The Influence of Grandparental Related Social Capital on Fertility Intentions

A study on the influence of grandparental related social capital on the intention to have another child and the effect of socioeconomic status on this relation.

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Abstract

There has been a strong decline of the fertility ratio in Western society, therefore, this research examines the influence of social capital, received from grandparents, on the intention to have another child in the Netherlands, both for individuals with one child and with two or more children. Based on the rational choice approach and the general theory of social capital the expectation was that more social capital would lead to a higher intention to have another child. Moreover, the difference in effects of instrumental, financial and potential help and the moderation effect of socioeconomic status on the relationship between social capital and fertility intention were examined. The NELLS data (N = 1914) are used to preform multiple linear regressions and ordinal logistic regressions. The results for individuals with one child show that social capital has a positive influence on the intention to have another child, and instrumental help has a stronger influence than financial help. Socioeconomic status did not have a moderation-effect. The results for respondents with two or more children show that there are no influences of social capital and socioeconomic status on the fertility intentions. Therefore, social capital has a stronger effect for individuals with one child compared to individuals with two or more children. These results show that it is important to consider the role of grandparents in debates about fertility rates in Western countries.

Key words. Social capital ● Fertility intention ● Grandparents ● Socioeconomic status

Introduction

In the last few decades there is a decline in fertility rates in Western countries (Thomese & Liefbroer, 2013). Women give birth to their first child at a higher age on average, so there is an increasing postponement of childbearing (Mills, Rindfuss, McDonald & Te Velde, 2011; Lesthaeghe, 2014). Also, there is a decline in the number of children women have (e.g., Lee & Choi, 2015; Kohler, Billari & Ortega, 2002). Previous research has found many reasons on micro-, meso- and macrolevel to explain the phenomenon of the decline of fertility (e.g., Balbo, Billari & Mills, 2013), such as the rise of effective contraception and gender equity (Mills et al., 2011). Also, the prominent theoretical approach 'New Home Economics' theory states that the opportunity costs of motherhood have increased due to rising female educational attainment and labour market participation (Becker, 1981). This causes a higher loss of income and more disadvantages of career breaks when women give birth to a child. Other research found ideological changes and economic uncertainty as explanations for the decline of fertility (e.g., Lesthaeghe, 2010; Macunovich, 1996; Örsal & Goldstein, 2010); there has been more emphasis

on individual autonomy in decision making and a higher desire for self-fulfilment, personal development and emancipation (Mills et al., 2011). Due to these ideological changes, people have smaller family size preferences (Goldstein, Lutz & Testa, 2003). Furthermore, economic uncertainty, in the form of unemployment and lower income, leads to the postponement of childbearing (Mills & Blossfeld, 2005; Oppenheimer, 1988) as parenthood requires a secure economic basis, which is absent when you live in economic uncertainty. However, one factor that has received much less attention is the social capital an individual has; this factor will be the focus of this research.

The decline of fertility has different consequences for society. One of these consequences is that the dependency ratio will deteriorate, which means that the productive part of the society will experience an increasing burden to maintain the economically dependent part of society, such as elderly and children. In combination with the ageing of society, this could have important implications for the welfare state. For example, when the relative size of the working-age population drops, the average healthcare and pension costs per working person will increase. In the Netherlands, where the fertility rate is below replacement level, 1.66 in 2015 (CBS, 2015), there is a debate about this process and how this should be resolved. One measure is the introduction of the so-called 'participation society', where everyone must take more responsibility for themselves and their relatives, to counteract the increasing welfare state costs. People become more dependent on the resources and help they can receive from others, such as their parents. However, it is the question in how far this network influences fertility intentions.

According to previous research, the resources that individuals (could) receive from others have an important positive effect on their fertility intentions if these resources are fertility related (for an overview, see Balbo et al., 2013). These fertility related resources are also referred to social capital. For example, previous research has found that Polish men and women have a higher intention to have a second child if they have more parents and friends involved in supportive exchange relations (Bühler and Fratczak, 2004). They also found that the effect of fertility-related social capital is even stronger on the intention to have a second child than on intentions to have a first child (Bühler and Fratczak, 2007). The same results are found for Hungary, Bulgaria, and Russia (Philipov, Speder & Billari, 2006; Philipov, 2002).

Most of these studies about the influence of social capital on fertility have focused on Central and East Europe. Also, many of them have included multiple relationships by defining the social capital of parents, such as grandparents, kin and friends. They did not specify on one of these types of relationship. One study that has focused on the Netherlands and one type of

relationships, namely grandparents, is a study by Thomese and Liefbroer (2013). It has investigated the influences of the involvement of grandparents in the care for young children and its effect on subsequent child births in dual-earner families (Thomese & Liefbroer, 2013). This research found a positive effect of social capital on fertility. However, there is no research that measures more aspects of social capital received from grandparents on fertility intentions of parents in the Netherlands, and that compares these different aspects in their effect. This research will close this gap. Moreover, it will be investigated if these effects are different for individuals who have one child currently, and individuals who have already two or more children. Besides, the effect of the socioeconomic status on the relationship between social capital and fertility intention will be considered. There has been much research about the influence of economic uncertainty on fertility intentions at macro level (for an overview, see Balbo et al., 2013), but not at individual level. Therefore, this study will examine this effect too.

Through focusing on one type of relationship for social capital, namely grandparents, and to investigate the influence of social capital and socioeconomic status on fertility intentions in a Western European country, our knowledge about factors that influence fertility will increase, which could be important for the debate about the 'participation society'. For example, if more social capital from grandparents leads to higher fertility intentions and the government wants to stimulate fertility because of the dependency ratio, policy could be made that grandparents could easier work part-time and in this way combine work and care for their grandchildren.

As mentioned, this research will focus on the social capital individuals receive from their parents, or in other words the grandparents of their child, and the effect of this social capital on their intention to have another child. The research question will be as follows: *'In how far does social capital received from grandparents influence the intentions to have another child in the Netherlands?'*. The focus will be on another child instead of intentions to have a first child, because the intention to have a first child generally differs from the intention to have another child (Billari, Philipov & Testa, 2009; Balbo & Mills, 2011). Most intentions to have a first child are caused by the wish to become a parent and by subjective norms, whereas intentions to have a second or third child are for example more affected by the previous life-course experience of parenthood and costs and benefits. Furthermore, it is possible now to involve the help parents receive with childcare. The social capital received from grandparents is divided into financial (e.g. receiving money), instrumental support (e.g. help in household and help with childcare) and potential support (e.g. how far away do grandparents live).

In the remainder of this research paper the theory and hypotheses about the influence of social capital on fertility intentions, and the relation with socioeconomic status and the number of children someone already has, will be discussed. Next, the precise relationships will be analysed based on the NELLS data (De Graaf, Kalmijn, Kraaykamp & Monden, 2010b). Subsequently, the results will be presented. This research paper will end with a conclusion and discussion in which there will be an answer to the research question and a reflection on this research.

Theoretical framework

In this research the focus will be on the intention to have another child. This means that the individual has mentioned that he or she would like to have another child within two years. However, having this intention does not mean that the individual actual will have another child within two years (Schoen, Astone, Kim & Nathanson, 1999). There is an important distinction between fertility intentions and fertility behaviour. Behaviour is also influenced by other internal and external factors, such as fecundity and the existence of an agreeable partner (Ajzen, 1985). So not all intentions to have another child are realised after two years and vice versa. Despite this distinction, fertility intentions are a strong predictive factor for fertility behaviour (Schoen et al., 1999). This becomes even stronger if it is a short time intention (Schoen et al., 1999; Philipov, 2009). It has also been shown that predictive factors of fertility intentions, are also predictors of fertility behaviour (Rindfuss, Morgan & Swicegood, 1988). Therefore, it is assumed that the intentions that are measured in this research are strong predictors of behaviour. Moreover, factors influencing fertility intentions, are also assumed to influence (indirectly) fertility behaviour (Ajzen 1991; Balbo & Mills, 2011).

The rational choice approach states that fertility intentions are a rational consideration between costs and benefits of giving birth to a child (Schmitt, 2008). Costs of having another child are among others direct costs (material and time costs) and opportunity costs, such as missed labour income and promotion. The benefits of giving birth to a child are less measurable. Psychological benefits are for example expanding a social network and getting gratification from watching a child growing up. There can also be social benefits, which could be derived from the compliance with social norms of having children. If the benefits of having a child are higher and the costs are lower, there is a greater likelihood that the individual intents to have a child.

The main aspect of the general theory of social capital is that this rational consideration of fertility intentions is influenced by someone's social network (Coleman, 1988; Bühler & Philipov, 2005; Philipov et al., 2006; Balbo & Mills, 2011). An individual acts in a web of informal relationships with relatives, friends and acquaintances. Within this social network, there is an exchange of resources. This means that people mutually provide different resources to each other; this could be goods, information, influence, active help, emotional support, money and power. This exchange of resources is reciprocal, which implies that someone obtains the right to receive resources like goods and services, if that individual also provides resources to others. Relationships like these are most often close and long-term, such as between family members. The exchange of resources most often takes place over a long period. If the resources someone get, or could get if needed, helps to achieve a certain goal, it is called social capital. The general theory of social capital states that if someone has more social capital, the costs of certain behaviour will lower. This makes it more likely that you will behave or have the intention to behave in a certain way.

Regarding fertility intentions, the expectation is therefore that if someone has more fertility related social capital, that person is more likely to have the intention to have another child. Help with care for children and financial support are examples of fertility related social capital, because they lower the direct costs of having children. In this research, only a part of someone's social network and potential social capital will be included. Specifically, the social capital that someone receives from his or her parents, and therefore grandparents of the children, and the chance that someone could receive social capital (e.g. how far away do grandparents live and are they still alive) will be investigated.

The partner of an individual is not included among the resource providers, and neither are his or her parents. Furthermore, the focus will be on the resources someone receives, so the resources someone gives to others will not be included. As mentioned, previous research has found that the exchange of resources most often takes places over a long period (Geurts, 2012) and therefore it is assumed that if an individual receives resources now, he or she will support others another time. For example, Geurts (2012) has found that grandparents look after their grandchildren to get support from their children if they become dependent on others later in life. These expectations lead to the first hypothesis.

H1. The greater the social capital received from grandparents is, the higher the probability to have the intention to have another child.

There are different types of resources, as mentioned earlier, but in this research the focus will be on two types that individuals possibly receive at the moment, namely financial and instrumental support. Financial support implies receiving or borrowing a certain amount of money during the last twelve months from the individual's parents (De Graaf, Kalmijn, Kraaykamp & Monden, 2010a). Instrumental support on the other hand, implies help from grandparents in the household and help with care for children (De Graaf et al., 2010a). The expectation is that receiving instrumental support will have a stronger effect on fertility intentions to have another child than financial support has in the Netherlands. Due to a high welfare in the Netherlands, the expectation is that most parents are in an economic position that they could afford another child without any financial support of others, or just a little support. On the other hand, the expectation is that instrumental support will be more important in the rational consideration about fertility intentions. An increasing number of women continue participating at the labour market after they gave birth to a child. This causes a higher need for childcare and previous research has found that people tends to prefer informal childcare instead of formal childcare (Portegijs, Cloïn, Ooms & Eggink, 2006). Therefore, instrumental support of grandparents in childcare will become more important. Moreover, it could possible increase the need for help in household to lower the feeling of a 'second shift' many working women are feeling now (Hochschild & Machung, 2012). While the number of women working in formal employment has increased, the division in responsibility for household and childcare between men and women remains unequal (McDonald, 2000). This has resulted in an 'second shift' or 'extra burden' in which women have a first shift at work, and another shift at home, causing a higher feeling of pressure and more working hours (including formal and informal work) for women compared to men. This causes higher costs for women if they give birth to yet another child, because the burden of their second shift will increase. So, if an individual could receive help and support like childcare and help in household, the costs of having another child will decrease. Therefore, the expectation is that individuals will attach more value to instrumental support compared to financial support in their decision to intent to have another child. This leads to hypothesis two.

H2. Instrumental support will have a stronger effect on intentions to have another child compared to financial support.

The general theory of social capital focuses on the rational consideration between costs and benefits of having another child (Coleman, 1988; Bühler & Philipov, 2005; Philipov et al.,

2006; Balbo & Mills, 2011). As stated before, the expectation is that the more social capital someone has, the higher the likelihood that someone intents to have another child. However, there is a possibility that this influence of social capital on fertility intentions is stronger for individuals with a low socioeconomic status, compared to those who have a higher socioeconomic status, because individuals with a low socioeconomic status have in general less resources of themselves. These individuals have in general a lower education and less income than those with a higher socioeconomic status. This causes a less stable and secure economic situation, whereas this is preferred when someone is having children (Bühler & Philipov, 2005). Social capital could reduce these costs of having children and stabilise the economic situation of a household (Bühler & Philipov, 2005). Because individuals with a lower socioeconomic status have a higher need to lower costs in order to intend having another child, it is expected that social capital is more important for them compared to those who have the required secure economic basis. Previous research has already found that in countries with high levels of economic uncertainty, the network support was crucial for fertility intentions (Bühler & Fratczak, 2007; Philipov et al., 2006; Philipov, 2002). To see if this is also true for individuals in economic uncertainty in the Netherlands, this research will test a third hypothesis.

H3. The effect of social capital received from grandparents on the probability to have the intention to have another child will be stronger for individuals with lower socioeconomic status compared to individuals with a higher socioeconomic status.

In the Western society, there is a strong two-child norm (Berinde, 1999; Andersson, Hank, Rønsen & Vikat, 2006; Sobotka & Beaujouan, 2014). This norm is about the strong preference for a family size of two children among (future) parents. People prefer having two children above three or more children (Berinde, 1999). Previous research has found that among women of reproductive age (15 to 49 years) in 37 countries a two-child family size has become the norm (Sobotka & Beaujouan, 2014). The two-child ideal has become nearly universal in all parts of Europe, namely 60% of the women in Europe consider two children as ideal. Even countries that first had a higher ideal family size have now converged towards the two-child norm. Many European countries now have a mean ideal family size around 1.95 to 2.15. This strong preference for two children is caused by different factors, such as an increasing family instability, secularization and a changing labour market position of women.

This strong preference for two children rises the expectation that there could be differences in effects of factors on the intention to have a second child and the intention to have

a third or subsequent child. In this research, it is expected that the effect of social capital will be stronger for individuals who have one child compared to those who have already two or more children. This is expected because if an individual already has two or more children, there may be some other reasons, like religiosity, to have the intention to have a third or subsequent child despite the strong two-child norm. To test this expectation, a fourth and last hypothesis is formulated.

H4. The effects of social capital received from grandparents on the probability to have the intention to have another child will be stronger for individuals with one child compared to individuals who have two or more children.

To investigate if social capital has different influences on the intention to have a second child compared to have a third or subsequent child, all other hypotheses will be tested separately for individuals with one child and individuals with two or more children.

Method

Data

This research draws on the data of the first wave of the Netherlands Longitudinal Life-Course Survey (NELLS) (De Graaf et al., 2010b). NELLS is a large-scale, longitudinal panel study (Tolsma, Kraaykamp, Graaf, Kalmijn & Monden, 2014). It contains a total of three waves spaced three years apart. The first two waves have already been conducted in 2009 and 2013. NELLS focuses on three main themes, namely inequality, social cohesion and norms and values among relatively young inhabitants of the Netherlands (15 to 45 years). Respondents are among others asked about family background, socio-demographic and socio-economic background, integration, attitudes and leisure time items (De Graaf et al., 2010a).

The data collection of the first wave has taken place between December 2008 and May 2010 and there was a two-stage stratified sampling applied. First, a quasi-random selection of 35 municipalities was conducted. The municipalities were stratified by three regions (North/East, South and West) and four degrees of urbanization (very strong, strong, moderate and marginal/not urbanized). However, it was not fully random because the four biggest cities in the Netherlands (Utrecht, Amsterdam, Rotterdam and The Hague) had to be included to reach a certain number of Turks and Moroccans in the sample. The second stage of sampling

contained a random selection from the population registry by local authorities. This was based on the country of birth of the respondent and his or her parents and the age of the respondent.

The questionnaire of the first wave had a mixed mode with both a face-to-face interview and a self-completion questionnaire. The sample consists of 5312 respondents between the age of 15 and 45, living in the Netherlands. There is an oversample of the two largest ethnic minorities in the Netherlands, namely Moroccans and Turks (2335 respondents with Turkish or Moroccan background are included in the sample, compared to 2977 native Dutch or with other migration background). The overall response rate was 52%, which is about average for face-to-face surveys in the Netherlands (De Graaf et al., 2010a).

The analytical sample consist of respondents who have at least one child and who have a valid value on each different item that is used in this analysis, which left a sample size of N = 1914. This sample consist of 494 individuals with one child and 1420 individuals with two or more children.

Measures

In this research, different variables are involved. The dependent variable is the intention to have another child, and the independent variable is social capital (consisting of instrumental help, financial help and potential help). There are two interaction variables of instrumental help and financial help with socioeconomic status. There is one stratification variable, namely the number of children the respondent already has. Furthermore, there will be some control variables. These are socioeconomic status, having a partner, age, gender, ethnicity, highest completed education and the number of grandparents that are still alive. Before all measures were executed, only respondents who had completed both the face-to-face interview and the self-completed questionnaire were selected (N = 4902).

Intention. The dependent variable is the intention to have another child. This is defined as the wish to have another child within two years. The intention is measured in the NELLS face-to-face interviews with the question 'Would you like to have another child within two years?'. The four possible responses were 'I would like that', 'I might want that', 'I do not want that' and 'I really do not want that'. Respondents who did not have a child at time of the interview were excluded in this research. There were no other missing values. A new variable is made. The scores for this variable are between '1' and '4'. The possible responses are reversed, so that a lower score implies no or less intention to have another child, and a higher score implies a stronger intention to have another child. The new variable is a categorical

variable on an ordinal level. However, this variable was entered as a continuous predictor in the analyses.

Social capital. Social capital is the independent variable and will be defined as the instrumental, financial and potential help the respondent receives from his or her parents. Social capital is measured through three separated variables, namely instrumental help, financial help and potential help.

Instrumental help. Instrumental help is defined as the help the respondent has received in household, with practical issues and with childcare during the last three months from the mother and father. In the NELLS interview, instrumental help is measured with two questions, namely 'Did you receive the following types of help from your mother during the past 3 months?' and 'Did you receive the following types of help from your father during the past 3 months?'. Both questions had to be answered for the following types of help 'Help in household, such as cleaning, grocery shopping, laundry, making dinner.', 'Help with practical issues, such as doing jobs around the house, filling in forms, move stuff.' and 'Help with childcare (if you have children).' The possible responses on these types of help were 'Yes', 'No' and 'Does not apply'. For every question, the responses of 'No' and 'Does not apply' are put together, because 'Does not apply' also indicates that the respondent does not receive this kind of help. The questions were not asked if the respondent still lived together with that parent (N = 1058 lived with mother, N = 898 lived with father). These respondents also have got value '0' on each item, which implied that they did not receive that type of help. The questions were also not asked if the parent was not alive anymore. Therefore, these respondents also have got value '0' for these questions. Other missing values are excluded. After controlling for coherence between the six items (Cronbach's Alpha = .798, which is sufficient with a norm of .7), the scores on the different items were added together to create one value for each respondent between '0' and '6'. Next, the variable was centred on the mean (1.149). The lowest score is -1.150, which implies that the respondent does not receive any type of help from his or her parents at all, and he highest score is 4.850, which implies that the respondent receives all types of help from bother the mother and the father. The variable is on discrete and interval level. However, this variable was entered as a continuous predictor in the analyses.

Financial help. The financial help is defined as received or borrowed money from someone's mother and/or father in the last 12 months. This is measured in the NELLS questionnaire with the question 'Have you received or borrowed €500,- or more from your mother or father during the last 12 months?'. The possible responses were 'Yes, multiple times', 'Yes, one time', 'No', 'Does not apply, parents are not alive anymore, no contact' and 'No

answer'. The responses 'Yes, multiple times' and 'Yes, one time' are taken together into one value. 'No' and 'Does not apply, parents are not in live anymore, no contact' are also taken together into one value, because 'Does not apply, parents are not in live anymore, no contact' also implies that the respondent has not received financial help. The possible response 'No answer' is excluded, because it is unclear if these respondents have received financial support or not. Other missing values are excluded. A new dummy variable is made, in which '0' implies that the respondent has not received financial help, and '1' that the respondent has received financial help.

Potential help. The potential help is defined as the chance that one or both parents of the respondent could help him or her. To measure the potential social capital of a respondent, it is measured how far away the respondent's parents live from the respondent and if the parents are still alive. In the NELLS interview it is measured how far away the parents live with the question 'How far away do your parents live?'. The possible responses were 'In the same neighbourhood or street', 'In the same town, but not in the same neighbourhood', 'In another town in the Netherlands (less than 20km away)', 'In another town in the Netherlands (more than 20km away)', 'In a foreign country' and 'I do not know'. However, if the parents did not live together or if one parent has died, the same question was asked separately for the mother and the father. To measure if the parents were still alive the following questions were asked in the survey 'Is your mother still alive? The question is about your own (biological) mother.' and 'Is your father still alive? The question is about your own (biological) father.'.

First, there was made an extra response category for the question how far the father lived away. If the father of the respondent was not alive anymore, the respondent was classified to this extra category. The same was done for the question about the mother. Second, a new variable was made which combined the questions about how far the father and the mother lived away. The respondents have got the value of the parent that lives nearest by. Thirdly, there was an extra category added to the question about how far away the parents lived (if the parents of the respondent lived together). If both parents were not alive anymore, the respondent was added to this extra category 'Parents are not alive anymore'. If a respondent had a missing value on the item where both parents lived together, the new variable was added. The possible response 'I do not know' was recoded to the same value as 'Parents are not alive anymore', because it is assumed that these respondents do not have contact with their parents and therefore do not have potential support from their parents. Other missing values are excluded.

In this way, respondents with parents that lived together, divorced parents, only one parent alive, with no parents alive and respondents who do not know where their parents live

had a score on the new variable. A value of '1' implies that both parents, the one parent that is still alive or the parent that lives nearest by lives in the same neighbourhood or street. Value '2' implies that that both parents, the one parent that is still alive or the parent that lives nearest by lives in the same town, but not in the same neighbourhood. Value 3 implies that both parents, the one parent that is still alive or the parent that lives nearest by lives in another town in the Netherlands less than 20km away. Value '4' implies that both parents, the one parent that is still alive or the parent that lives nearest by lives in another town in the Netherlands more than 20km away. Value '5' implies that both parents, the one parent that is still alive or the parent that lives nearest by lives in a foreign country. Value '6' implies that both parents have died or the respondent does not know where they live. It is a discrete variable on ordinal level. However, this variable was entered as a continuous predictor in the analyses.

Socioeconomic status. The socioeconomic status of the respondent is defined as the position in society someone has in social and economic perspective. In this research, the socioeconomic status is measured by the household income of the respondent, because the main argument is that people with a high socioeconomic status could afford another child by themselves. The household income was measured in the NELLS interview with the question 'What is the net income per month of you and your partner together? It is about the partner you live together with or who you are married with.'. The possible responses were sixteen categories between 'Less than €150 per month' and '€7000 or more per month'. Another possible response was 'I do not know; I do not want to say it'. This response is excluded. The other missing value is also excluded. The scale with sixteen categories is centred on the mean (7.536), so the scores are on an interval and continues level from '-6.540' to '8.460', in which a higher score implies a better socioeconomic position. The variable is on discrete and ordinal level. However, this variable was entered as a continuous predictor in the analyses.

Instrumental help*socioeconomic status. To measure the differences in the effect of social capital on the intentions per socioeconomic status, two interaction variables are created. The first one is created by the multiplication of the variables instrumental help and socioeconomic status.

Financial help*socioeconomic status. The interaction effect of financial help and socioeconomic status is the second interaction variable to measure the influence of socioeconomic status on the relationship between social capital and the intention to have another child. This variable is created by the multiplication of the variables financial help and socioeconomic status.

Number of children. The stratification variable is the number of children the respondent already has; this also includes stepchildren, foster children and adopted children and only children who are still alive. The number of children is measured in the NELLS interview with the question 'How many children (still alive) do you have? Including stepchildren, foster children and adopted children'. The responses were between '0' and '8'. Only respondents who already have a child are included in this research, so the respondents without children are excluded. There is made a dummy variable in which '0' implies that the respondent has only one child at time of the interview, and '1' implies that the respondent already has two or more children.

Partner. The first control variable partner is defined as having a partner for at least three months by the time of the interview. This variable is included because it is assumed that respondents with a partner have a higher chance to have the intention to have another child compared to respondents who do not have a partner. This variable was measured in the NELLS interview with the question 'Do you have a partner? We mean someone where you are living together with or where you are having a relationship with, that has lasting three months or longer'. The possible responses were 'Yes' and 'No'. The dummy variable is recoded so that a value of '0' implies that the respondent does not have a partner and value '1' implies that the respondent has a partner. There were no missing values.

Age. The age of the respondent will be the second control variable, because there is a non-linear relationship between age and fertility. The age of the respondent was provided by the local authority and measured as the age in years at time of the interview. The responses were between 14 and 49, but only respondents between the age of 15 and 45 are included because that was the target sample of the NELLS. There are no other missing values. Because of the non-linear relationship, a categorical variable is made. There are five dummy variables, the first indicates the respondents between the age of 15 and 19, the second between the age of 20 and 24, the third between the age of 25 and 29, the fourth between the age of 35 and 39 and the last one between the age of 40 and 45. Respondents between the age of 30 and 34 are the reference category.

Gender. A second control variable that will be considered is gender, because women on average have a higher 'intended parity' than men (Morgan and Rackin, 2010). This data is provided by the local authorities. The variable is a dummy variable and called 'woman', with value '0' implying a man and value '1' a woman. There are no missing values.

Ethnicity. Another control variable is ethnicity, to control the possibility that the intention to have another child is higher among different ethnicities despite of their social

capital (Guzman, Wildsmith, Manlove & Franzetta, 2010). In the NELLS data, ethnicity is measured by self-reported countries of birth. The ethnicity of the respondent is based on the definition of Centraal Bureau voor de Statistiek (CBS, n.d.) and focusses on both the countries of birth of the respondent and their parents. If the respondent and one or both of his or her parents are born in a foreign country, the respondent is considered as a foreigner. The respondent is also classified as being of foreign origin if one or both parents are born in a foreign country, but the respondent is born in the Netherlands. If the respondent is born in a foreign country, but his or her parents are both born in the Netherlands, the respondent is classified as being of Dutch origin. When the respondents and both parents are born in the Netherlands, the respondent is also classified of being of Dutch origin. There was a distinction made between first and second generations and Moroccan, Turkish, Non-Western, Western and Dutch ethnicity in the NELLS data. In this research, there is only a distinction made between native Dutch and respondents with any other ethnicity. A dummy variable is created and a value of '0' implies another ethnicity and '1' implies a Dutch ethnicity. There are no missing values.

Education. The control variable education is defined by the highest completed educational level of the respondent. This variable is included because previous research has found out that educational level has an important effect on fertility intentions, and on timing of fertility (see Balbo et al, 2013 for an overview). In the NELLS interview respondents were asked for sixteen different types of education if they had followed that type of education and if they had completed that type of education with a diploma. If the respondent had followed an education in a foreign country, the respondent had to choose a category that was at a comparable level. A new variable was made in which the answers of the second question were added to each other to create a variable at discrete and ordinal level in which '0' implies no education and a value of '11' implies that the respondent has completed a PhD degree at the university. Thus, a higher value implies a higher completed educational level. The response option 'Foreign education, not easy to indicate, primary education' was classified to category 'primary school (lagere school)'. The response option 'Foreign education, not easy to indicate, secondary school' was classified to category 'lower vocational education (lbo, vmbo-kb/bbl)'. The response option 'Foreign education, not easy to indicate, higher education' was classified to category 'higher vocational education (hbo)'. Other missing values are excluded. This variable was entered as a continuous predictor in the analyses.

Number of grandparents alive. The last control variable is the number of grandparents that are still alive. This control variable is included because there is no or less possibility to receive social capital from grandparents if one or both have died. This is measured in the

NELLS survey with the questions 'Is your mother still alive? The question is about your own (biological) mother.' and 'Is your father still alive? The question is about your own (biological) father.'. The possible responses were 'Yes' and 'No'. There were no missing values. A new variable is made in which the values on both items were added to each other for each respondent. Next, two dummy variables were created. The first dummy variable implies that the respondent has one parent alive and the second that both parents of the respondent are still alive. Respondents with no parents alive are the reference category.

The ordinal logistic regression always takes the last category of dummy variables as reference category, whereas the linear regression does not do this. To make their results comparable, there are made new variables of all dummy variables in which the values were reversed. These variables are used in the ordinal logistic regression and the variables described above are used in the linear regression.

Table 1 presents the descriptive statistics of all variables that are included in this research. Because of the stratified analyse, the descriptive statistics are presented for both respondents with one child and respondents with two or more children. On average, individuals with only one child intent to have another child (min = 0, max = 4, mean = 2.820). Individuals with two or more children on average do not have the intention to have another child on average (min = 1, max = 4, mean = 1.770). The instrumental help that individuals with one child receive is .268 above average of the whole sample (min = -1.150, max = 4.850, mean = .268). The average was that the individuals had received one type of help from one parent. However, individuals with two or more children receive -.093 below average (min = -1.115, max = 4.850, mean = -.093). 14.8% of the individuals with one child had received financial help (min = 0, max = 1, proportion = .148), whereas 14.3% of the individuals with two or more children had received financial help (min = 0, max = 1, proportion = .143). Both the parents (or the parent that lives nearest by) of individuals with one child (min = 1, max = 6, mean = 3.002) and with two or more children (min = 1, max = 6, mean = 3.147) live on average in another town in the Netherlands, but less than 20km away. The socioeconomic status of individuals with one child is .146 above average (min = -6.540, max = 8.460, mean = 0.146) which implies that they have almost a net income of €2500,- to €2999,- a month. Individuals with two or more children however have a small difference with individuals with one child (min = -6.540, max = 8.460, mean = -.051). On average, they have a net income of €2000,- to €2499,- a month. 89.3% of the individuals with one child has a partner (min = 0, max = 1, proportion = .893) compared to 91.0% of the individuals with two or more children (min = 0, max = 1, proportion = .910). Of all individuals with one child is .2% is between the age of 15 and 19 (min = 0, max = 1,

proportion = .002), 5.3% is between 20 and 24 (min = 0, max = 1, proportion = .053), 19.2% is between 25 and 29 (min = 0, max = 1, proportion = .192), 32.4% is between 30 and 34 (min = 0, max = 1, proportion = .324), 21.7% is between 35 and 39 (min = 0, max = 1, proportion = .217) and 21.3% is between the age of 40 and 45 (min = 0, max = 1, proportion = .213). Of all individuals with two or more children is .1% is between the age of 15 and 19 (min = 0, max = 1, proportion = .001), .5% is between 20 and 24 (min = 0, max = 1, proportion = .050), 6.1% is between 25 and 29 (min = 0, max = 1, proportion = .061), 20.1% is between 30 and 34 (min = 0, max = 1, proportion = .201), 30.9% is between 35 and 39 (min = 0, max = 1, proportion = .309) and 42.3% is between the age of 40 and 45 (min = 0, max = 1, proportion = .423). Around 53.4% of all individuals with one child is woman (min = 0, max = 1, proportion = .534), whereas 57.6% of the individuals with two or more children is woman (min = 0, max = 1, proportion = .576). Furthermore, 51.0% of the individuals with one child has a Dutch ethnicity (min = 0, max = 1, proportion = .510), whereas 47.8% of the individuals with two or more children has a Dutch ethnicity (min = 0, max = 1, proportion = .478). On average, the educational level of individuals with one child is higher (min = 0, max = 11, mean = 5.755) than the educational level of individuals with two or more children (min = 0, max = 11, mean = 5.218). 1.8% of all individuals with one child, has no parents alive (min = 0 max = 1, proportion = .018), whereas 22.5% has one parent alive (min = 0, max = 1, proportion = .225) and 75.7% has two parents that are still alive (min = 0, max = 1, proportion = .757). Of all individuals with two or more children, 3.4% has no parents alive anymore (min = 0, max = 1, proportion = .034), 25.6% has one parent that is still alive (min = 0, max = 1, proportion = .256) and 71.0% has both parents alive (min = 0, max = 1, proportion = .710).

Table 1. Descriptive statistics, for both the respondents with one child (N=494) and with two or more children (N=1420).

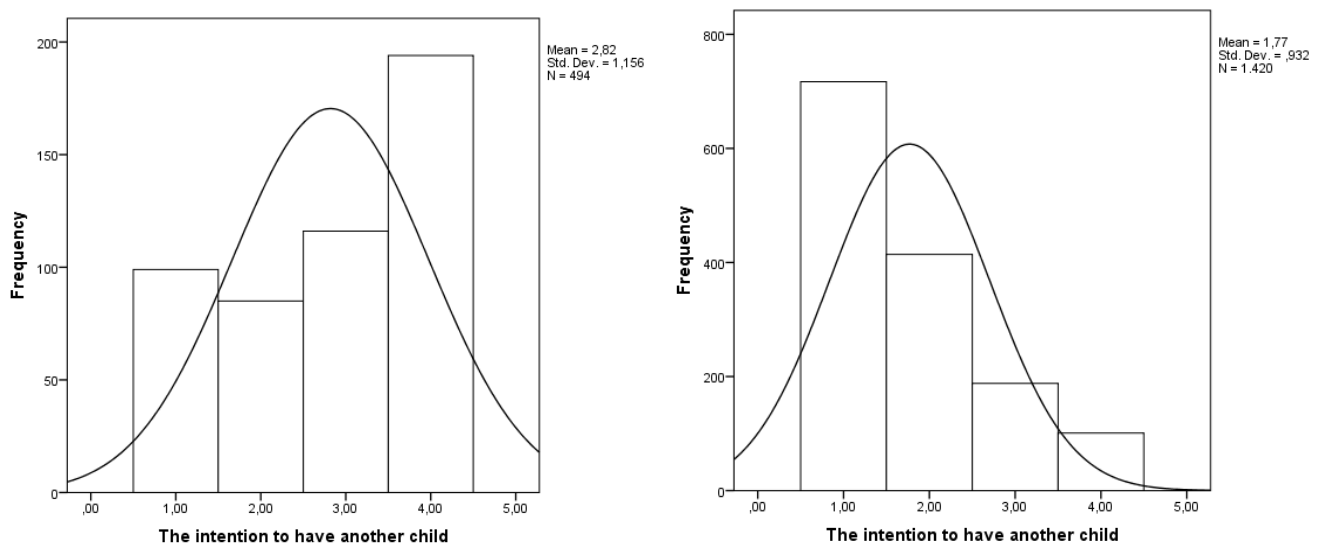|	One child				Two or more children			
	Minimum	**Maximum**	**Mean / proportion**	**S. D.**	**Minimum**	**Maximum**	**Mean / proportion**	**S. D.**
Intention	1.000	4.000	2.820	1.156	1.000	4.000	1.770	.932
Instrumental help	-1.150	4.850	.268	1.635	-1.150	4.850	-.093	1.471
Financial help	.000	1.000	.148		.000	1.000	.143	
Potential help	1.000	6.000	3.002	1.401	1.000	6.000	3.147	1.506
Socioeconomic status	-6.540	8.460	.146	2.569	-6.540	8.460	-.051	2.501
A partner	.000	1.000	.893		.000	1.000	.910	
Age 15 to 19	.000	1.000	.002		.000	1.000	.001	
Age 20 to 24	.000	1.000	.053		.000	1.000	.005	
Age 25 to 29	.000	1.000	.192		.000	1.000	.061	
Age 30 to 34	.000	1.000	.324		.000	1.000	.201	
Age 35 to 39	.000	1.000	.217		.000	1.000	.309	
Age 40 to 45	.000	1.000	.213		.000	1.000	.423	
Woman	.000	1.000	.534		.000	1.000	.576	
Dutch	.000	1.000	.510		.000	1.000	.478	
Education	.000	11.000	5.755	2.762	.000	11.000	5.218	2.903
No parents alive	.000	1.000	.018		.000	1.000	.034	
One parent alive	.000	1.000	.225		.000	1.000	.256	
Two parents alive	.000	1.000	.757		.000	1.000	.710	

Source: De Graaf et al., 2010b

Analytical strategy
Multiple linear regression

To test the different relationships that are assumed, multiple analyses are conducted. These analyses are stratified by the number of children the respondent already has, to test hypothesis four '*The effects of social capital received from grandparents on the probability to have the intention to have another child will be stronger for individuals with one child compared to individuals who have two or more children.*'. Every hypothesis is first analysed for respondents who have one child and then analysed for respondents who have two or more children. In this way, the effects of the variables for each group of respondents can be compared.

To test hypothesis one '*The greater the social capital received from grandparents is, the higher the probability to have the intention to have another child.*', there is a multiple linear regression conducted, despite that the dependent variable intention is a categorical variable and has a non-normal distribution (Figure 1). This variable is for this analyses used as a continues variable. There are three independent variables included in the first model, namely instrumental help, which has a continues level, financial help, which is a dichotomous variable and potential help, which has a continues level. In this way, it is possible to test the main effect of social capital on the intention to have another child (Table 2, models 1). Moreover, it is possible to test hypothesis two '*Instrumental support will have a stronger effect on intentions to have another child compared to financial support.*', by looking at the differences in effect of instrumental help and financial help on the intention to have another child (Table 2, models 1).

Figure 1. **The distribution of the variable intention for respondents with one child (left) and respondents with two or more children (right).**

In a second model of the multiple linear regression analyses, the control variables were added to eliminate their effects (Table 2, models 2). These control variables include having a partner, age, gender, ethnicity, highest completed educational level and number of grandparents that are alive. Furthermore, in this second model socioeconomic status is added to the analyses. This was done to test whether socioeconomic status has a direct effect on the intention to have another child before the interaction variables were added to the analyses.

A third model was added to the multiple linear regression analyses to test the third hypothesis '*The effect of social capital received from grandparents on the probability to have the intention to have another child will be stronger for individuals with lower socioeconomic status compared to individuals with a higher socioeconomic status*.'. In this third model, the interaction variables of instrumental help with socioeconomic status and financial help with socioeconomic status were included (Table 2, models 3), despite the nonsignificant direct effects of socioeconomic status on the intention to have another child in both categories. In this way, the moderation effect of socioeconomic status on the relationship between social capital and the intention to have another child could be investigated.

Ordinal logistic regression

Because of the violation of the linear regression assumption that the dependent variable must be at interval or ratio level, an ordinal logistic regression is also conducted to verifier if the results of the linear regression are robust. However, the focus is on the linear regression analyses because of the interpretation.

There is one ordinal logistic regression conducted for respondents with one child and one for respondents with two or more children (Table 3). All variables are included in this one model, so it is comparable with the last models of the linear regression analyses (Table 2, models 3). In this way, all hypotheses can be tested. The odds ratios are obtained by taking the exponent of the logistic regression coefficient B.

In both the linear regression and the ordinal logistic regression all variables are tested two sided to make stronger conclusions, despite the assumed directions in the hypotheses. The level of significance that is used is five percent. The analyses for respondents with one child are conducted with N = 494, and the analyses for respondents with two or more children are conducted with N = 1.420. The analyses were preformed using the program IBM SPSS Statistics 22.0.

Results

First, the results of the multiple linear regression for respondents who have one child will be discussed. Subsequently, the results of the linear regression for respondents who have two or more children will be discussed. Thereafter the results from the ordinal logistic regression will be briefly discussed.

Multiple linear regression; respondents with one child

Before conducting the analyses for respondents with one child, the assumptions of a linear regression were tested. The correlations are shown in Table A1 (Appendix). There are no correlations between the intention to have another child and financial help, potential help, age 15 to 19, age 20 to 24, age 35 to 39, woman and both interaction variables. However, the regression analyses will be conducted with all variables included. The assumption of enough cases (N = 494) and no extreme outliers (a score greater than 3 box lengths above or below the box boundaries) are met. All variables also have a lower VIF value than 10, except for the dummy variables for having one or two parents. This implies that there is no multicollinearity. As mentioned earlier, the assumption of normality is violated because of the discrete and ordinal dependent variable intention (Figure 1). However, the other variables are normally distributed. The residuals also met the assumptions; the observed and predicted values of the intention to have another child are normally distributed, and the relationship with the predicted values is linear. Also, the residuals are homoscedastic; the variance in the residuals is homogenous across the full range of predicted values.

Table 2 (model 1) shows the results for hypothesis one and two. There is a significant positive effect of instrumental help on the intention to have another child for respondents who have one child (B = .144, t = 4.319, p < .001). This implies that if someone receives one more type of instrumental help from his father or mother, his or her intention to have another child will increase with .144. There are no significant effects found for financial help and potential help. The explained variance is .038, which implicates that 3.8% of the intention to have another child is determined by these variables. These results indicate that there is found support for hypothesis one for respondents who have one child. This means that the more social capital someone receives from the grandparents, the stronger his or her intention will be to have another child. Moreover, these results for the respondents with one child also support hypothesis two, namely that instrumental help will have a stronger effect on the intention to have another child compared to financial help.

Table 2, model 2, shows the results of the multiple linear regressions in which the control variables were added. The instrumental help still has a significant effect (B = .070, t = 2.310, p = .021). The socioeconomic status however does not have a significant effect on the intention to have another child. On the other hand, having a partner increases the likelihood that someone intents to have another child with .321 compared to someone who does not have a partner (B = .321, t = 2.063, p = .040). There is no significant difference between the intentions of respondents at the age of 15 to 19 and respondents at the age of 30 to 34. The same goes for respondents at the age of 20 to 24 and 25 to 29. However, the intention to have another child is .277 lower for respondents at the age of 35 to 39 compared to respondents at the age of 30 to 34, this difference is significant (B = -.277, t = -2.244, p = .025). Also, the fertility intention of respondents at the age of 40 to 45 is 1.349 lower than the intention of respondents at the age of 30 to 34 ((B = -1.349, t = -10.349, p < .001). Surprisingly, the results show that woman have a significantly lower intention to have another child than men, namely .302 lower (B = -.302, t = -3.247, p < .001). Furthermore, ethnicity and education do not have a significant effect on the intention to have another child. At last, respondents who have one parent alive or two parents do not have a significant different intention than respondents who do not have any parents alive. The explained variance of this model is .308, which means that 30.8% of the intention to have another child for respondents with one child could be explained by these variables. There is still support for hypothesis one and two for respondents with one child, despite the effects of the control variables.

The third model of Table 2 show the multiple linear regressions in which the interaction variables were added. All significant effects in model 2 stay significant in this third model. The interaction effect of instrumental help and socioeconomic status has not been found significant. As so is the interaction effect of financial help and socioeconomic status. This results implies that there is no difference in effect of financial help or instrumental help on the intention to have another child between respondents with different socioeconomic statuses. Therefore, there is no support found for hypothesis three for respondents with one child. This means that the effect of social capital received from grandparents on the intention to have another child will not be stronger for individuals with lower socioeconomic status compared to individuals with a higher socioeconomic status.

Multiple linear regression; respondents with two or more children

The assumptions of linear regression are also tested before conduction the analyses for respondents with two or more children. The correlations are shown in Table A2. There are no

correlations between the intention to have another child and instrumental help, financial help, age 15 to 19, age 20 to 24, age 35 to 39, education, no parents alive, one parent alive and both parents alive and both interaction variables. However, the regression analyses will be conducted with all variables included. The assumption of enough cases (N = 1420) is met. There are four outliers, but these are not extreme (a score greater than 3 box lengths above or below the box boundaries), so these cases were included in the analyses. All variables also have a lower VIF value than 10, this implies that there is no multicollinearity. As mentioned earlier, the assumption of normality is violated because of the discrete, ordinal variable intention. The other variables are normally distributed. The assumption of normally distribution of residuals is met; the observed and predicted values of the dependent variable are normal distributed. Besides, the relationship between the predicted values of the residuals is linear and the variance in the residuals is homogenous across the full range of predicted values.

Table 2, model 1, shows the results for the multiple linear regression for respondents with two or more children. The effect of instrumental help on the intention to have another child has not been found significant. There is also no support found for the expectation that financial help would lead to a higher intention to have another child. Moreover, there are no indications that a higher potential help increases probability to have the intention to have another child. The explained variance of this model was .003, which implicates that .3% of the intention to have another child is determined by these variables. Because of the nonsignificant effects of instrumental, financial and potential help, there is no support found for hypothesis one for respondents with two or more children. Furthermore, there is also no support found for hypothesis two, because both instrumental help and financial help have no significant effect.

Table 2, model 2, show the results of the second model for respondents who have already two or more children. In this model, the control variables were added. Whereas potential help was significant in the first model, this effect disappeared after adding the control variables. The socioeconomic status of the respondent does also not have a significant effect on the intention to have another child. Just as for respondents with one child, having a partner increases significantly the probability that a respondent with two or more children intents to have another child. The intention increases with .244 (B = .224, t = 2.631, p = .009). There is no significant difference between the intentions of respondents at the age of 15 to 19 and respondents at the age of 30 to 34. The same goes for respondents at the age of 20 to 24 and 25 to 29. However, the intention to have another child is .340 lower for respondents at the age of 35 to 39 compared to respondents at the age of 30 to 34, this difference is significant (B = -.340, t = -5.043, p < .001). Also, the fertility intention of respondents at the age of 40 to 45 is .595 lower than the

intention of respondents at the age of 30 to 34 (B = -.595, t = -8.984, p < .001). Gender has the same effect direction on the intention to have another child for respondents with one and with two or more children according to these results. Woman have a significant lower fertility intention than men, the difference in intention is .287 (B = -.287, t = -5.954, p < .001). Ethnicity does have a significant effect. Respondents with a Dutch ethnicity have a .254 lower intention than respondents with another ethnicity (B = -.254, t = -4.743, p < .001). Education however does not have a significant effect on the intention to have another child. Moreover, there is no significant difference in effect on the intention between respondents who have no parents alive and one parent alive, the same goes for respondents who have no parents alive and both parents alive. The explained variance of this model was .135, which implies that 13.5% of the intention of respondents who have two or more children to have another child could be explained by these variables.

The third model of Table 2 shows the multiple linear regression analysis in which the interaction variables were added. The significant effects of model 2 stay significant in the third model. However, the effect of socioeconomic status is now also found significant (B = -.024, t = -1.983, p = .048). This implies that if someone's socioeconomic status increases, the intention to have another child decreases with .024. Both the interaction effects of instrumental help with socioeconomic status and financial help with socioeconomic status are not significant. The explained variance of this model is .136, which implies that 13.6% of the intention to have another child for respondents with two or more children could be explained by these variables. Because of the nonsignificant results of the interaction effects, there is no support found for hypothesis three for respondents with two or more children that the effect of social capital received from grandparents on the intention to have another child will be stronger for individuals with lower socioeconomic status compared to individuals with a higher socioeconomic status.

There is found support for hypothesis four that the effects of social capital, received from grandparents, on the probability to have the intention to have another child will be stronger for individuals with one child compared to individuals who have two or more children. Social capital, that consist of instrumental, financial and potential help, has an effect on intentions of respondents with one child, and no effect on the intentions of respondents with two or more children. Therefore, social capital has a stronger effect on the fertility intentions of respondents with one child compared to those with two or more children.

Table 2. Results multiple linear regression of fertility intention on social capital, socioeconomic status and control variables, divided by respondents with one child (N=494) and with two or more children (N=1420).

	One child						Two or more children					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	2.741	.129	2.736	.448	2.721	.448	1.663	.061	2.069	.197	2.059	.197
Instrumental help	.144***	.033	.070*	.030	.066*	.031	.002	.018	-.012	.018	-.013	.018
Financial help	-.081	.146	.049	.128	.075	.129	.022	.071	.004	.067	.010	.067
Potential help	.017	.038	.037	.037	.034	.037	.033	.017	.008	.018	.007	.018
Socioeconomic status			.023	.020	.035	.023			-.022	.011	-.024*	.012
A partner			.321*	.156	.337*	.156			.224**	.085	.227**	.085
Age 15 to 19[a]			1.230	.986	1.222	.985			.972	.621	.960	.622
Age 20 to 24[a]			.124	.212	.131	.211			-.456	.336	-.465	.336
Age 25 to 29[a]			.135	.131	.142	.131			.103	.109	.109	.109
Age 35 to 39[a]			-.277*	.124	-.284*	.124			-.340***	.067	-.338***	.067
Age 40 to 45[a]			-1.349***	.130	-1.355***	.130			-.595***	.066	-.591***	.066
Woman			-.302***	.093	-.302***	.093			-.287***	.048	-.287***	.048
Dutch			-.148	.098	-.145	.098			-.254***	.054	-.253***	.054
Education			.022	.018	.021	.018			.012	.009	.012	.009
One parent alive[b]			.041	.356	.054	.356			.050	.142	.052	.142
Two parents alive[b]			.095	.358	.100	.357			.048	.141	.050	.141
Instrumental*ses					.008	.011					.007	.006
Financial*ses					-.074	.043					.011	.025
R^2	.038		.308		.313		.003		.135		.136	

a. Reference category is age 30 to 34.

b. Reference category is no parents alive.

*p < .05 **p < .01 ***p < .001

The ordinal logistic regression is conducted only to test the robustness of the linear regression analyses, therefore the results will be briefly described.

The assumptions of an ordinal logistic regression were tested before conducting the analyses. For respondents with one child, the assumption of proportional odds is met, which implies that the effects of the explanatory variables are the same across the different thresholds. Even so is the assumption of a good model fit met, the final model gives a significant improvement over the baseline intercept-only model. Moreover, the observed data are consistent with the fitted model. However, there are many empty cells (74.8%), but the Pseudo R-square, which is an alternative indication of the predicative power of the model, indicates a medium proportion (Nagelkerke = .309).

The assumptions of proportional odds and a good model are also met for the respondents with two or more children. Moreover, the observed data are consistent with the fitted model. However, there are many empty cells (74.0%), but the Pseudo R-square indicates a medium proportion (Nagelkerke = .140).

Table 3 shows the results for the ordinal logistic regression for both categories. These results are comparable with Table 2, models 3. First the differences between the results of both analyses for the respondents with one child will be discussed and subsequently the results for the respondents with two or more children.

The effect of instrumental help on the intention to have another child has been found significantly, just as with the linear regression. It also has the same effect direction. Whereas having a partner was significant in the other analysis, it is not found significant in the logistic regression. The age of the respondent has the same direction and significant effects in this analysis. The effect of gender is also found significant and has the same direction as in the linear regression. In both analyses the women have a lower intention to have another child. The effects of the other variables are not found significant, just as with the linear regression. The high odds ratio of age 15 to 19 is probably caused by the fact that there was only one respondent in this category.

Whereas the effect of socioeconomic status was found significant in the linear regression for respondents with two or more children, this effect was not found significant in the ordinal logistic regression. The effect of having a partner is for both regressions found significant. Also, it has the same direction, namely having a partner increases the probability that someone intents to have another child. The age of the respondent also had the same significant effects and directions as in the linear regression. Furthermore, the effect of gender has found significant

again and the effect is in the same direction. This implies that a woman has a lower intention to have another child than a man. At last, the effect of ethnicity is also significant in both regression analyses, and it has the same direction. Respondents with a Dutch ethnicity have a lower intention to have another child. The effects of the other variables are not found significant, just as with the linear regression.

Overall, the results of the multiple linear regression analyses are relatively robust. The ordinal logistic regression also found support for hypothesis one and two for respondents with one child, and hypothesis four.

Table 3. Results ordinal logistic regression of fertility intention on social capital, socioeconomic status and control variables, divided by respondents with one child (N=494) and with two or more children (N=1420

	One child		Two or more children	
	Exp(B)	SE	Exp(B)	SE
Instrumental help	1.132*	.060	.991	.039
Financial help	1.045	.250	1.023	.149
Potential help	1.063	.071	1.031	.039
Socioeconomic status	1.069	.044	.956	.027
A partner	1.782	.305	1.631*	.200
Age 15 to 19[a]	323270502.582	.000	5.995	1.308
Age 20 to 24[a]	1.516	.416	.411	.737
Age 25 to 29[a]	1.404	.259	1.290	.227
Age 35 to 39[a]	.596*	.237	.522***	.144
Age 40 to 45[a]	.095***	.269	.307***	.146
Woman	.563**	.184	.540***	.117
Dutch	.777	.191	.547***	.119
Education	1.047	.034	1.027	.021
One parent alive[b]	.989	.683	1.197	.321
Two parents alive[b]	1.154	.685	1.183	.317
Instrumental*ses	1.016	.023	1.015	.014
Financial*ses	.880	.084	1.039	.055
Pseudo R^2	.309		.140	

a. Reference category is age 30 to 34.
b. Reference category is no parents alive.
*p < .05 **p < .01 ***p < .001

Conclusion

This research was conducted to examine the possible influence of social capital, received from the grandparents, on the intention to have another child. The research question was as follows *'In how far does social capital received from grandparents influence the intentions to have*

another child in the Netherlands?'. This was examined to get more knowledge about factors that contribute to the creation of fertility intentions, which are of increasing concern because of the debate about the deterioration of the dependency ratio in the Netherlands. The influence of someone's socioeconomic status on the relationship between social capital and the intention to have another child has also been examined. Furthermore, it was examined if the importance of social capital for the intention to have another child differs between individuals with one child, and individuals who already have two or more children.

Four hypotheses were drafted to address these effects. The first hypothesis concerned the influence of social capital on the fertility intentions. It stated that the greater the social capital received from grandparents is, the higher the probability will be to have the intention to have another child. Based on the general theory of social capital and the rational choice approach, social capital could reduce the costs of having another child and therefore increase the chance of having the intention to have another child. The second hypothesis concerned the different effects of two types of social capital received from the grandparents, namely instrumental help and financial help. It stated that instrumental support would have a stronger effect on the intention to have another child compared to financial support, based on the idea that most individuals in the Netherlands could afford a child financially by themselves and have due to, among others, a higher labour market participation of women a higher need for instrumental help. The third hypothesis concerned the influence of socioeconomic status and it stated that the effect of social capital on the intention to have another child would be stronger for individuals with a lower socioeconomic status compared to individuals with a higher socioeconomic status. This was assumed because individuals with a lower socioeconomic status will have a higher need to reduce the costs of having another child before they will intent to have another child. The fourth and last hypothesis stated that the effects of social capital received from grandparents on the intention to have another child would be stronger for individuals with one child compared to individuals who have two or more children, because of the strong two-child norm in Western society.

Looking at the results of the analyses, the first hypothesis could be confirmed for individuals with one child. Instrumental support from grandparents increases the likelihood that someone intents to have another child. However, financial and potential support do not influence the intention to have another child. The second hypothesis also could be confirmed for individuals with one child, which implies that instrumental support increases the probability of having the intention to have another child more than financial help. However, the results for respondents with two or more children did not support the first and second hypotheses. The

third hypothesis is also not confirmed, for both individuals with one child and with two or more children. Finally, there is found support for hypothesis four, that social capital has a stronger effect on the intentions of individuals with one child compared to individuals with two or more children.

In answer to the research question, it could be stated that social capital received from the grandparents leads to a higher probability to have the intention to have another child. However, this only applies for individuals who have one child and only if the social capital consists of instrumental support.

Discussion

This research brought some improvements to the knowledge about fertility intentions. It has provided extra support for the general theory of social capital and it gives more specified information about the influences of different types of social capital on fertility intentions. Moreover, the importance of the role of grandparents in fertility intentions has been clarified as well as the differences between the intentions of individuals with one child and individuals with two or more children. Furthermore, the data used are representative for the Dutch society (even though some groups were oversampled); and therefore, also probably the Western society. The findings in this research therefore expand the limited knowledge about the influence of social capital on fertility intentions in the Netherlands, and probably other Western societies.

Despite the careful research, there have been some limitations. The options for measuring different variables were constraint by the available data and therefore not all variables are measured as desired. For example, it was not possible to include the social capital received from parents-in-law, whereas it might also have influence on the intention to have another child. The 'insurance effect' states that when one confidant is not available, the individual can rely on others (Balbo & Mills, 2011). This effect is now not included and therefore it might be interesting to examine this effect in further research. Furthermore, it was not possible to measure the potential social capital, except for how far away parents lived and if they were still alive. It may be that an individual does not receive any type of help now, but could get much help if needed. This potential social capital might have an influence on the intentions too, and therefore it is important that further research will include this aspect of social capital as well. Moreover, financial help now included both receiving money as a gift, and as a loan. However, there may be an important difference between these two in the effect on fertility intentions. The available data was longitudinal, but the time between the first two waves was not long enough to measure the reciprocity aspect of social capital as desired and therefore it

was left out in this research. If further research observes the relationships between individuals and their parents over a longer time, for example ten or twenty years, they could investigate this aspect of social capital. Besides the more material aspect of social capital that are measured in this research, it might also be interesting to include the emotional support from grandparents in further research.

Another important limitation was that the data did not fit the assumptions of multiple linear regressions. Consequently, the reliability of the results is weakened and should be interpreted with cautious. Furthermore, the distribution of the number of cases between the individuals with one child and with two or more children was unequal. This may have influenced the results. At last, there might be a selection bias because this research only focusses on individuals who already have at least one child (Kravdal, 2001, 2007). However, it is not sure how problematic this bias is for the results. Further research should provide insight about how to address this bias.

An implication for further research is also to find out what could explain the exact differences in effects on fertility intentions between individuals with one and with two or more children. It is also interesting to find out why potential help increases the likelihood of having the intention to have another child for individuals with two or more children. Moreover, it could be interesting to investigate why the economic uncertainty does not influence the fertility intentions on individual level, whereas it does have an influence on macrolevel (see Balbo et al., 2013).

Once again, this research has found that grandparents could have an influence on the fertility intentions their own children. Especially when they provide help such as childcare and housekeeping. This emphasizes the importance of taking grandparents into account when making fertility policy and other policies, such as concerning retirement age. This is also important in the debate about the consequences of the deterioration of the dependency ratio.

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Appendix

Table A1. Correlations between all variables for respondents with one child (N = 494).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Intention	-																			
2. Instrumental help	.193***	-																		
3. Financial help	.006	.145***	-																	
4. Potential help	-.040	-.294***	.048	-																
5. Socioeconomic status	.101*	.158***	.016	-.016	-															
6. A partner	.178***	.028	-.095*	.038	.332***	-														
7. Age 15 to 19	.046	-.039	-.019	-.032	.006	.016	-													
8. Age 20 to 24	.060	.023	-.073	-.104*	-.087	-.035	-.011	-												
9. Age 25 to 29	.187***	.089*	-.073	-.045	-.096*	.053	-.022	-.115*	-											
10. Age 30 to 34	.217***	.093*	.009*	-.010	.027	.086	-.031	-.163***	-.338***	-										
11. Age 35 to 39	.027	.001	-.011	-.025	.121**	-.040	-.024	-.124**	-.257***	-.364***	-									
12. Age 40 to 45	-.493***	-.202***	.021	.141**	-.013	-.092*	-.023	-.122**	-.254***	-.360***	-.273***	-								
13. Woman	-.075	.092*	.023	.007	-.097*	-.153***	.042	.147***	.126**	-.056	-.051	-.090*	-							
14. Dutch	-.093*	.151***	.089*	-.268***	.229***	.027	.044	-.005	-.179***	.064	.004	.093*	.035	-						
15. Education	.104*	.200***	.080	.041	.361***	.059	-.045	.001	-.083	.101*	.045	-.076	.089*	.155***	-					
16. No parents alive	-.097*	-.118**	-.014	.292***	-.042	.047	-.006	-.032	-.066	-.062	-.072	.225***	-.085	-.078	-.032	-				
17. One parent alive	-.143***	-.247***	-.033	.155***	-.037	-.048	-.024	-.040	-.078	-.082	-.001	.195***	-.032	.023	-.079	-.073	-			
18. Two parents alive	.169***	.278***	.036	-.242***	.049	.032	.026	.049	.097*	.100*	.023	-.260***	.058	.002	.087	-.240***	-.950***	-		
19. Instrumental help*ses	.056	.037	-.040	.057	.218***	.057	-.014	-.021	.013	-.061	.117**	-.048	.048	-.031	.053	.001	-.085	.082	-	
20. Financial help*ses	.001	.019	.075	-.012	.447***	.187***	-.001	-.027	.003	-.002	.052	-.038	-.019	.094*	.119**	-.038	-.011	.022	.144***	-

*p < .05 **p < .01 ***p < .001

Table A2. Correlations between all variables for respondents with two or more children (N = 1420).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Intention	-																			
2. Instrumental help	-.014	-																		
3. Financial help	.006	.101***	-																	
4. Potential help	.052*	-.325***	-.047	-																
5. Socioeconomic status	-.093***	.149***	-.046	-.102***	-															
6. A partner	.083**	.005	-.033	-.030	.271***	-														
7. Age 15 to 19	.050	-.027	-.015	.034	-.030	.012	-													
8. Age 20 to 24	-.004	-.030	.000	.020	-.062*	.022	-.003	-												
9. Age 25 to 29	.123***	.031	.065	.038	-.109***	-.003	-.010	-.018	-											
10. Age 30 to 34	.201***	.156***	-.029	-.024	-.056*	.072**	-.019	-.035	-.127***	-										
11. Age 35 to 39	.012	.031	.018	-.005	.044	-.008	-.025	-.047	-.17***	-.335***	-									
12. A 40 to 45	-.236***	-.163***	-.024	.001	.068**	-.054*	-.032	-.060*	-.218***	-.429***	-.573***	-								
13. Woman	-.125***	.080**	-.008	-.012	-.092***	-.116***	.032	.060*	.116***	.060*	-.018	.099***	-							
14. Dutch	-.196***	.194***	.016	-.241***	.363***	.080**	.002	-.047	-.089***	-.114***	-.015	.156***	.022	-						
15. Education	-.028	.206***	.034	-.116***	.456***	.144***	-.061*	.012	-.050	.012	.043	-.023	-.056*	.348***	-					
16. No parents alive	-.021	-.134***	-.065*	.354***	-.069**	-.064*	-.007	-.013	-.031	-.045	-.058*	.108***	-.029	-.046	-.103***	-				
17. One parent alive	-.025	-.190***	-.042	.051	-.058*	-.052	.021	-.018	-.108***	-.069**	-.002	.111***	-.032	-.036	-.111***	-.110***	-			
19. Two parents alive	.032	.236***	.066*	-.190***	.083**	.075**	-.017	.023	.117***	.084**	.025	.150***	.042	.053*	.148***	-.293***	-.918***	-		
19. Instrumental help*ses	.045	.059*	-.041	.063*	.005	-.027	.018	.042	-.005	.054*	.010	-.058*	.008	-.029	-.009	.028	-.011	-.001	-	
20. Financial help*ses	-.031	.013	.113***	-.020	.415***	.136***	.002	-.060*	-.113***	-.005	.031	.038	-.037	.143***	.165***	-.001	.010	-.009	.037	-

*p < .05 **p < .01 ***p < .001