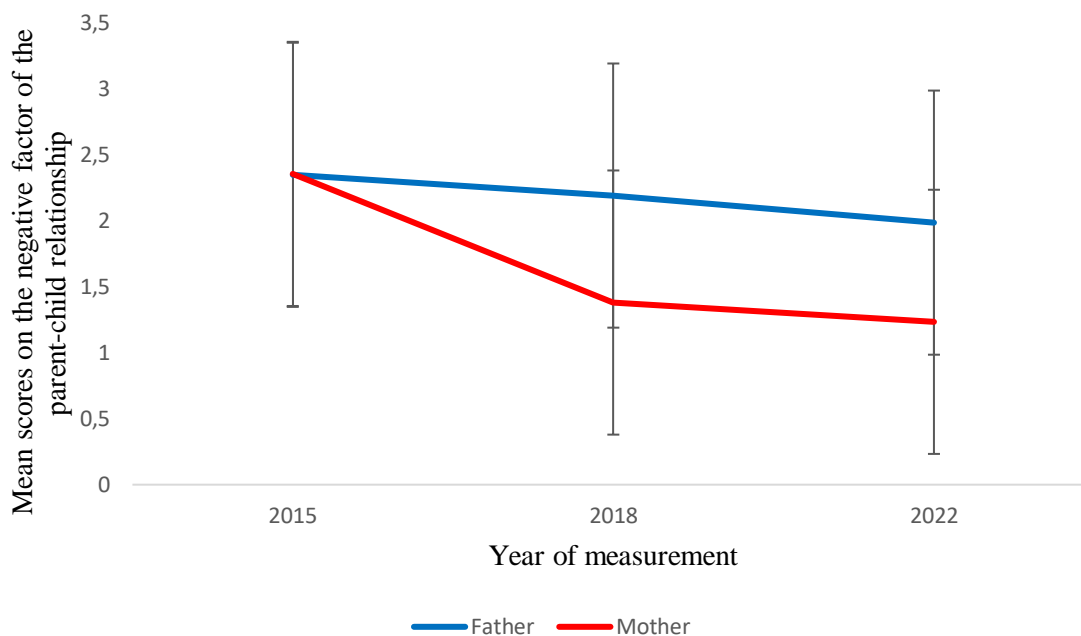
Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

Mauchly's test of sphericity showed that the assumption of sphericity was met (p = .185). So, the results were obtained from the 'sphericity assumed' row and no correction was needed (Table 20).

Table 20

Within-subjects and between-subjects effects of the negative factor of the parent-child relationship when the child's gender is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Negative	Sphericity assumed	2	4.617	6.435	.002*
	Negative*gender parent	Sphericity assumed	2	.394	.549	.578
Between-subjects	Mother		1	1.291	.419	.519

*p ≤ .05

A repeated-measures ANOVA determined that the mean scores on the main effect of the negative formulated statements when the parents' gender was added as a moderator did differ significantly across the three waves (F(2, 324) = 6.435, p = .002). The mean scores of the interaction effect negative*gender parent did not differ significantly across the three waves (F(2, 324) = .549, p = .578). The test of between-subjects effect showed no significant difference in the negative aspects of the parent-child relationship depending on the parent's gender (F(1, 162) = .419, p = .519).

Living at the parental home or not as moderator

The first moderator, living at the parental home or not (living) is added to the repeated measures ANOVA of both the positive as the negative factor.

First, the positive factor, the descriptives of the positive factor with living situation as moderator are represented in Table 21.

Table 21

Descriptives of the positive factor for the different scores on total living

		Mean	Std. Deviation	N
2015	0	6.010	1.128	64
	1	6.329	.873	46
	2	6.265	.803	34
	3	5.483	1.543	20
2018	0	5.932	1.157	64
	1	6.130	1.067	46
	2	6.275	.839	34
	3	5.867	1.378	20
2022	0	6.229	.937	64
	1	6.109	1.241	46
	2	6.196	.845	34
	3	5.967	1.123	20

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

0 = lived at home in all three waves
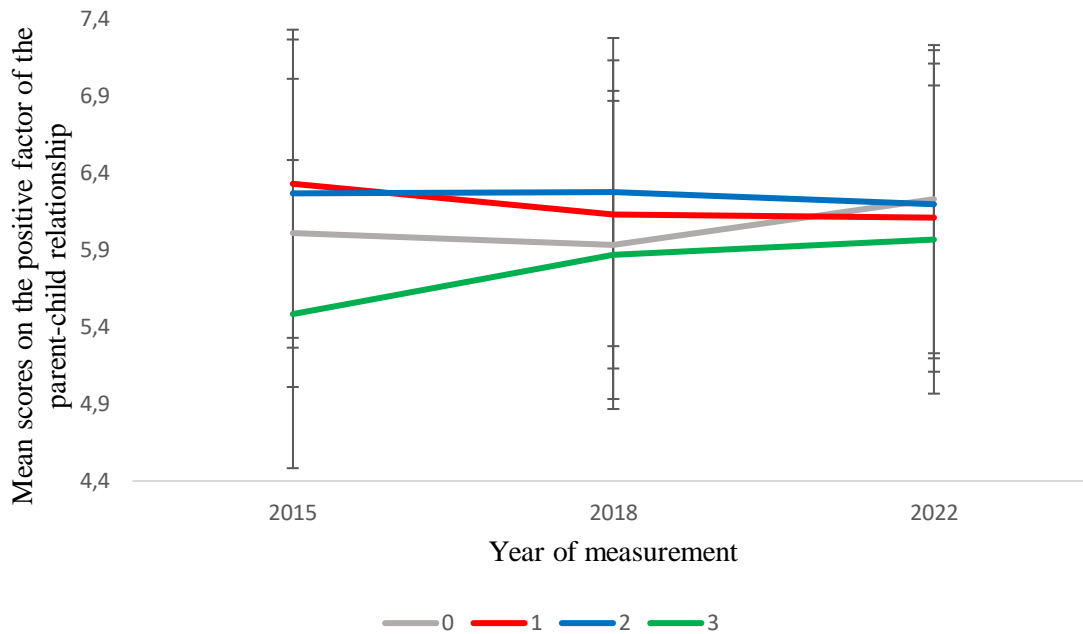1 = did not live with the respondent in one of three waves
2 = did not live with the respondent in two of three waves
3 = did not live with the respondent in all three waves

The descriptives of the positive factor for the different scores on total living presented in Table 21 are made visual in figure 7.

Figure 7

Visual representation of the descriptives of the positive factor for the different scores on total living

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

0 = lived at home in all three waves
1 = did not live with the respondent in one of three waves
2 = did not live with the respondent in two of three waves
3 = did not live with the respondent in all three waves

Mauchly's test of sphericity showed that the assumption of sphericity was not met (p = .006). This means that a correction was needed. Since ε >.75 (ε = .941), this should be the Huynh-Feldt correction (Table 22).

Table 22

Within-subjects and between-subjects effects of the positive factor of the parent-child relationship when the child's living situation is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Positive	Sphericity assumed	2	.393	.757	.470
		Huynh-Feldt	1.939	.405	.757	.466
	Positive*totalliving	Sphericity assumed	6	1.022	1.968	.070
		Huynh-Feldt	5.816	1.054	1.968	.072
Between-subjects	Totalliving		3	3.340	1.400	.245

*$p \leq .05$

Note: the assumption of sphericity was not met ($p < .05$), therefore, the results should be obtained from the 'Huynh-Feldt row'.

The higher the score on 'totalliving' the longer the child has not lived with the respondent during this study.

A repeated-measures ANOVA determined that the mean scores on the main effect of the positive formulated statements when living situation was added as a moderator did not differ significantly across the three waves ($F(1.939, 310.203) = .757$, $p = .466$). The mean scores of the interaction effect positive*totalliving also did not differ significantly across the three waves ($F(5.816, 310.203) = 1.968$, $p = .072$). However, since the p-value was greater than 0.05 (not significant), but less than 0.10, a 'trend' in the data could be suggested. This indicates that there was a trend towards parents being more positive about the relationship over time when the child is not living with the respondent compared to when they do live together. The test of between-subjects effect showed no significant difference in the positive aspects of the parent-child relationship depending on whether the child has lived in the parental home in all three waves or independently in one, two or all three waves ($F(3, 160) = 1.400$, $p = .245$).

Then for the negative factor, the descriptives of the negative factor when living situation was added as a moderator can be found in Table 23.

Table 23

Descriptives of the negative factor for the different scores on total living

		Mean	Std. Deviation	N
2015	0	2.403	1.502	64
	1	2.296	.894	46
	2	2.271	1.195	34
	3	2.440	1.271	20
2018	0	2.459	1.346	64
	1	2.204	1.240	46
	2	2.171	1.126	34
	3	2.240	1.353	20
2022	0	2.156	1.236	64
	1	1.920	1.008	46
	2	1.922	1.177	34
	3	2.125	1.147	20

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

0 = lived at home in all three waves
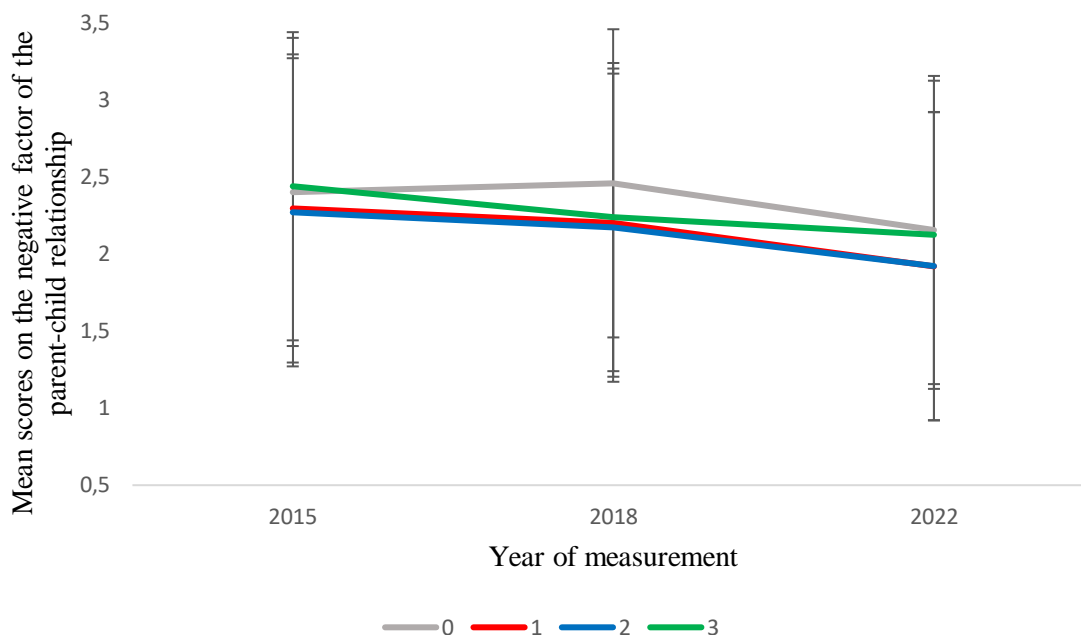1 = did not live with the respondent in one of three waves
2 = did not live with the respondent in two of three waves
3 = did not live with the respondent in all three waves

The descriptives of the negative factor for the different scores on total living presented in Table 23 are made visual in figure 8.

Figure 8

Visual representation of the descriptives of the negative factor for the different scores on total living

Note: the scores had a minimum of 1 = totally applicable and a maximum of 7 = not applicable

0 = lived at home in all three waves
1 = did not live with the respondent in one of three waves
2 = did not live with the respondent in two of three waves
3 = did not live with the respondent in all three waves

Mauchly's test of sphericity showed that the assumption of sphericity was met (p = .189). So, no

correction was needed and the results were obtained from the 'sphericity assumed' row (Table 24).

Table 24

Within-subjects and between-subjects effects of the negative factor of the parent-child relationship when the child's living situation is added as a moderator

			df	Mean square	F	Sig.
Within-subjects	Negative	Sphericity assumed	2	3.813	5.249	.006*
	Negative*totalliving	Sphericity assumed	6	.134	.184	.981
Between-subjects	Totalliving		3	1.574	.508	.677

*p ≤ .05

Note: the higher the score on 'totalliving' the longer the child has not lived with the respondent during this study.

The repeated-measures ANOVA showed that the main effect of the negative aspects of the parent-child relationship was still significant during the transition from adolescence to young adulthood (p <.05). However, no significant difference was found between de different groups of living situation across the three waves (F(2, 320) = 5.249, p = .006). The mean scores of the interaction effect negative*totalliving also did not differ significantly either across the three waves (F(6, 320) = .184, p = .981). The test of between-subjects effect showed no significant difference in the negative aspects of the parent-child relationship depending on whether the child has lived in the parental home in all three waves or not in one, two or all three waves (F(3, 160) = .508, p = .677).

Control variables

The control variables were added to the main analyses of both the positive as the negative factor without any interaction effect. None of the control variables gave a significant result (p ≤ .005).

Starting with the kind of parent. First, the kind of parent is added as a covariate to the analysis with the positive factor, the assumption of sphericity was not met (p = .002). Since ε > .75 (ε = .932) a Huynh-Feldt correction was used. These results were non-significant (F(1.896, 307.094) = 1.892, p = .155). When the kind of parent was added to the analysis of the negative factor the assumption of sphericity was met (p = .146). So, no correction was needed and the results could be obtained from the 'sphericity assumed' row. These did not show significant (F(2, 324) = 1.409, p = .246). Thus, the kind of parent had no significant effect on either the positive or the negative factor of the parent-child relationship during the transition to young adulthood.

The second control variable was the number of children in the household. Adding this as a covariate to the repeated measures ANOVA of the positive factor, the assumption of sphericity was not met (p = .004). This means that a correction was needed. ε > .75 (ε =.937) so the Huynh-Feldt correction was used. That gave an insignificant result (F(1.908, 309.073) = .537, p = .577). Adding the number of children in the household to the repeated measures ANOVA of the negative factor, the assumption of sphericity was met (p = .192). Meaning the results should be obtained from the 'sphericity assumed' row. However, this was not significant (F(2, 324) = .315, p = .730). Thus, the number of children in the

household had no significant effect on either the positive or the negative factor of the parent-child relationship during the transition to young adulthood.

The last control variable in this study was the parents' age. Adding this in the repeated measures ANOVA of the positive factor gave no significant results ($F(1.924, 311.744) = 3.723$, $p = .027$). A Huynh-Feldt correction was done since the assumption of sphericity was not met ($p = .008$) and $\varepsilon > .75$ ($\varepsilon = .945$). In the repeated measures ANOVA for the negative factor with the parents' age as covariate, the assumption of sphericity was met ($p = .244$). This means that the results could be obtained from the 'sphericity assumed' row without any correction. However, these did not show significant ($F(2, 324) = 2.303$, $p = .102$). Thus, the age of the parents had no significant effect on either the positive or the negative factor of the parent-child relationship during the transition to young adulthood.

Discussion

The aim of this thesis was to gain a clearer view on how the parent-child relationship changes during the transition from adolescence to young adulthood. The research question for this thesis was: *'How does the parent-child relationship change moving from adolescence to young adulthood?'*. Which was elaborated on with two sub questions: *'Does gender make a difference in the change in the parent-child relationship during the transition from adolescence to young adulthood?'* and '*How does the child leaving the parental home contribute to this possible change in the parent-child relationship?'*. The target population in this thesis were parents with children between 15 and 18 years old in 2015. The thesis focusses on the parent-child relationship between parents and their oldest child.

The research question is answered through a quantitative, longitudinal approach. The hypotheses were tested using measurements from three points in time (2015, 2018 and 2022), representing adolescence (15-18 years old), late adolescence (18-21 years old), young adults (22-25 years old). The data came from the LISS panel administered by Centerdata (Tilburg University, The Netherlands) where three waves of the family and household survey were selected. The three waves were combined based on respondent number.

A factor analysis was performed on the nine items that measured the parent-child relationship to see whether there was an underlying construct for the items and new variables were created representing the mean of the included items. This resulted in two factors, one with the positive formulated statements and one with the negative formulated statements.

Next repeated measures ANOVA was used to see whether significant changes have occurred between measurement times (Field, 2018). First the sphericity assumption was tested by running Mauchly's test of sphericity, this determined whether a correction should be done in order to obtain the results (Field, 2018).

When significant differences were found, a post hoc pairwise comparison using the Bonferroni test was used to gain some more information about which age categories significantly differ from each other.

The repeated measures ANOVA was executed separately for the positive and the negative factor and all moderators and confounders were added separately to see the effects without allowing them to affect each other.

The results of this thesis showed no significant difference in the mean scores on the positive formulated statements over the three waves. This means that this study found no significant difference in the positive aspects of the parent child relationship between adolescents (15-18 years old) children in their late adolescence (18-21 years old) and/or young adults (22-25). However, there was a significant difference found in the mean scores on the negative formulated statements over the three waves. The results of the repeated measures ANOVA indicate that the parent-child relationship got significantly less negative during the transition from adolescence to young adulthood.

The post hoc test showed that that the difference in the mean negative score between 2015 (wave 8) and 2018 (wave 11) was not statistically significant. However, the decrease in the mean negative score did reach significance when comparing 2015 (wave 8) to 2022 (wave 15). Also, the increase in the mean negative score between 2018 and 2022 showed significant. Meaning that the negative aspects of the parent child relationship differed significantly between adolescents (15-18 years old) and young adults (22-25) and also between children in their late adolescence (18-21 years old) and young adults (22-25 years old). But there is no significant difference found in the negative aspects of the parent child relationship between adolescents (15-18 years old) and children in their late adolescence (18-21 years old). Suggesting the change in the parent-child relationship takes especially place between late adolescence (18-21 years old) and young adulthood (22-25 years old).

The results of this study are, for the most part, in line with the hypothesis, which suggested that *changes will occur in the parent-child relationship during the transition from adolescence to young adulthood and that these changes will be perceived as improving the relationship. The main change is expected to be in the reduction of irritations and conflicts.*

Indeed, changes were found in the parent-child relationship during the transition from adolescence to young adulthood. Whether these are perceived as positive is hard to tell, the positive aspects did not significantly differ during the transition. However, it was expected that the main change

would be found in the reduction of irritations and conflicts. This is in line with the results of this study that show that the parent-child relationship got significantly less negative during the time of this study. In other words, in the parents' perception the parent-child becomes less negative when the children transition from adolescence to young adulthood.

This also corresponds to the life course perspective which states that the parent-child relationship is characterized by both continuity and discontinuities (Castrén et al., 2021). While the roles, relationships and traditions of parents and their children remain constant, transitions experienced by both generations such as aging can lead to shifts in the dynamics of this relationship (Jerome, 1994). This means that the relationship might change in dynamics (e.g. less conflicts) but the significance and in this case how 'good' the relationship is perceived does not have to change much.

The first sub question in this thesis was *'Does gender make a difference in the change in the parent-child relationship moving from adolescence to young adulthood?'.* The results of this thesis found no evidence that the gender of either the parent or the child had an effect on the change in the parent-child relationship during the transition from adolescence to young adulthood. There was a significant difference in the positive aspects of the parent-child relationship depending on the parent's gender in the test of between-subjects effect. Indicating that mothers are more positive about the parent-child relationship compared to fathers, however, not within a relationship over time. No significant difference was found for the child's gender, however, a trend did show in the between subjects test. Indicating that there is a trend towards parents being more positive about the relationship with their daughter compared to their son.

This is not in line with the hypothesis *that the gender of both the parent as the child makes a difference in how the parent-child relationship changes during the transition from adolescence to young adulthood.* The main difference was expected in the number of conflicts. Mothers are expected to maintain more conflicts with their children compared to fathers, just as daughters are expected to maintain more conflicts with their parents compared to sons. It was also expected that mothers will maintain more contact with their children, just as daughters are expected to maintain more contact with

their parents. However, the concept of contact was not measured in the parent-child relationship scale in this study.

The results not being in line with the hypothesis could be explained by the fact that the hypothesis does expect changes in the relationship and mentioned what these changes are. However, it does not say whether the quality of the relationship improves or not. The hypothesis was focused on different aspects of the parent-child relationship (conflicts and contact) but not the relationship as a whole since there was no literature found on that. The literature did mention that daughters would tend to have a closer relationship with their parents compared to sons (Fang et al., 2021; Sneed et al., 2006). Also, mothers tend to have a closer relationship with their young adult children compared to fathers (Fang et al., 2021; Laursen & Collins, 2009). However, this does not mention any changes during the transition from adolescence to young adulthood and thus won't show in a study focussing on these changes. These differences in gender do show in the between subjects tests for the positive factor, where a significant result was found on the parents gender. Indicating that mothers are more positive about the parent-child relationship compared to fathers. And for the child's gender there was no significant difference found, however, a trend was found in the between subjects test. Indicating that there is a trend towards parents being more positive about the relationship with their daughter compared to their son.

The second sub question in this thesis was '*How does the child leaving the parental home contribute to this possible change in the parent-child relationship?'*. The results of this thesis found no significant effect of the living situation of the child on the change of the parent-child relationship during the transition from adolescence to young adulthood. Suggesting that for the parent-child relationship during the transition from adolescence to young adulthood it would not matter if a child lives in their parental home or not. However, despite not finding a significant result, a trend did show in the positive factor when the living situation was added as a moderator. Indicating that there is a trend towards parents being more positive about the relationship over time when the child is not living with the respondent compared to when they do live together.

The results are not in line with the hypothesis which expected *that the negative aspects of the parent-child relationship would decrease when the child leaves the parental home during the transition*

from adolescence to young adulthood while the positive aspects would increase. Resulting in a better parent-child relationship. Or with the life course perspective that says that life events, such as leaving home, are considered critical moments that can significantly alter the course of one's relationships (Johnson et al., 2011). The found trend however, is in line with the hypothesis but no significant result was found.

A possible explanation for the results not being in line with the hypothesis is that there were only two possible answers to this question: 1: living at home, 2: living independently. The codebook of the survey explained that by 'living independently' they meant that the child stays at the respondent's home for less than 4 days a week. This child could live independently or with an ex-partner of the respondent. Note that there is no separate answer option for when children do not live at the parental home but also not independently. This means that as long as the child does not live with the respondent for at least 4 days a week, every other option (e.g. child living independently, with a relative or with an ex-partner) is categorised under living independently. Therefore, questions could be asked about how well this question and its answer options fit the study. It answers the question of whether or not a child lives with the respondent at home. But it does not quite answer the question of whether a child still lives with his parents or not. Which could possibly alter the results of this thesis.

Another explanation could be that the hypothesis is based on the perception of the children, since there has been prior research done on how children perceive change in the parent-child relationship when leaving their parental home but no research was found on how parents perceived the relationship. According to Suitor et al. (2008) it is possible that parents perceive this change differently. For example, a study from 2006 showed that around 60% of the parents had the same perception as their children on the affection between them (Kowal et al., 2006). This means that there is 40% of the parents that have a different perception as their children. This could explain why the results of this study do not match the hypothesis which was based on children's perceptions.

Strengths and limitations

Strengths and limitations are critical aspects to consider in any research study. In this study the strengths and limitations include the following:

The first strength of this study is the data, the LISS panel has a very large reach of people. The LISS panel consists of 5000 households, including around 7500 individuals (Centerdata research institute, 2022). As a result, many people fill out the surveys, resulting in large samples. The inclusion of a large sample size enhances the reliability and generalizability of the findings. With a larger sample size, the estimates and measurements derived from the data tend to be more precise (Field, 2018). This is not a guarantee however, as it depends to what extent the sample is representative of the group under study. Unfortunately, because the sample for this study was quite specific (people with children within a certain age range), a lot of people were excluded. As a result, there were (only) 164 in the sample of this study.

Next to that, the LISS panel is based on a true probability sample of households selected from the population register by Statistics Netherlands, which means that it is not possible for individuals to register themselves (Centerdata research institute, 2022). This ensures that the panel is composed and representative. However, this says nothing about the representation of the participated sample because a select proportion of people may choose to participate. Nevertheless, it does increase the likelihood of a representative sample. In cases where households would not be able to participate due to lack of resources, they were provided with a computer and internet connection. This sets the LISS panel apart from other online panels where self-registration is common, potentially leading to underrepresentation of individuals without internet access.

Another strength of this data is that at all three different measurement times, the same questions were asked in the same order and in the same way. This is a strength because the order of the questions or the way a question is asked could influence the answers. Since this study looks at change over time, it is important that this change cannot be attributed to the question order or the way a question is asked.

Lastly, this study is very up-to-date. The questionnaire is completed by thousands of households every year, so data from each year has been available since 2008. The data used in this study are up until the end of 2022 (this study is conducted in 2023), which means that statements can be made about the current situation.

However, there are also some limitations to this study. First of all, the main limitation to this study is the number of respondents. Since the study population was quite specific, especially due to the

age range, a lot of people were excluded. This led to a valid N of 164 respondents. It might be possible that the statistical power (the probability that a test will correctly reject a false null hypothesis) was too small to detect a small difference (Field, 2018). This could possibly explain why this study found few significant results.

Secondly, there was only data available on the parent-child relationship between parents and their oldest child. No data was available on the parent-child relationship with any of the other children in a household. Other studies have found that the parent-child relationship can differ between the oldest child and the other children in a household (Walsh & Zadurian, 2022). This is often due to a variety of factors, including the parents' own experiences and expectations, the child's individual personality, and the dynamics within the family as a whole. According to Tucker et al. (2003) younger siblings tend to receive more parental affection compared to their older siblings. On the contrary, middle children seem to be less likely to be favoured compared to their older and younger siblings across various aspects (Hertwig et al., 2002). Therefore, the results do not say anything about the parent-child relationship during the transition from adolescence to young adulthood between parents and any of the children in the household other than the oldest child.

Next to that, since it is a longitudinal study, there could potentially be disruptive events that happened during the time of the study, in this case between 2015 and 2022. For example, participants might experience unexpected events, such as personal trauma, economic changes, job loss or other life events that were not measured in this study. Such life events can cause a lot of stress and affect various relationships including the parent-child relationship (Kim, 2021). This could potentially confound the results of the study because changes in the parent-child relationship that are found in this study are linked to the transition from adolescence to young adulthood without knowing that a life event caused the changes.

The Covid-19 pandemic is an example of a disruptive event that occurred during the timeframe of this study (2015-2022) and could have influenced the parent-child relationship during the transition from adolescence to young adulthood. The pandemic has increased stress levels in many parents due to factors such as job loss or because both the parents and children were constantly at home since schools and businesses were closed (Thomson et al., 2023). The increased stress possibly had its effect on the

parent-child relationship. The pandemic has also led to changes in parent-child interactions (Janssen et al., 2020). Most families were forced to spend more time together with fewer distractions or extracurricular activities. While this could be positive, this was not always the case, especially for adolescents striving for independence. These findings suggest that the Covid-19 pandemic could have affected the parent-child relationship during the transition from adolescence to young adulthood, potentially confounding the results of this study.

Also, the use of a parent-child relationship scale that has not been validated is a limitation of the study. Despite the parent-child relationship scale being a pre-existing scale, it has not been validated. A validated scale means that the validity and reliability have been studied: the instrument actually measures what it is supposed to measure, even when used in different situations by different people (Tsang et al., 2017). A validated scale gives a little more assurance about the reliability and validity of the data collected in this particular construct. However, the reliability of the scale in this study was tested with a reliability analysis. Since the reliability analysis showed a Crohnbach's alpha above .70 in every year for both the positive as the negative factor (see Table 6 and 7 in the results section), it can be assumed that the factors in this study were reliable (Field, 2018).

Recommendations for further research

Recommendations for further research are to study whether the findings of this studies also apply to the other children in the household. This study had it's focus only on the oldest child in the household and no data was available on for example the second child or the youngest child in a household. However, the parent-child relationship can differ between the oldest child and the other children (Walsh & Zadurian, 2022). This is often due to a variety of factors, including the parents' own experiences and expectations, the child's individual personality, and the dynamics within the family as a whole. As the dynamics can differ between parents and siblings it can be important to consider all children in a household when studying parent-child relationships instead of just the oldest child. For instance, the parents' own experiences and expectations can shape how they interact with each child (Krejčová et al., 2023). A first-born child might be subject to higher expectations or stricter rules as parents navigate parenthood for the first time. On the other hand, parents might interact differently with

younger siblings due to lessons learned from raising the oldest child. According to Tucker et al. (2003) younger siblings tend to receive more parental affection compared to their older siblings. On the contrary, middle children seem to be less likely to be favoured compared to their older and younger siblings across various aspects (Hertwig et al., 2002). Next to that, the overall family dynamics can also impact the parent-child relationship. Factors such as birth order, age gaps between siblings, and the presence of any sibling rivalry can all influence how parents relate to each child (Portner & Riggs, 2016). By focusing only on the oldest child, this study might miss these nuances. Therefore, it's recommended for future research to consider all children in a household to gain a more comprehensive understanding of parent-child relationships during the transition from adolescence to young adulthood.

As well as studying the parent-child relationship between parents and other children in the household, further research could look into how the changes in the parent-child relationship affect the rest of the family. According to the life course perspective, individuals are interconnected within families (Elder & Johnson, 2002; Johnson et al., 2011). Changes in the parent-child relationship could for example impact the relationship between the parents. This study only focussed on the parent-child relationship between parents and their oldest child but all other family relationship were not included in this study. Studying the effect that the changes in the parent-child relationship has on other family relationships could give some more insight into family dynamics.

Another recommendation for further research is to look at the impact of different life events and that take place during the transition from adolescence to young adulthood on the parent-child relationship. The current study focused on age and included moving out of the parental home as a life event. However, there are many more life events that can happen during the transition from adolescence to young adulthood that could potentially affect the parent-child relationship. For example, cohabitation can affect the quality of family relationships (Baranowska-Rataj, 2013). Future studies could look into how the parent-child relationship changes during the transition from adolescence to young adulthood when the child starts cohabitating during the transition. Other life events that could be looked into are; graduation, first job, possibly childbirth.

A third recommendation for further research is to further dive into the trends that are found in this thesis. When the p-value is greater than 0.05 (not significant), but less than 0.10, it could be

suggested that there is a so-called 'trend' in the data. This means that the evidence is not strong enough to say that the result is statistically significant but there may be an interesting trend or pattern going on. This thesis found a trend in of the interaction effect positive*totalliving (p = .072). This indicates that there is a trend towards parents being more positive about the relationship over time when the child is not living with the respondent compared to when they do live together. Another trend was found in the test of between-subjects effect of the childs gender. This trend would suggest that that parents are more positive about the parent-child relationship with daughters compared to sons (p = .054). Further research could look into this trend and gain more insight into these trends or patterns.

Further research could also look at the direction of leaving the parental home as a moderator. This study focused on the effect of leaving the parental home on the changes in the parent-child relationship, however, it is also possible that leaving home is influenced by the parent-child relationship. For example, children who experience a weaker parent-child relationship are more likely to leave home compared to children who experience a good parent-child relationship (Härkönen et al., 2017). This is because children with a good parent-child relationship often experience stronger feelings of safety and emotional stability which makes them want to stay at their parental home longer (Shao & Kang, 2022). While children who experience a weaker parent-child relationship often feel less attached to their home setting and experience more conflicts. This might encourage them to desire independence and leave their parental home at a younger age. Future research could gain more insight in the direction of this moderator and what aspects are connected to it.

A final recommendation for future research is to perform a three-way interaction with the time effect, the parent's gender and the child's gender. In this study the gender of the parent and the child are added separately to see how they affect the changes in the parent-child relationship during the transition from adolescence to young adulthood. However, there could be differences between the father-son relationship and the fathers-daughter relationship as well as between the mother-daughter relationship and the mother-son relationship. There is some research that says for examples that fathers are more inclined to be involved with their sons compared to their daughters (Zhang & Grant, 2023). This study did not perform this three-way interaction because the expectation was that there was not enough statistical power to do so.

Conclusion

In the parents' perception the parent-child gets better (becomes less negative) when the children go from adolescence to young adulthood.

This study shows that there is in fact a change in the parent-child relationship between parents and their oldest child during the transition from adolescence to young adulthood. However, this change in the relationship only occurs in the negative aspects of the parent-child relationship (conflicting feelings, irritation, anger, unstable relationship and embarrassment). The parent child relationship was found to become less negative over the 7-year time period of this study. In other words, the parent-child relationship becomes less negative from adolescence (15-18 years old) to young adulthood (22-25 years old). And even from late adolescence (18-21 years old) to young adulthood (22-25) a decrease was found in the negative aspects of the parent-child relationship. The study shows no difference in the positive aspects of the parent-child relationship (being fond, having a close relationship and feeling closely connected) during the transition from adolescence to young adulthood.

No evidence was found in this study that the gender of either the parent or the child had an effect on the change in the parent-child relationship during the transition from adolescence to young adulthood. Differences were found in the positive aspects of the parent-child relationship depending on the parent's gender between subjects. Indicating that mothers are more positive about the parent-child relationship compared to fathers. However, this says something about the differences in the relationship between mothers and fathers but not about the differences in the changes in the relationship over time. Also, a trend was found between subject for the child's gender, indicating that there is a trend towards parents being more positive about the relationship with their daughter compared to their son. But this again says nothing about the differences in the changes over time.

This study also did not find any results that showed that whether the child lives at the parental home or not does affect the changes in the parent-child relationship during the transition from adolescence to young adulthood. However, a trend was detected that indicated that there is a trend towards parents being more positive about the relationship over time when the child is not living with the respondent compared to when they do live together.

The expected confounders; the kind of parent, the number of children in a household and the parents age had no effect on the changes in the parent-child relationship during the transition from adolescence to young adulthood.

References

Abdi, H. (2010). The greenhouse-geisser correction. *Encyclopedia of research design*, *1*(1), 544-548.

Antonucci, T. C., Birditt, K. S., & Ajrouch, K. (2011). Convoys of social relations: Past, present, and future. *Handbook of life span development*, *2*(1), 161-182.

Arnett, J.J. (2015). Socialization in emerging adulthood: From the family to the wider world, from socialization to self-socialization.

Akin, R., Breeman, L. D., Meeus, W., & Branje, S. (2020). Parent-adolescent relationship quality as a predictor of leaving home. *Journal of Adolescence*, 79(1), 81–90. https://doi.org/10.1016/j.adolescence.2019.12.017

Aquilino, W. S. (1997). From Adolescent to Young Adult: A Prospective Study of Parent-Child Relations during the Transition to Adulthood. *Journal of Marriage and Family*, *59*(3), 670. https://doi.org/10.2307/353953

Aquilino, W. S. (2006). Family relationships and support systems in emerging adulthood.

Baranowska-Rataj, A. (2013). What would your parents say? The impact of cohabitation among young people on their relationships with their parents. *Journal of Happiness Studies*, *15*(6), 1313–1332. https://doi.org/10.1007/s10902-013-9477-0

Barrett, P., Hale, B., Butler, M. (2014). Caring for Older People. In: Family Care and Social Capital: Transitions in Informal Care. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-6872-7_7

Bartnikowska, U., & Ćwirynkało, K. (2020). The resources of adults taking care of their elderly parents at home–a research report. *Interdisciplinary Context of Special Pedagogy*, *29*(1), 7-23.

Bertogg, A., & Szydlik, M. (2016). The Closeness of Young Adults' Relationships with Their Parents. Swiss Journal of Sociology, 42(1), 40–60. doi:10.1515/sjs-2016-0003

Birditt, K. S., & Fingerman, K. L. (2012). Parent-child and intergenerational relationships in adulthood. In M. A. Fine & F. D. Fincham (Eds.), Handbook of family theories (pp. 71–86). Routledge.

Braeken, J., & Van Assen, M. A. (2017). An empirical Kaiser criterion. *Psychological methods*, *22*(3), 450.

Bucx, A. (2009). *Linked lives: Young adults' life course and relations with parents.* https://dspace.library.uu.nl/handle/1874/36223

Castrén, A.-M., Česnuitytė, V., Crespi, I., Gauthier, J.-A., Gouveia, R., Martin, C., Suwada, K. (Eds.). (2021). *The Palgrave Handbook of Family Sociology in Europe*. doi:10.1007/978-3-030-73306-3

Centerdata research institute. (2022). LISS panel. Centerdata.nl. https://www.centerdata.nl/en/liss-panel

Centerdata research institute. (2023). *Data Archive*. Centerdata.nl. Retrieved on May 6 2023, from https://www.dataarchive.lissdata.nl/study_units/view/1382

Chow, C. M., Roelse, H., Buhrmester, D., & Underwood, M. K. (2012). Transformations in friend relationships across the transition into adulthood. In B. Laursen & W. A. Collins (Eds.), *Relationship pathways: From adolescence to adulthood* (pp. 91–111). Los Angeles, CA: Sage.

Connidis, I. (2010).Familyties and aging. (2nd Ed.). Los Angeles, CA: Pine Forge Press.

Dalgaard, N. T., Filges, T., Viinholt, B. C. A., & Pontoppidan, M. (2022). Parenting interventions to support parent/child attachment and psychosocial adjustment in foster and adoptive parents and children: A systematic review. *Campbell Systematic Reviews*, 18(1). https://doi.org/10.1002/cl2.1209

De Goede, I. H. A., Branje, S. J. T., & Meeus, W. H. J. (2009). Developmental changes in adolescents' perceptions of relationships with their parents. *Journal of Youth and Adolescence,* 38,75-88.

De Jong-Gierveld, J., & Dykstra, P. A. (2008). Virtue is its own regard? Support-giving in the family and loneliness in middle and old age. *Ageing & Society*, 28, 217 – 287

Dusetzina, S. B., Brookhart, M. A., & Maciejewski, M. L. (2015). *Control Outcomes and Exposures for Improving Internal Validity of Nonrandomized Studies. Health Services Research, 50(5)*, 1432–1451. doi:10.1111/1475-6773.12279

Elder, G. A. (1984). Families, kin, and the life course: a sociological perspective. In R. Park, (Ed.), Advances in child development research: The family (pp. 80- 136). Chicago: University of Chicago Press

Elder, G. H., Jr., & Johnson, M. K. (2002). The life course and aging: Challenges, lessons, and

new directions. In R. A. Settersten (Ed.), Invitation to the life course: *Toward new understandings of later life,* Part II (pp. 49 – 81). Amityville, NY: Baywood.

Estefanía, M. M., Campos, G., Bravo, A. E. R., & Resino, D. A. (2020). Young People's Autonomy and Psychological Well-Being In the Transition to Adulthood: A Pathway analysis. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.01946

Fang, S., Galambos, N. L., & Johnson, M. D. (2021). *Parent–Child Contact, Closeness, and Conflict Across the Transition to Adulthood. Journal of Marriage and Family, 83(4), 1176– 1193.* doi:10.1111/jomf.12760

Field, A. (2018). *BUNDLE: Field: Discovering Statistics using IBM SPSS Statistics 5e + SPSS 24* (Fifth ed.). SAGE Publications, Inc.

Fingerman, K. L. (2017). Millennials and their Parents: Implications of the new Young Adulthood for Midlife Adults. *Innovation in Aging*, *1*(3). https://doi.org/10.1093/geroni/igx026

Fingerman, K., Miller, L., Birditt, K., & Zarit, S. (2009). Giving to the good and the needy: Parental support of grown children. *Journal of Marriage and Family*, 71(5), 1220-1233.

Fingerman, K. L., & Yahirun, J. J. (2015). Emerging adulthood in the context of family. In J. J. Arnett (Ed.), *Oxford handbook of emerging adulthood* (pp. 163–176). Oxford University Press.

Fokkema, T. De Ruijter, E. Maas, J. (2004). Contacten tussen ouders en hun volwassen, uitwonende kinderen. *Bevolking en gezin*, *32*(3), 25-54.

Furman, W., & Winkles, J. K. (2012). Transformation in heterosexual romantic relationships across the transition into adulthood: "Meet me at the bleachers … I mean the bar." In B. Laursen & W. A. Collins (Eds.), *Relationship pathways: From adolescence to young adulthood* (pp. 191– 214). Thousand Oaks, CA: Sage.

Furstenberg Jr, F. F. (2010). On a new schedule: Transitions to adulthood and family change. *The future of children*, 67-87.

Galambos, N. L., & Kotylak, L. A. (2011). Transformations in parent-child relations from adolescence to adulthood. In B. Laursen & W. A. Collins (Eds.), Relationship pathways from adolescence to young adulthood (pp. 23–42). Sage.

Härkönen, J., Bernardi, F., & Boertien, D. (2017). Family Dynamics and Child Outcomes: An overview of research and open questions. *European Journal of Population*, *33*(2), 163–184. https://doi.org/10.1007/s10680-017-9424-6

Haslanger, S. (2009). Family, ancestry and self: What is the moral significance of biological ties?. *Adoption & Culture*, *2*(1), 91-122.

Hertwig, R., Davis, J.N., & Sulloway, F.J. (2002). Parental investment: How an equity motive can produce inequality. Psychological Bulletin, 128, 728-745

Janssen, L., Kullberg, M. J., Verkuil, B., Van Zwieten, N., Wever, M. C. M., Van Houtum, L. A., Wentholt, W. G. M., & Elzinga, B. M. (2020). Does the COVID-19 pandemic impact parents' and adolescents' well-being? An EMA-study on Daily Affect and Parenting. *PLOS ONE*, *15*(10), e0240962. https://doi.org/10.1371/journal.pone.0240962

Jerrome, D. (1994). Time, change and continuity in family life. *Ageing & Society*, *14*(1), 1–27. https://doi.org/10.1017/s0144686x00000039

Johnson, M. K., Crosnoe, R., & Elder Jr, G. H. (2011). Insights on adolescence from a life course perspective. *Journal of Research on Adolescence*, *21*(1), 273-280.

Kim, S. (2021). Cross-Sectional and longitudinal studies. In *Springer eBooks*. https://doi.org/10.1007/978-3-030-22009-9_576

Kowal, A.K., Krull, J.L., & Kramer, L. (2006). Shared understanding of parental differential treatment in families. Social Development, 15, 277-295.

Krejčová, K., Chýlová, H., & Rymešová, P. (2023). Analysis of siblings' relationship and parenting style using structure modelling approach. *PLOS ONE*, *18*(2), e0281266. https://doi.org/10.1371/journal.pone.0281266

Lam, J. (2019). Intergenerational family dynamics and relationships. In *Springer eBooks*. https://doi.org/10.1007/978-3-319-69892-2_896-1

Laursen, B., & Collins, W. A. (2009). Parent-child relationships during adolescence. In R. M. Lerner & L. Steinberg (Eds.), Handbook of adolescent psychology (Vol. 2, 3rd ed., pp. 3–42). Wiley.

Lefkowitz, E. (2005). Things have gotten better: Developmental changes among emerging adults after the transition to university. *Journal of Adolescent Research, 20*, 40 – 63.

Leidy, M., Schofield, T., & Parke, R. (2009). Parent-child relationships.

Leopold, T. (2012). The Legacy of Leaving Home: Long-Term Effects of Coresidence on Parent - child Relationships. *Journal of Marriage and Family*, *74*(3), 399–412. https://doi.org/10.1111/j.1741-3737.2012.00964.x

Lindell, A. K., & Campione-Barr, N. (2017). Continuity and change in the family system across the transition from adolescence to emerging adulthood. *Marriage and Family Review, 53(4),* 388–416. https://doi.org/10.1080/01494929.2016.1184212

Longmore, M. A., Manning, W. D., & Giordano, P. C. (2013). Parent-child relationships in adolescence. *Handbook of family theories*: A content-based approach, 28-50.

Mihalec-Adkins, B. P. (2020). Parent-child relationships. *Encyclopedia of Personality and Individual Differences*, 3433-3435.

Mulder, C. H. (2009). Leaving the parental home in young adulthood. *Handbook of youth and young adulthood: New perspectives and agendas,* 203-210.

Nelson, S. C., Bahrassa, N. F., Syed, M., & Lee, R. M. (2015). Transitions in young adulthood: Exploring trajectories of parent-child conflict during college. Journal of Counseling Psychology, 62, 545–551. https://doi.org/10.1037/cou0000078

O'Connor, T. G., Allen, J. P., Bell, K. L., & Hauser, S. T. (1996). Adolescent-parent relationships and leaving home in young adulthood. *New Directions for Child and Adolescent Development*, *1996*(71), 39-52.

Padilla-Walker, L. M., Nelson, L. J., & Carroll, J. S. (2012). Affording emerging adulthood: Parental financial assistance of their college-aged children. *Journal of Adult Development, 19*, 50–58. doi:10.1007/s10804-011-9134-y

Pallant, J. (2016). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (Rev. ed.). Berkshire, UK: Open University Press.

Parra, A., Oliva, A., & Reina, M. (2013). Family relationships from adolescence to emerging adulthood: A longitudinal study. *Journal of Family Issues*, 36, 2002–2020. https://doi.org/10. 1177/0192513X13507570

Portner, L. C., & Riggs, S. A. (2016). Sibling relationships in Emerging Adulthood: Associations with Parent–Child relationship. *Journal of Child and Family Studies*, *25*(6), 1755–1764. https://doi.org/10.1007/s10826-015-0358-5

Punch, S., & Vanderbeck, R. M. (2017). Families, Intergenerationality, and Peer group Relations: Introduction. In *Springer eBooks* (pp. 1–25). https://doi.org/10.1007/978-981-4585-92-7_15-1

Putney, N. M., & Bengtson, V. L. (2003). Intergenerational relations in changing times. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 149 – 164). New York: Kluwer/Plenum.

Reczek, C., & Zhang, Z. (2016). Parent–child relationships and parent psychological distress: How do social support, strain, dissatisfaction, and equity matter?. *Research on aging*, *38*(7), 742-766.

Roy, K. M., & A. Settersten Jr, R. (2022). The Family Life Course Framework: Perspectives on Interdependent Lives and Inequality. In *Sourcebook of Family Theories and Methodologies: A Dynamic Approach* (pp. 287-307). Cham: Springer International Publishing.

Scheinfeld, E., & Worley, T. (2018). Understanding the parent-child relationship during the transition into college and emerging adulthood using the relational turbulence theory. *Communication Quarterly*, *66*(4), 444-462.

Settersten Jr, R. A., & Ray, B. (2010). What's going on with young people today? The long and twisting path to adulthood. *The future of children*, 19-41.

Setterston, R. A., Jr. (2007). Passages to adulthood: Linking demographic change and human development. *European Journal of Population*, 23, 251 – 272

Shao, Y., & Kang, S. (2022). The link between Parent–Child relationship and learning engagement among adolescents: the chain mediating roles of learning motivation and academic Self-Efficacy. *Frontiers in Education*, *7*. https://doi.org/10.3389/feduc.2022.854549

Silverstein, M., Gans, D., & Yang, F. M. (2006). Intergenerational support to aging parents: The role of norms and needs. *Journal of family Issues*, *27*(8), 1068-1084.

Smokowski, P.R., Bacallao, M.L., Cotter, K.L. & Caroline B. R. Evans (2015). The Effects of Positive and Negative Parenting Practices on Adolescent Mental Health Outcomes in a Multicultural

Sample of Rural Youth. *Child Psychiatry Hum Dev* 46, 333–345. https://doi.org/10.1007/s10578-014-0474-2

Sneed, J. R., Johnson, J. G., Cohen, P., Gilligan, C., Chen, H., Crawford, T. N., & Kasen, S. (2006). Gender differences in the age-changing relationship between instrumentality and family contact in emerging adulthood. *Developmental Psychology*, 42, 787–797. https://doi.org/10.1037/0012- 1649.42.5.787

Steele, E. H., & McKinney, C. (2018). *Emerging adult psychological problems and parenting style: Moderation by parent-child relationship quality. Personality and Individual Differences.* doi:10.1016/j.paid.2018.04.048

Suitor, J. J., Sechrist, J., Plikuhn, M., Pardo, S. T., & Pillemer, K. (2008). Within-Family Differences in Parent–Child Relations across the life course. *Current Directions in Psychological Science*, *17*(5), 334–338. https://doi.org/10.1111/j.1467-8721.2008.00601.x

Tanner, J. L. (2006). Recentering during emerging adulthood: A critical turning point in life span human development. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 21–55). Washington, DC: American Psychological Association

Thomas, P. A., Liu, H., & Umberson, D. (2017). Family relationships and well-being. *Innovation in aging*, *1*(3). https://doi.org/10.1093/geroni/igx025

Thomson, K., Jenkins, E., Gill, R., Hastings, K., Richardson, C. G., Petteni, M. G., McAuliffe, C., & Gadermann, A. M. (2023). Parent psychological distress and parent-child relationships two years into the COVID-19 pandemic: results from a Canadian cross-sectional study. *PLOS ONE*, *18*(10), e0292670. https://doi.org/10.1371/journal.pone.0292670

Thornton, A., Orbuch, T., & Axinn, W. (1995). Parent – child relationships during the transition to adulthood. *Journal of Family Issues, 16*, 538 – 564. doi:10.1177/019251395016005003

Tosi, M. (2017). Leaving-home transition and later parent–child relationships: Proximity and contact in Italy. *European Societies*, *19*(1), 69-90.

Tsai, K. M., Telzer, E. H., & Fuligni, A. J. (2013). Continuity and discontinuity in perceptions of family relationships from adolescence to young adulthood. *Child Development, 84(2),* 471–484. https://doi.org/10.1111/j.1467-8624.2012.01858.x

Tsang, S., Royse, C., & Terkawi, A. S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia, 11(5),* 80. https://doi.org/10.4103/sja.sja_203_17

Tucker, C.J., McHale, S.M., & Crouter, A.C. (2003). Dimensions of mothers' and fathers' differential treatment of siblings: Links with adolescents' sex-typed personal qualities. Family Relations, 52, 82-89.

Walsh, G., & Zadurian, N. (2022). Exploring the links between parental attachment style, child temperament and Parent-Child relationship quality during adolescence. *Journal of Child and Family Studies*, *32*(9), 2721–2736. https://doi.org/10.1007/s10826-022-02447-2

Wang, C. (2020). Parent-Child Relationship Among College Students. *International Conference on Educational Training and Educational Phenomena*

Whiteman, S. D., McHale, S. M., & Crouter, A. C. (2011). Family relationships from adolescence to early adulthood: Changes in the family system following firstborns' leaving home. *Journal of Research on Adolescence*, *21*(2), 461–474. https://doi.org/10.1111/j.1532-7795.2010.00683.x

Zhang, X., & Grant, A. (2023). Parent–Child Relationships From Adolescence to Adulthood: An examination of children's and parent's reports of intergenerational solidarity by race, ethnicity, gender, and socioeconomic status from 1994–2018 in the United States. *Social sciences, 12(5),* 266. https://doi.org/10.3390/socsci12050266

Appendix I: Variables from the dataset 'family and household' wave 8

nomem_encr2 - Number of the household member encrypted

cf15h003 - Gender respondent

- Answer type: buttons

- Categories: 1. Male, 2. Female

cf15h004 Age respondent

- 2015 - year of birth

cf15h454 Did you ever have any children?

- Did you ever have any children?

  With this we mean **biological** children (gotten with your partner or someone else) as well

  as **step**children, **adoptive** children and **foster** children.

  Please do not include any **deceased** children. We ask about this later.

- Answer type: Radio buttons

- Categories: 1. Yes, 2. no

cf15h455 – total number of children

- How many living children do you have in total?

- Can you indicate how many biological children (both living at home and living

  independently) and living-at-home stepchildren, adoptive children and/or foster children you

  have? Also include living-at-home children of your partner, regardless of whether or not you

  are married to this partner. By 'living independently' we mean that this child stays at your

  home for less than 4 days a week. This child can live independently or with an ex-partner.

  Please do not include the child(ren) that is/are deceased.

- Answer type: Integer

- min: 0

- Max: 15

cf15h456 - Birth year first child

- In the table below, please enter the birth years of all these children.

    Include here the birth years of your own children (living at home as well as living independently), of stepchildren living at home, adoptive children and/or foster children

- Answer type: Integer

- Min: 1900

cf15h068 - Gender: first child

- What is the gender of your children?

- Answer type: radio buttons

- Categories: 1. Boy, 2. Girl

cf15h083 - Living at home or living independently: first child

- Do your children live at home or do they live independently?

    By '**living independently**' we mean that this child stays at your home for less than 4 days a week. This child can live independently or with an ex-partner.

- Answer type: radio buttons

- Categories: 1. Living at home, 2. Living independently

cf15h098 - Kind of parent: first child

- For each child, please indicate below whether you are the biological parent, the step parent, the adoptive parent or foster parent.

    If you are living together with your partner's children, select the option 'step parent'.

- Answer type: radio buttons

- Categories: 1. Biological parent, 2. Step parent, 3. Adoptive parent, 4. Foster parent

cf15h513 - cf15h521

The following statements are about how you feel towards your (oldest) [son/daughter], born in [YEAR OF BIRTH OLDEST CHILD]. Please indicate to what extent every statement applies to you.

Cf15h513 - I am very fond of my son/daughter

Cf15h514 - my son/daughter and I have a close relationship

Cf15h515 - I have conflicting feelings about my son/daughter

Cf15h516 - my son/daughter's behaviour irritates me

Cf15h517 - I feel closely connected to my son/daughter

Cf15h518 - I sometimes feel guilty towards my son/daughter

Cf15h519 - quite often I am angry with my son/daughter

Cf15h520 - the relationship with my son/daughter is quite unstable, sometimes it is very positive, sometimes very negative

Cf15h521 - I sometimes feel embarrassed because of what my son/daughter says or does

- Answer type: radio buttons

- Categories: 1. Not applicable 2, 3, 4, 5, 6, 7. Totally applicable

Appendix 2: Variables from the dataset 'family and household' wave 11

nomem_encr2 - Number of the household member encrypted

cf18k003 - Gender respondent

- Answer type: buttons

- Categories: 1. Male, 2. Female

cf18k004 Age respondent

- 2018 - year of birth

cf18k454 Did you ever have any children?

- Did you ever have any children?

  With this we mean **biological** children (gotten with your partner or someone else) as well

  as **step**children, **adoptive** children and **foster** children.

  Please do not include any **deceased** children. We ask about this later.

- Answer type: Radio buttons

- Categories: 1. Yes, 2. no

cf18k455 – total number of children

- How many living children do you have in total?

- Can you indicate how many biological children (both living at home and living

  independently) and living-at-home stepchildren, adoptive children and/or foster children you

  have? Also include living-at-home children of your partner, regardless of whether or not you

  are married to this partner. By 'living independently' we mean that this child stays at your

  home for less than 4 days a week. This child can live independently or with an ex-partner.

  Please do not include the child(ren) that is/are deceased.

- Answer type: Integer

- min: 0

- Max: 15

cf18k456 - Birth year first child

- In the table below, please enter the birth years of all these children.

  Include here the birth years of your own children (living at home as well as living

  independently), of stepchildren living at home, adoptive children and/or foster children

- Answer type: Integer

- Min: 1900

cf18k068 - Gender: first child

- What is the gender of your children?

- Answer type: radio buttons

- Categories: 1. Boy, 2. Girl

cf18k083 - Living at home or living independently: first child

- Do your children live at home or do they live independently?

  By '**living independently**' we mean that this child stays at your home for less than 4 days a

  week. This child can live independently or with an ex-partner.

- Answer type: radio buttons

- Categories: 1. Living at home, 2. Living independently

cf18k098 - Kind of parent: first child

- For each child, please indicate below whether you are the biological parent, the step parent,

  the adoptive parent or foster parent.

  If you are living together with your partner's children, select the option 'step parent'.

- Answer type: radio buttons

- Categories: 1. Biological parent, 2. Step parent, 3. Adoptive parent, 4. Foster parent

cf18k513 - cf18k521

The following statements are about how you feel towards your (oldest) [son/daughter], born in [YEAR

OF BIRTH OLDEST CHILD]. Please indicate to what extent every statement applies to you.

Cf18k513 - I am very fond of my son/daughter

Cf18k514 - my son/daughter and I have a close relationship

Cf18k515 - I have conflicting feelings about my son/daughter

Cf18k516 - my son/daughter's behaviour irritates me

Cf18k517 - I feel closely connected to my son/daughter

Cf18k518 - I sometimes feel guilty towards my son/daughter

Cf18k519 - quite often I am angry with my son/daughter

Cf18k520 - the relationship with my son/daughter is quite unstable, sometimes it is very positive, sometimes very negative

Cf18k521 - I sometimes feel embarrassed because of what my son/daughter says or does

- Answer type: radio buttons

- Categories: 1. Not applicable 2, 3, 4, 5, 6, 7. Totally applicable

Appendix 3: Variables from the dataset 'family and household' wave 15

nomem_encr - Number of household member encrypted

cf22o536 - Gender respondent

- Answer type: buttons

- Categories: 1. Male, 2. Female, 3. Other

cf22o004 – Age respondent

- 2022-Birth year

cf22o454 - Did you ever have any children?

- Did you ever have any children?

  With this we mean **biological** children (gotten with your partner or someone else) as well

  as **step**children, **adoptive** children and **foster** children.

  Please do not include any **deceased** children. We ask about this later.

- Answer type: Radio buttons

- Categories: 1. Yes, 2. No

cf22o455 – total number of children

- How many living children do you have in total?

- Can you indicate how many biological children (both living at home and living independently)

  and living-at-home stepchildren, adoptive children and/or foster children you have? Also

  include living-at-home children of your partner, regardless of whether or not you are married to

  this partner. By 'living independently' we mean that this child stays at your home for less than

  4 days a week. This child can live independently or with an ex-partner. Please do not include

  the child(ren) that is/are deceased. You can report about these children on the next page.

- Answer type: Integer

- min: 0

- Max: 15

Cf22o098 - Kind of parent: first child

- For each child, please indicate below whether you are the biological parent, the step parent, the adoptive parent or foster parent.

  If you are living together with your partner's children, select the option 'step parent'.

- Answer type: radio buttons

- Categories: 1. Biological parent, 2. Step parent, 3. Adoptive parent, 4. Foster parent

Cf22o456 - Birth year first child

- In the table below, please enter the birth years of all these children.

  Include here the birth years of your own children (living at home as well as living independently), of stepchildren living at home, adoptive children and/or foster children

- Answer type: Integer

- Min: 1900

Cf22o538 - Gender: first child

- What is the gender of your children?

- Answer type: radio buttons

- Categories: 1. Boy, 2. Girl, 3. Other

Cf22o083 - Living at home or living independently: first child

- Do your children live at home or do they live independently?

  By '**living independently**' we mean that this child stays at your home for less than 4 days a week. This child can live independently or with an ex-partner.

- Answer type: radio buttons

- Categories: 1. Living at home, 2. Living independently

Cf22o513-Cf22o521

The following statements are about how you feel towards your (oldest) [son/daughter], born in [YEAR OF BIRTH OLDEST CHILD]. Please indicate to what extent every statement applies to you.

Cf22o513 - I am very fond of my son/daughter

Cf22o514 - my son/daughter and I have a close relationship

Cf22o515 - I have conflicting feelings about my son/daughter

Cf22o516 - my son/daughter's behaviour irritates me

Cf22o517 - I feel closely connected to my son/daughter

Cf22o518 - I sometimes feel guilty towards my son/daughter

Cf22o519 - quite often I am angry with my son/daughter

Cf22o520 - the relationship with my son/daughter is quite unstable, sometimes it is very positive, sometimes very negative

Cf22o521 - I sometimes feel embarrassed because of what my son/daughter says or does

- Answer type: radio buttons

- Categories: 1. Not applicable 2, 3, 4, 5, 6, 7. Totally applicable