

Higher education level, higher gender equality in the division of care tasks?

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Abstract

Background. The factors influencing the division of care responsibilities between parents have previously been studied. With the improvement in women's economic position and the change in traditional gender norms, the question is whether these factors remain present in today's society. This study examines the relationship between Dutch parents' educational level and their division in care tasks, by examining the impact of gender norms and income inequality of Dutch parents. **Method.** This research is based on quantitative data from the LISS data archive ($N=196$). Multiple regressions were performed to test the relation between level of education and the division in care tasks. A positive effect of level of education on the division in care tasks was expected. Gender norms were expected to function as a mediator and inequality in income were expected as a moderator. **Results.** Parents with a higher levels of education have more liberal gender norms that cause them to share work and care more equally compared to parents with lower levels of education. A direct relation between education level and the division of caregiving tasks was not found, nor was the influence of income inequality on the distribution of caregiving tasks. **Conclusion.** Current gender norms affect how Dutch parents divide work and care. This is in line with earlier research showing that the strong care culture in the Netherlands is very decisive. This research indicates the need to develop interventions that question and criticize traditional gender norms in order to strive for more equal opportunities and less financial dependence for women.

Key words: division in care tasks, gender, income, education level, gender norms, work-life balance, socioeconomic status

In the Netherlands, traditional divisions in work and care are still observed. In almost two third of families with underaged children, the father is working and earning more than the mother, who is doing more care tasks (Brakel, 2020). This is troubling because it reduces equal chances on the labor market and often creates a financial dependent relation. How parents divide caregiving responsibilities is influenced by prevailing gender norms. Gender norms are visible in the Netherlands through the domination of the ‘one-and-a-half earner model’ (Begall & Verbakel, 2021). In this model, fathers work fulltime and do fewer care tasks than mothers, who work parttime. The model is based on the traditional norm that mothers are more suited for taking care of children than fathers (Begall & Verbakel, 2021). Edlund & Öun (2016) argue that traditional norms about the division of work and care are mostly supported by individuals with a lower education and elderly people. Although the *Emancipation Monitor* of the Dutch Institute of Statistics (CBS) shows a decrease in individuals supporting the traditional standards, these standards continue to exist (Brakel, 2020).

In addition to gender norms, women’s position in the labor market changes over time, women’s economic position (working frequency, working hours and education level) increased in 2020 (Brakel, 2020). As women have begun to work more and thus earn more, they are less financially dependent on their partners. The extent to which parents depend on each other's income also plays a role in the division of caregiving responsibilities (Craig & Mullan, 2014) . Highly educated Dutch women are more likely to participate in the labor market and are also more likely to be financially independent (80%) than lower educated Dutch women (34%) (Brakel, 2020).

Previous research has examined the relationship between educational attainment and the division of caregiving responsibilities between Dutch parents (Van Wel & Knijn, 2006; Ruitenbergh & de Beer, 2014; Cloin, Keuzenkamp & Plantenga, 2011; Craig & Mullan, 2014). The data for these studies were collected in 2000, 2004, 2006 and 2010. Influential factors such as gender norms and women's position in the labor market continue to change, so it remains relevant to examine this relationship, especially given the negative impact on the mother's life. A traditional division in care responsibilities and being financially dependent can negatively impact women’s situation. This becomes even more important as the divorce rate in the Netherlands increases and therefore lower educated mothers are falling further behind as they are more financially dependent (CBS, 2022; Mandemakers & Kalmijn, 2014). In addition, the more traditional norms that are present in a society and thus in family life, the less leisure time women experience, which negatively influences their quality of life (Yerkes,

Roeters & Baxter, 2018). Moreover, women's labor market opportunities can be limited by an unequal division of caregiving responsibilities due to lack of time (Ferrant, Pesando, & Nowacka, 2014). This limits them in investing in their human capital or in applying for fulltime employment opportunities. Thus, equal responsibility of caregiving tasks may positively impact women's lives both socially and economically. The current research can provide insight into the relationship between level of education and the division of care responsibilities in today's society. As a result, it can provide insight in effective group interventions to reduce gender inequality. Current interventions can be strengthened and new interventions can be developed to make (future) mothers aware of the risks of an unequal distribution of care tasks and the additional economic dependence.

In this study, the relation between education level and division in care tasks in the Netherlands will be researched based on the dataset 'Family and Household' from the LISS data archive. This dataset investigates parents' views on their division in care and household tasks. Based on this dataset, this study aims to provide an answer to the following question: What is the relation between Dutch parents' education level and their division in care tasks? And what is the influence of gender norms and income inequality on this relation?

Education level

Existing research on the distribution of care responsibilities emphasizes socioeconomic status¹ (SES). Income and educational attainment are more often considered, as a proxy of SES because it is easier to measure. Research shows a relation between educational level and the division of care tasks. Van Wel & Knijn (2006) show that the most important factor for mothers for labor market participation is cultural. Due to the prevailing caregiving culture, women work less than men. Mothers with a lower level of education are more strongly affected. The prevailing caregiving culture and the norms that go with it have a stronger effect on lower educated mothers (Van Wel & Knijn, 2006; Cloïn, Keuzenkamp & Plantenga, 2011). Other research shows that education level is also associated with exposure to ideas of equality (Cunningham et al., 2005; Kroska and Elman, 2009) and therefore higher educated parents will divide care responsibilities more equally. Craig & Mallon (2014) state that the relationship between educational attainment and the division in caregiving tasks consists of the combination of the factors of gender norms and income inequality. Higher educated people often have a partner from the same class, which means there is less income

¹ Socioeconomic status refers to the social standing which is measured through combining of education level, income and status

inequality and thus less relative benefit from a skewed distribution (Craig & Mallon, 2014). In addition, more educated women are more likely to be employed and have more progressive gender norms that encourage a more equal distribution (Craig & Mallon, 2014). On top of that, more educated people tend to be more ambitious in their work, which often results in better jobs and more opportunities in the labor market (Visser et al., 2009; Judge & Kammeyer-Mueller, 2012). Higher educated parents are therefore more likely to share caregiving responsibilities equally or have them performed by the lower educated partner in order not to have to give up ambitions. Other things that come into play with highly educated parents may include having a high-demand job, having to work more hours, and having more responsibilities (Falkenberg et al., 2016). This would result in having less time for caregiving tasks. On the other hand, more educated people have more flexible working conditions, more control, more income and more resources to outsource care tasks (Falkenberg et al., 2016). This would result in having more time for caregiving tasks or being able to arrange work around it. Previous research has shown that educational attainment is associated with the division of caregiving responsibilities but whether this is currently influenced as much by gender norms as by income inequality is not yet known.

Inequality in income

Level of education, income and employment are related factors, since education has a positive impact on economic possibilities on the long term (Grunow, Schulz, & Blossfeld, 2012; Becker, 2009). Data from CBS show that income is related to different factors, but in particular to age, gender and level of education (Menger & Nieuweboer, 2019). A higher level of education correlates with a higher income, but gender differences are present. Women earn less compared to men which is partly explainable by the one-and-a-half earner model. In this model, women work less and thus have lower earnings. However, when taking several factors into account, a part of the difference remains unexplained when comparing men and women with same education levels and job types. This is also known as the ‘gender pay gap’ (Rimmer, 2014). The one-and-a-half earner model creates a financially dependent relationship between mother and father.

According to Hiller (1984) and supported by others (Evertsson & Neramo, 2004), there are several approaches that influence the division of family work², namely relative resources, time available and economic efficiency. Relative resources relate to the idea that

² Family work is a combination of both household tasks and care tasks that need to be done to maintain family members

the parent with the most resources also has more power in the relationship (Hiller, 1984). Resultingly, bringing in a greater part of resources allows that parent to participate less in family work (Hiller, 1984). This also overlaps with the resource theory by Mederer (1993), who explains that the breadwinner of the family can buy him or herself out of family tasks.

The next approach called 'time available' is focused on the ease (time and skills) a parent has in family work (Hiller, 1984; Evertsson & Nermo, 2004). It claims that the parent who does family work more easily and has more time will end up doing more care tasks. This also partially explains the inequality in care tasks for parents who both have a full-time job, because one parent can be more skilled in performing these tasks. Another reason for parents to divide family work in a certain way is economic efficiency (Hiller, 1984), which means parents divide tasks in such a way that most profit is gained. Parents will search for a combination that provides the most utility and creates most economical advantages (Hiller, 1984).

As mentioned earlier, the position of women in the labor market has improved. As a result, they may experience less relative inequality. In that case, it is not always economically efficient for there to be an unequal distribution to the detriment of women. However, it is questionable whether the labor market position has been strengthened to the extent that this is the case.

Gender norms

Gender norms play a part in dividing care tasks between mothers and fathers (Begall & Verbakel, 2021; Hiller, 1984; Potuchek, 1992; Sevilla-Sanz, Gimenez-Nadal, & Fernández, 2010; Evertsson & Nermo, 2004). The way gender norms influence the division in care tasks can be explained by means of the role differentiation approach, the socialization approach and/or masculinity/femininity norms.

The role differentiation approach is based on the idea that parents must divide two roles because of functionality and efficiency in the family (Hiller, 1984). Given biological differences, a certain division has to be made in labor and care and sharing care tasks is seen as not compatible (Hiller, 1984; Blood & Wolf, 1960). Policies treating mothers and fathers different, are often based on biological differences, such as pregnancy. For example, mothers benefit from a longer and longer paid parental leave than fathers (Haas & Hwang, 2016). Although women need time to recover physically, the skewed distribution does not give the father time to get used to his caregiving duties. Policies based on biological differences can

therefore further enhance this disbalance. These differences are especially hard to change when they are institutionalized in policies. Another approach of Hiller (1984) concerns socialization ideology, which argues that women and men internalize certain traditional gender roles in their life to different extents. As a result, mothers and fathers will take in gender roles that correlate with their expectations and will end up performing according to those norms (Hiller, 1984). This approach acknowledges the fact that social class and education level are of influence on having conservative, traditional gender attitudes (Hiller, 1984). In line with previous mentioned research (Edlund & Öun, 2016), higher educated people have internalized more liberal gender attitudes and are therefore more likely to divide family work more equally. However, it must be taken into account that gender norms change and as a consequence the norms that are internalized change as well. The socialization ideology is in line with the gender theory that criticizes the idea that breadwinning (paid employment) is a unitary (masculine) dimension (Potuchek, 1992). These gender norms and attitudes are shaped and defined in parents' lives and therefore differ for individuals because of different experiences in life (Potuchek, 1992). When taking a look at gender norms, specific norms of masculinity and femininity also have to be considered as they could differ per country (Sevilla-Sanz, Gimenez-Nadal, & Fernández, 2010). Masculinity norms consist of traditional ideas that being a 'caring man' impacts status negatively, while femininity norms consist of traditional ideas that being a 'caring woman' is how it should be and caring is a woman's primary responsibility (Sevilla-Sanz, Gimenez-Nadal, & Fernández, 2010).

The role differentiation approach, the socialization ideology and gender theory all show how education level is related to gender norms and thus influences how parents divide care responsibilities. Due to changes in these gender norms and the economic position (including level of education) of women, the question is how strong these gender norms are influencing today's society.

Hypotheses

This study examines the relation between parents' education level and their division in care tasks. Based on literature, theories and previous studies, four hypotheses are formulated.

H₁: There is a positive relation between education level and the division in care tasks: if the education level is higher, the division in care tasks will be more equal/liberal.

H₂: There is a positive relation between education level and liberal gender norms: if the education level is high, the gender norms will be more liberal.

H₃: There is a positive relation between gender norms and the division in care tasks: if the

gender norms are more liberal, the division in care tasks will be more equal/liberal.

H4: Income inequality affects the relation between education level and the division in care tasks: if the incomes are very unequally divided, the effect will be less strong.

Furthermore, gender is expected to have an impact on income inequality because of the one-and-a-half earner model and gender pay gap. It can also impact gender norms as there is a difference between masculine and feminine norms according to previous research (Sevilla-Sanz, Gimenez-Nadal, & Fernández, 2010). Therefore I will divide the data in two groups, men and women, because it is possible that some relations may be significant for men or women but are not seen when controlling for gender.

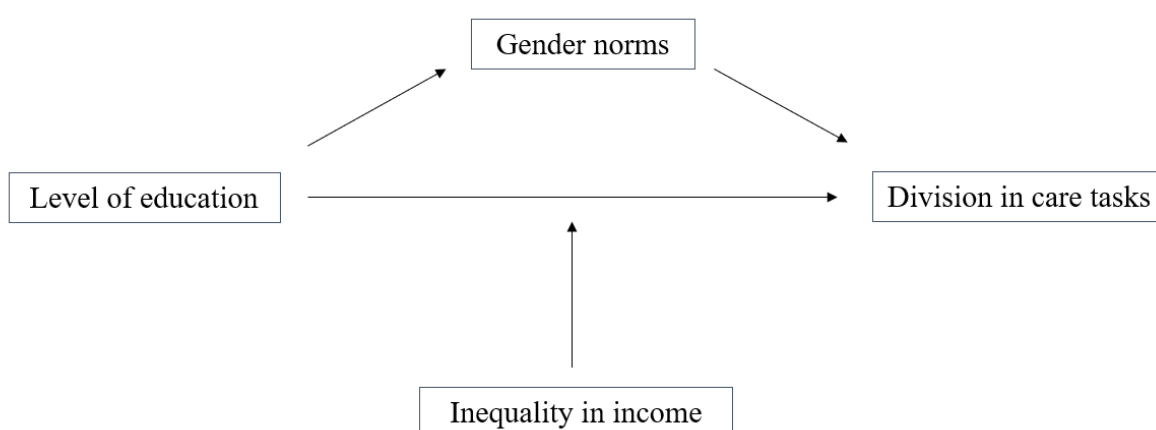


Figure 1. Model of analysis: level of education as a predictor for division in care tasks, mediated by gender norms and moderated by inequality in income.

Method

Study design

This study is a cross-sectional research based on quantitative data gained from online, Dutch questionnaires. The collection of the data of this study was administrated by CentERdata and obtained by researchers from Utrecht University, University of Amsterdam and Radboud University in The Netherlands. They made use of the LISS panel which is a panel composed by CBS. A random sample from the population registers of CBS was drawn to create a panel. The LISS panel is a considerate group and an overarching, inclusive representation of the Dutch society. Despite the fact that the questionnaires of this research

were online, panel members without technical equipment were reached and included by providing equipment.

Data and measurements

The original study and data collection were approved by the ethical committee of the Faculty of Behavioral and Social sciences from Utrecht University. This current study was also approved by the same committee. All LISS panel members signed an informed consent before participating and different LISS Data Archive officers are responsible for obtaining consent, the representativeness and the quality of the data³. The LISS panel members knew their answers would be used for research only and would stay anonymous. All data was collected between September 2019 and March 2020. More recent data was available, but is not taken into account because of a possible impact of COVID-19. Questionnaires family and household ($N=5265$), politics and values ($N=6286$) and background characteristics ($N=9290$) were taken into account.

Study Sample

In the dataset Family & Household a lot of missings were found, as it was not obligatory to answer all questions. Unfortunately, this impacted the sample size considerably, as only 329 respondents completed the questions about the division in care tasks. After merging the three questionnaires, 281 cases were present. Respondents were excluded if income values (personal or household income) were missing. The final sample consisted of 196 respondents. All respondents met the requirement of having at least one child under the age of 4 living at home and one respondent per household was interviewed. Gender was equally represented (50,5% men and 49,5% women) in the sample and respondents were on average 38 years old ($SD = 5.037$).

Level of education

In order to analyze the relation between level of education and division in care tasks, we measured education level by asking for the highest, completed level of education in standardized CBS categories (primary education, vmbo, havo/wwo, mbo, hbo and university). These categories were seen as continuous in order to keep variance in the analysis.

³ Full description of the operation of the LISS Data Archive is documented in the "Preservation and Dissemination Policy of the LISS Data Archive" retrieved from https://www.lissdata.nl/sites/default/files/afbeeldingen/Preservation%20and%20Dissemination%20Policy%20of%20the%20LISS%20Data%20Archive_2.0.pdf

Inequality in income

To analyze inequality in income, gross household monthly income and personal gross monthly income were used and a new variable partner income was created. When the personal or partner income was zero, it was manipulated to 1 to make sure a ratio could be calculated. The ratio between personal and partner income was calculated. The outcomes functioned as the measure for inequality and were divided in two categories with 0 indicating parents' income is almost equal/mother earns more than partner and 1 indicating the mother is financially dependent. The mother is seen as financially dependent when the father earns at least 33% more.

Gender norms

Gender norms were measured by taking seven items into account such as: "Men should earn money and women should take care of household and care tasks" and "Men and women should both contribute to the household income". Answers could be given on a scale of 1 to 5 with 1 indicating: totally disagree and 5 indicating totally agree. A reliability analysis was done to make sure all seven items represent gender norms in a valid way. The item 'fathers should do more in household work' was deleted, due to an increase in the Cronbach's Alpha when the item was deleted. The sum score of all items was measured and used in the analysis.

Division in care tasks

The division of care tasks was measured by eight items. Four of them answering the question: 'Can you indicate which of you does these tasks more often?'. Four different tasks were presented such as 'story reading, playing games, other forms of play' and 'bringing to daycare/school'. Answers could be given on a scale of 1 to 5 with 1 indicating: 'I do a lot more than my partner' and 5 indicating: 'my partner does a lot more than I'. The other four items were about: 'Can you indicate which of you performs these tasks, you or your partner?'. Tasks are for example 'changing diapers' and 'staying at home with the child when unwell'. Answers could be given on a scale of 1 to 7 with 1 indicating: 'only me' and 7 indicating: 'only my partner'. A reliability analysis was done to make sure the eight items represent division in care tasks in a valid way. A new scale was created to generate a variable that measures the equality in the division with 1 indicating: mother does almost everything and 5 indicating: father does almost everything. The mean of these scores represented the division in care tasks. When one answer was missing, the outcome was manipulated by adding the mean to include the respondent. This was the case for 8 respondents.

Data analysis

To analyze the data, all datasets were merged into one dataset with use of SPSS Statistics 28. I tested the assumptions of normality, linearity, homoscedasticity and the absence of multicollinearity. Hypothesis 1 was tested by doing a linear regression analysis to test if education level (independent continuous variable) has an effect on the division in care tasks (dependent interval variable). Hypothesis 2 and 3 were tested by using multiple regression analysis to test the effect of gender norms (mediator interval variable). The analysis was conducted through the SPSS regression program PROCESS v3.0 by Andrew F. Hayes. Hypothesis 4 was not tested in the intended way due to the small sample size. Instead, inequality in income (independent dichotomous variable) was tested by a multiple regression analysis to test the effect on division in care tasks.

Results

The sample ($N=196$) consists of 99 men (50,5%) and 97 women (49,5%). The descriptive of all interval and continuous variables are shown in table 1. All differences in means for men and women were tested with independent t-tests but none of the differences are significant: level of education ($t(194) = -6.04, p = .216$), division in care tasks ($t(194) = 5.130, p = .302$) and gender norms ($t(194) = -1.12, p = .523$). The dichotomous variable is shown in table 2.

Table 1

Descriptive of the interval and continuous variables in the sample (N=196)

Variable	Min.	Max.	Men		Women		Total	
			Mean	SD	Mean	SD	Mean	SD
Level of education	1	6	4.74	1.17	4.84	1.10	4.79	1.13
Division in care tasks	1	5	2.75	0.53	2.37	0.51	2.57	0.55
Gender Norms	12	35	25.32	4.19	26.04	4.74	25.68	4.48

Table 2

Descriptive of the dichotomous variable (N=196)

Variable	Item	Men		Women		Total	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Inequality in income	Mother is depended	72	72.7	58	59.8	66	33.7
	Mother is not depended	27	27.3	39	40.2	130	66.3
	Total	99	100	97	100	196	100

Level of education

A simple linear regression was used a relation between education level and the division in care tasks (H_1). The results show a non-significant positive relation for men, $F(1,97) = 2.51, p = .117, R^2 = .03, R^2 \text{ adjusted} = .02$. The relation is non-significant and positive for women as well, $F(1,95) = 3.06, p = .084, R^2 = .03, R^2 \text{ adjusted} = .02$. It can be concluded level of education does not have a direct effect on divisions in care tasks. Results are shown in table 3.

Table 3.

Simple linear regression for division in care tasks (N=196)

Predictor	Men				Women			
	<i>b</i>	<i>SE B</i>	<i>B</i>	<i>p</i>	<i>b</i>	<i>SE B</i>	<i>B</i>	<i>p</i>
Constant	2.41	0.22			1.97	.23		
Level of education	0.07	0.05	0.16	.117	0.08	0.05	0.12	.084

Note. $R^2 = .025$ for men; $R^2 = .031$ for women

Inequality in income

A negative effect of income inequality on the relation between education level and the division in care tasks (H_4), could not be tested due to the small sample size. Instead, the effect of inequality in income on division of care tasks was tested by doing a multiple regression analysis with level of education and inequality in income as predictors and division in care tasks as outcome variable. Results show that level of education and inequality in income are

not significantly related with division in care tasks, only 2,1% of the variance is explained, $F(1,193) = .21, p = .630, R^2 = .02, R^2 \text{ adjusted} = .01$. It can be concluded that inequality in income does not have a direct effect on division in care tasks. Results are shown in table 4.

Table 4.

Multiple regression for division in care tasks (N=196)

Predictor	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>p</i>
Step 1				
Constant	2.23	0.17		
Level of education	0.07	0.04	0.14	.048
Step 2				
Constant	2.26	0.18		
Level of education	0.07	0.04	0.14	.048
Inequality in income	-0.04	0.08	-0.03	.630

Note. $R^2 = .020$ for step 1; $R^2 = .021$ for step 2

Gender norms

To investigate the mediation effect of gender norms on the relation between level of education on the division in care tasks (H_2, H_3) a regression analysis was performed separately for men and women. There is a significant positive effect of education level on gender norms for men

$B = 0.96, p = .008, 95\% \text{ C.I. } [.00, .07]$ and women, $B = 1.04, p = .018, 95\% \text{ C.I. } [.00, .07]$.

This accepts H_2 , which poses that there is a positive relation between education level and liberal gender norms for both men and women.

Results show acceptance for H_3 as well, which poses there is a positive relation between gender norms and the division of care tasks. A positive significant effect is found for both men ($p = .034$) and women ($p = .008$). Therefore, it can be concluded that gender norms have a positive mediating effect for both men and women in the relation between education level and division in care tasks. Results for men are shown in figure 2 and for women in figure 3.

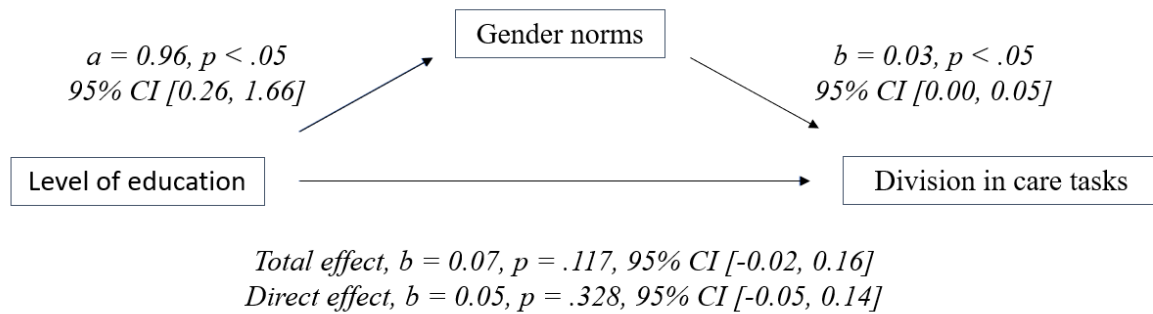


Figure 2. Mediation model of level of education as a predictor of division in care tasks, mediated by gender norms for men.

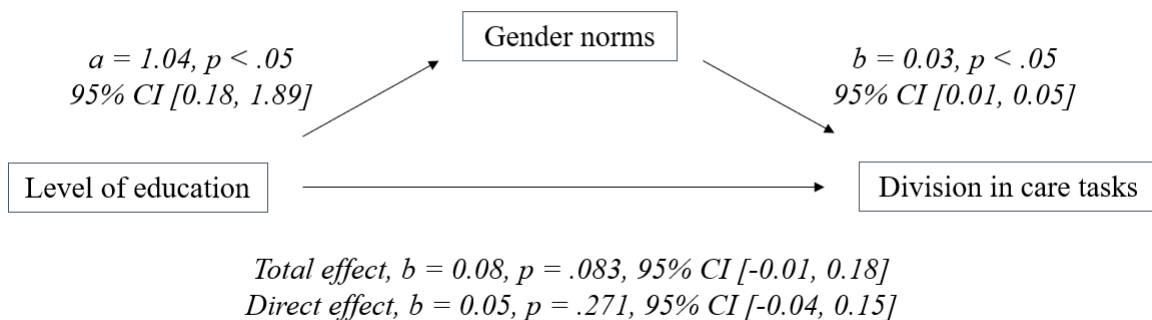


Figure 3. Mediation model of level of education as a predictor of division in care tasks, mediated by gender norms for women.

Discussion

This study aimed to explore the relationship between Dutch parents' educational level and their division in care tasks. The central research questions were: What is the relation between Dutch parents' education level and their division in care tasks? And what is the influence of gender norms and income inequality on this relation?

The results show support for the relation between level of education, gender norms and the division in care tasks. This indicates that higher educated parents with at least one child under the age of 4, are more likely to have gender egalitarian ideas about care task division. This result is consistent with previous research (Van Wel & Knijn, 2014) that showed that traditional gender norms are more prevalent among women with lower levels of education. There may also be an intergenerational effect that perpetuates the traditional norm

and therefore the studies show the same results. Research shows that daughters who have a working mother are more likely to become a working mother themselves and have more liberal ideals about work and care (Ruitenbergh & de Beer, 2014).

The results of this study show no support for the direct effect of level of education on the division in care tasks. This is contrary to what was expected. A possible explanation can be that the sample size was too small, which meant that not all categories of education level were represented equally. It may be that educational attainment in itself is not important enough to explain how parents divide care responsibilities, but that one's educational attainment ensures that one enters a certain social environment. Education level then determines the environment you end up in, the gender norms you are given and the people you surround yourself with. This indirect relationship can be further explored in future research.

Additionally, there is no support for the relation between inequality in income and parents' division in care responsibilities. This result differs from Hiller (1984) and Mederer's (1993) theories that give economic explanations for a skewed distribution in care responsibilities. This difference can be explained by previous research that showed the care culture is deeply rooted in our society and plays a greater role than financial factors (Van Wel & Knijn, 2014). Another factor that can play a role is that respondents sometimes do not know their income and therefore fill in an estimate, round it off or do not want to answer truthfully. It does not necessarily mean that income does not play a role at all but currently gender norms are more decisive. It remains important to conduct this research in a longitudinal study. When gender norms change in the future, people will make other choices based on what is expected of them and what they think they should do. This affects the factors of division of care responsibilities.

This study has some limitations. The dataset of this study was collected by researchers and the LISS panel was used. This provides a high degree of validity because this panel has been carefully constructed. Unfortunately, the sample size in this study turned out to be small which also means that the validity cannot be guaranteed. For example, the distribution of respondents across education level does not correspond to how it is on average in the Netherlands. Therefore, it is hard to generalize the results to all Dutch parents with at least one child under the age of 4. In addition, inequality in income was not examined as expected due to the small sample size. As a result, only the influence of income inequality on the division of care responsibilities has now been tested but not the effect of income inequality on the relationship between level of education and division in care tasks.

However, this study also has some strengths. First, current research confirms previous findings on the relationship between educational attainment, gender norms, and the division of care responsibilities. This relationship was also investigated several years ago but emancipation has strengthened the position of women in the labor market and is changing the traditional gender norm (Brakel, 2020). It appears again that prevailing gender norms have more force on the choices parents make in division of labor and care. Second, the questionnaires are very well constructed and valid. The variables were tested using many questions that are well correlated and therefore provide a complete picture of the distribution in caring tasks and gender norms.

To conclude, we can state that individuals with a higher level of education have more liberal ideas about dividing work and care and divide care responsibilities more equally between father and mother. Although economic factors were expected to play a role because of economic efficiency, they appear to have no effect for parents in this study.

To create a more equal division of care responsibilities between fathers and mothers, gender norms must be addressed. It is clear that there is a relationship between gender norms and the division of care responsibilities and that education level plays a role in this. Future interventions can focus on schoolchildren in which programs are offered to question the social norm. When traditional norms are not taken for granted, there may be more freedom in making choices. It is important here to consider educational level because gender norms are related to this. To create more gender equality in care and work, future research can focus on the long-term and on testing of interventions as described above, as gender norms continue to change over time.

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Appendices

Appendix 1 – Instruments

LISS Panel – Background characteristics – October 2019

Questionnaire: [Background characteristics](#)

Used questions: Nomem_encr, geslacht, brutoink_, brutohh_f, oplcat,

LISS Panel – Family and Household – Wave 12

Questionnaire: [Family and Household](#)

Used questions: Nomem_encr, cf19|198 – cf19|201, cf19|202 – cf19|206

LISS Panel – Gender norms – Wave 12

Questionnaire: [Politics and values](#)

Used question: Nomem_encr, cv20|109 – cv20|111, cv20|112 – cv20|115

Appendix 1 – Syntax

```
1  ▶ Encoding: UTF-8.
2
3  AANPASSEN VAN VARIABELEN
4
5  Compute brutoink_partner2=0.
6    IF(brutoink_partner>1) brutoink_partner2=brutoink_partner.
7    IF(brutoink_partner=0) brutoink_partner2=1.
8  Execute.
9
10 Compute newvar=1.
11   IF (brutoink_partner>1) newvar=brutoink_partner.
12   IF (brutoink_partner=1) newvar=0.
13 EXECUTE.
14
15 * Encoding: UTF-8.
16 Compute newvar=ZT_gender2.
17   IF (geslacht=1) newvar=ZT_1_gender.
18   IF (geslacht=2) newvar=ZT_1.
19 EXECUTE.
20
21 COMPUTE newvar=ZT_2gender2.
22   IF (geslacht=1) newvar=ZT_2_man_recode.
23   IF (geslacht=2) newvar=ZT_2.
24 EXECUTE.
25
26 COMPUTE newvar=ZT_3gender2.
27 IF (geslacht=1) newvar=ZT_3_man_recode.
28 IF (geslacht=2) newvar=ZT_3.
29 EXECUTE.
30
31 COMPUTE newvar=ZT_4gender2.
32 IF (geslacht=1) newvar=ZT_4_man_recode.
33 IF (geslacht=2) newvar=ZT_4.
34 EXECUTE.
35
36 COMPUTE newvar=ZT_5gender2.
37 IF (geslacht=1) newvar=ZT_5_man_recode.
38 IF (geslacht=2) newvar=ZT_5_recode.
39 EXECUTE.
40
41 COMPUTE newvar=ZT_6gender2.
42 IF (geslacht=1) newvar=oud_ZT_6_man_recode.
43 IF (geslacht=2) newvar=oud_ZT_6_recode.
44 EXECUTE.
```

```
43 IF (geslacht=2) newvar=oud_ZT_6_recode.
44 EXECUTE.
45
46 COMPUTE newvar=ZT_7gender2.
47 IF (geslacht=1) newvar=ZT_7_man_recode.
48 IF (geslacht=2) newvar=ZT_7_recode.
49 EXECUTE.
50
51 COMPUTE newvar=ZT_5gender2.
52 IF (geslacht=1) newvar=ZT_8_man_recode.
53 IF (geslacht=2) newvar=ZT_8_recode.
54 EXECUTE.
55
56 COMPUTE newvar=ZT_9gender2.
57 IF (geslacht=1) newvar=ZT_9_man_recode.
58 IF (geslacht=2) newvar=ZT_9_recode.
59 EXECUTE.
60
61 COMPUTE newvar=bichoZT.
62 IF (SUM_ZT>24) newvar=0.
63 IF (SUM_ZT<24) newvar=1.
64 IF (SUM_ZT=24) newvar=1.
65 EXECUTE.
66
67 COMPUTE newvar=ink.
68 IF (brutoink_partner<1) newvar=1.
69 IF (brutoink_partner>1) newvar=brutoink_partner.
70 EXECUTE.
71
72 COMPUTE newvar.
73 IF (brutoink<1) newvar=1.
74 IF (brutoink>1) newvar=brutoink.
75 EXECUTE.
76
77 COMPUTE newvar.
78 IF (lnk_ong2<.1) newvar=1.
79 IF (lnk_ong2>.1)&(lnk_ong2<.5) newvar=2.
80 IF (lnk_ong2>.5)&(lnk_ong2<.75) newvar=3.
81 IF (lnk_ong2>.75)&(lnk_ong2<1.25) newvar=4.
82 IF (lnk_ong2>1.25)&(lnk_ong2<1.5) newvar=5.
83 IF (lnk_ong2>1.5)&(lnk_ong2<10) newvar=6.
84 IF (lnk_ong2>10) newvar=7.
85 EXECUTE.
86
```

```
86
87 COMPUTE newvar.
88 IF (oplcatt=1) newvar=0.
89 IF (oplcatt=2) newvar=0.
90 IF (oplcatt=3) newvar=0.
91 IF (oplcatt=4) newvar=0.
92 IF (oplcatt=5) newvar=1.
93 IF (oplcatt=6) newvar=1.
94 EXECUTE.
95
96 COMPUTE newvar.
97 IF (geschl=1) newvar=0.
98 IF (geschl=2) newvar=1.
99 EXECUTE.
100
101 COMPUTE newvar.
102 IF (inkong=1)&(Gender=1) newvar=1.
103 IF (inkong=2)&(Gender=1) newvar=1.
104 IF (inkong=3)&(Gender=1) newvar=1.
105 IF (inkong=4)&(Gender=1) newvar=0.
106 IF (inkong=5)&(Gender=1) newvar=0.
107 IF (inkong=6)&(Gender=1) newvar=0.
108 IF (inkong=7)&(Gender=1) newvar=0.
109 IF (inkong=1)&(Gender=0) newvar=0.
110 IF (inkong=2)&(Gender=0) newvar=0.
111 IF (inkong=3)&(Gender=0) newvar=0.
112 IF (inkong=4)&(Gender=0) newvar=0.
113 IF (inkong=5)&(Gender=0) newvar=1.
114 IF (inkong=6)&(Gender=0) newvar=1.
115 IF (inkong=7)&(Gender=0) newvar=1.
116 EXECUTE.
117
118 INDEPENDENT T-TEST TO DO MEANS TESTS
119
120 DATASET ACTIVATE DataSet4.
121 T-TEST GROUPS=Gender(0 1)
122 /MISSING=ANALYSIS
123 /VARIABLES=ZT_gem
124 /ES DISPLAY(TRUE)
125 /CRITERIA=CI(.95).
126
127
```

```

127
128 T-TEST GROUPS=Gender(0 1)
129 /MISSING=ANALYSIS
130 /VARIABLES=GN_sum
131 /ES DISPLAY(TRUE)
132 /CRITERIA=CI(.95).
133
134
135
136 T-TEST GROUPS=Gender(0 1)
137 /MISSING=ANALYSIS
138 /VARIABLES=oplcat2
139 /ES DISPLAY(TRUE)
140 /CRITERIA=CI(.95).
141
142 DIRECT RELATION BETWEEN LEVEL OF EDUCATION AND EN DIVISION IN CARE TASKS (MEN)
143
144 DATASET ACTIVATE DataSet2.
145 REGRESSION
146 /DESCRIPTIVES MEAN STDDEV CORR SIG N
147 /MISSING LISTWISE
148 /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
149 /CRITERIA=PIN(.05) POUT(.10)
150 /NOORIGIN
151 /DEPENDENT ZT_gem
152 /METHOD=ENTER oplcat2
153 /SCATTERPLOT=(*ZRESID ,*ZPRED)
154 /RESIDUALS NORMPROB(ZRESID).
155
156 DIRECT RELATION BETWEEN LEVEL OF EDUCATION AND DIVISION IN CARE TASKS (WOMEN)
157
158 DATASET ACTIVATE DataSet3.
159 REGRESSION
160 /DESCRIPTIVES MEAN STDDEV CORR SIG N
161 /MISSING LISTWISE
162 /STATISTICS COEFF OUTS R ANOVA
163 /CRITERIA=PIN(.05) POUT(.10)
164 /NOORIGIN
165 /DEPENDENT ZT_gem
166 /METHOD=ENTER oplcat2.
167
168

```



```

168
169 DIRECT RELATION BETWEEN LEVEL OF EDUCATION AND DIVISION IN CARE TASKS (MEN & WOMEN)
170
171 DATASET ACTIVATE DataSet4.
172 REGRESSION
173 /DESCRIPTIVES MEAN STDDEV CORR SIG N
174 /MISSING LISTWISE
175 /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
176 /CRITERIA=PIN(.05) POUT(.10)
177 /NOORIGIN
178 /DEPENDENT ZT_gem
179 /METHOD=ENTER oplcat2 NEW
180 /SCATTERPLOT=(*ZRESID ,*ZPRED)
181 /RESIDUALS NORMPROB(ZRESID).
182
183 MULTIPLE REGRESSION STEP 1
184
185 REGRESSION
186 /DESCRIPTIVES MEAN STDDEV CORR SIG N
187 /MISSING LISTWISE
188 /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
189 /CRITERIA=PIN(.05) POUT(.10)
190 /NOORIGIN
191 /DEPENDENT ZT_gem
192 /METHOD=ENTER oplcat2
193 /SCATTERPLOT=(*ZRESID ,*ZPRED)
194 /RESIDUALS NORMPROB(ZRESID).
195
196 MULTIPLE REGRESSION STEP 2
197
198 REGRESSION
199 /DESCRIPTIVES MEAN STDDEV CORR SIG N
200 /MISSING LISTWISE
201 /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
202 /CRITERIA=PIN(.05) POUT(.10)
203 /NOORIGIN
204 /DEPENDENT ZT_gem
205 /METHOD=ENTER oplcat2 GN_sum NEW
206 /SCATTERPLOT=(*ZRESID ,*ZPRED)
207 /RESIDUALS NORMPROB(ZRESID).
208
209 TESTING ASSUMPTIONS
210
211 DATASET ACTIVATE DataSet4.
212 REGRESSION
213 /DESCRIPTIVES MEAN STDDEV CORR SIG N
214 /MISSING LISTWISE
215 /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
216 /CRITERIA=PIN(.05) POUT(.10)
217 /NOORIGIN
218 /DEPENDENT ZT_gem
219 /METHOD=ENTER oplcat2 GN_sum NEW
220 /SCATTERPLOT=(*ZRESID ,*ZPRED)
221 /RESIDUALS NORMPROB(ZRESID).
222
223 MEDIATION IN PROCESS (MEN)
224 CLICK ANALYZE
225 CLICK REGRESSION
226 CLICK PROCESS
227 Y VARIABLE = DIVISION IN CARE TASKS
228 X VARIABLE = LEVEL OF EDUCATION IN CBS
229 MEDIATOR = GENDER NORMS SUM
230 MODEL NUMBER = 4
231 CLICK OPTIONS
232 CLICK SHOW TOTAL EFFECT MODEL
233 CLICK EFFECT SIZE
234 CLICK STANDARDIZED COEFFICIENTS
235 CLICK OK
236 CONFIDENCE INTERVALS = 95
237 NUMBER OF BOOTSTRAP SAMPLES = 5000
238 CLICK OK - RUN ANALYSIS
239

```

240 MEDIATION IN PROCESS (WOMEN)
241 CLICK ANALYZE
242 CLICK REGRESSION
243 CLICK PROCESS
244 Y VARIABLE = DIVISION IN CARE TASKS
245 X VARIABLE = LEVEL OF EDUCATION IN CBS
246 MEDIATOR = GENDER NORMS SUM
247 MODEL NUMBER = 4
248 CLICK OPTIONS
249 CLICK SHOW TOTAL EFFECT MODEL
250 CLICK EFFECT SIZE
251 CLICK STANDARDIZED COEFFICIENTS
252 CLICK OK
253 CONFIDENCE INTERVALS = 95
254 NUMBER OF BOOTSTRAP SAMPLES = 5000
255 CLICK OK - RUN ANALYSIS
256