

Gender Equality in the Family and Childbearing

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Dommermuth, L., Hohmann-Marriott, B., & Lappegård, T. (2017). Gender Equality in the Family and Childbearing. *Journal of Family Issues*, 38(13), 1803–1824.

<https://doi.org/10.1177/0192513X15590686>



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Acknowledgments:

This study is part of the research project Family Dynamics, Fertility Choices and Family Policy (FAMDYN), funded by the Research Council of Norway (project no. 202442/S20).

The longitudinal data were provided through the ACCESS Life Course Infrastructure Project funded by the Research Council of Norway (grant no. 195403) and NOVA. We are grateful for the valuable comments from the participants at the Annual meeting of the Population Association of America in New Orleans 2013 as well as Kjetil Telle and Marit Rønsen.

Thanks also to the Australian National University, Australian Demographic and Social Research Institute that hosted Lappegård while substantial part of her share was performed.

Abstract

Gender equality and equity in the division of household labor may be associated with couples' transitions to first, second, and third births. Our comprehensive analysis includes the division of housework and childcare as well as the perception of whether this division is fair and satisfactory. We use a unique dataset combining the Norwegian Generations and Gender Survey (2007) with information on childbirths within three years after the interview from the population register. We found that an unequal division of housework is associated with a decreased chance of first and subsequent births. Childcare is most relevant when the respondent is satisfied with the division, as one-child couples where the respondent is less satisfied with the division of childcare are less likely to have a second child. Our findings suggest that, even in a high-equity context such as Norway, equality and equity in the household are also important for childbearing.

Keywords

childbearing, gender equality, division of housework, equity, fertility

Introduction

Low fertility in developed societies may be exacerbated by the pressure placed on families by women's extra burden. This burden results from the gap between high levels of societal gender equality, particularly in labor markets, and low levels of gender equality within families (Goldscheider, Oláh, & Puur, 2010; McDonald, 2000). According to gender equity theory, women's new opportunities from education and the labor market raise perceptions of unfairness when women are not supported if they become mothers, and thus may reduce childbearing (McDonald, 2013). Developed countries vary greatly in their institutional support for work-family balance, ranging from relatively little support in Southern Europe and Southeast Asia, to relatively high levels of support in Northern Europe. Even in a national context of equal opportunities and strong institutional support for families, such as Norway, household factors may differ. The relationship between gender equality and fertility may depend on these household factors such as the division of household labor, the perception of this division, and different childbearing transitions (Westoff & Higgins, 2009; Goldscheider et al., 2010; Neyer, Lappegård, & Vignoli, 2013). Disentangling the influence of gender equality and equity on different childbearing transitions may provide important information on the processes influencing individual fertility behavior.

The aim of this study is to investigate how gender equality and equity are associated with childbearing among couples at different birth transitions in Norway. We focus on housework and childcare, two related yet separate aspects of household labor. For both we look at the actual division of household labor (*equality*) as well as whether the division is perceived as fair and satisfactory (*equity*). Our analyses take into account different childbearing transitions, including couples with no children, with one child, and with two children. We also investigate the possible mediating effect of gender role attitudes. We use a unique dataset that combines data from the Norwegian Generations and Gender Survey

(GGS) in 2007 with data from the Norwegian Population Register on actual childbirths after the interview, giving us longitudinal birth histories for the entire original sample.

Background

Changing gender roles could be linked to changes in childbearing, as indicated by a wide range of prior research suggesting that the division of both housework and childcare are linked with fertility intentions and childbearing. The underlying mechanism theorized is that more gender equality in the family might ease women's burden by sharing the responsibility for children and the household, and thus provide better work and family balance, making childbearing more plausible.

This is demonstrated by studies showing that when housework is shared, couples are more likely to intend a first or subsequent child and to have a second child sooner (Buber, 2002; Mencarini & Tanturri, 2005; Mills, Mencarini, Tanturri, & Begall, 2008; Oláh, 2003; Tazi-Preve, Bichlbauer, & Goujon, 2004; Torr & Short, 2004). In addition, increasing paternal involvement in childcare is associated with both higher intentions to have another child and greater likelihood of actually having another child (Brodmann, Esping-Andersen, & Güell, 2007; Cooke, 2009; Duvander & Andersson, 2006; Duvander, Lappegård, & Andersson, 2010; Fiori, 2011; Kotila & Camp Dush, 2011; Neyer et al., 2013; Pinelli & Fiori, 2008).

Housework and childcare are often examined separately, but studies that compare the two show childcare more closely linked to fertility than housework. European couples who share childcare have stronger childbearing intentions than those who share housework (Buber, 2002; Neyer et al., 2013). Also, second births in Germany and the UK are more likely when fathers are more involved in childcare, whereas father's involvement in housework does not show this association (Cooke, 2004; Schober, 2013).

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Our first research question thus asks whether the division of housework and division of childcare are differently associated with childbearing. In Norway, as in many developed countries, men's involvement in the care of children has been increasing more rapidly than their participation in housework. Based on previous research (Buber, 2002; Cooke, 2004; Neyer et al., 2013; Schober, 2013) we assume a stronger association between division of childcare and subsequent childbearing than between division of housework and subsequent childbearing. The argument for this is that how parents arrange childcare duties may be more closely related to their preferences for family life and their desire for children than how they organize housework. In addition, child-oriented men might be more likely to take a larger share of the childcare task. However, it might also be possible to argue the other way around that gender equality in housework may be more important than gender equality in childcare. The reason for this might be that childcare tasks are seen as more pleasant and fulfilling than housework, which tends to be onerous and repetitive (Coltrane, 2004; Mannino & Deutsch, 2007). An unequal division of burdensome housework could lead to higher dissatisfaction and therefore lowered fertility.

Couples' perceptions of the gender equity or fairness of the division of household labor may be at least as important as the equality of the division itself (Fraser, 1994; McDonald, 2000). That is, the division of household labor may be unequal in practice, but as long as the practice is perceived as equitable and fair, it may be associated with increased childbearing. Equity has been compared with equality in several European countries (e.g. Bernhardt & Goldscheider, 2008; Neyer et al., 2013; Buber, 2002), finding slightly different patterns which may be accounted for by differing measurements of equity and equality and/or different country contexts. In a study comparing equality and equity of housework and their relations to intentions for a first or subsequent births across ten European countries, associations differ by parity and gender (Neyer et al., 2013). For those with no children,

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neither equity nor equality of the division of housework is associated with childbearing intentions. However, for parents the division of housework is associated with intentions for another child. For mothers, equality is most important, whereas equity matters more for fathers. Regarding the division of childcare, both mothers and fathers are more likely to intend another child if they perceive the division as equitable. Parents with two children are also more likely to intend another child if they have an equal division of childcare. Buber (2002) also compares equity and equality in childcare, finding that both equity and equality increase the likelihood of Austrian women's intentions for a second child. Reflecting the study by Neyer et al. (2013), the influence of equality is stronger than the influence of equity.

Our second research question asks whether gender equality and equity in the division of housework and childcare are differently associated with childbearing. We assume a stronger relationship between gender equity and childbearing than between gender equality and childbearing, for both housework and childcare. The argument for this is that people's perception about whether the division is fair and satisfactory may be seen as more important than the actual division. We investigate the association between gender equality and equity with childbearing for the case of Norway, a country that ranks high on the gender equality scale. Over the past decade there has been a strong gender equality discourse at the societal level, and the aim of gender equality has been implemented in family policy programs directed at families with young children. Although there are strong expectations for gender equality in both the society and in the family, gender equality in Norwegian society is more advanced than is gender equality in families, leading to a gap in gender equality between the public and private sphere. Men do a greater share of housework today, but many women and especially mothers are employed part-time and continue to perform a larger share of both childcare and household labor than men (Kitterød, 2012; Kitterød & Pettersen, 2006). This

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means there is still great variation in family arrangements in Norway which may be perceived as fair and satisfactory even when the actual division is not equal.

The linking of childbearing to equality and equity in housework and childcare may be influenced by additional factors. We focus on three: parity, men with a greater share of household labor, and gender ideology. The division of housework and childcare may have a different meaning at different parities. Studies which focus on fertility intentions find that the division of household labor shows stronger associations for women and men with children than for those without children (Mills et al., 2008; Neyer et al., 2013). Division of childcare may also be more relevant for one-child parents than for two-child parents, but this has not yet been studied. Our study takes this into account by investigating the relationship between gender equality and childbearing at different parities, including those with no children, one child and two children.

The most common division of household labor is for the woman to take on a greater share of the tasks than the man, which is usually seen to reflect gender ideology, time availability or relative resources (Bianchi, 2000). A situation where men take on a greater share of household labor than their partners is rare. This can also be difficult to identify because many studies of division of household labor use an indicator measuring the mean level of the man's or the woman's share (i.e. Batalova & Cohen, 2002; Fuwa, 2004), which may obscure important distinctions between groups (Mancini, 2013). A study including several European countries shows that exceptions where men take a greater share of housework than their female partners do exist (Davis & Greenstein, 2004). The number of men who do more may be increasing, as a study from the UK showed steady growth from the 1960s to the 1990s in the percentage of families in which the man contributed more time to family responsibilities than the woman (Sullivan, 2006). This leaves open the question of how unequal division of housework and childcare is related to childbearing when men do

more. Do men do more because they are more family-oriented and thus more likely to have a first or subsequent child? Or do men who do more reduce their childbearing in response to a heavier household burden? In the current study we address this in both research questions by identifying households with an unequal division of labor, both where the woman does more and where the man does more.

Gender role attitudes might mediate the relationship between the division of household labor and childbearing. Studies on gender equality and fertility intentions often use gender role attitudes as indicators of gender equality (Kaufmann, 2000; Philipov, 2008; Puur, Oláh, Tazi-Preve, & Dorbritz, 2008; Westoff & Higgins, 2009; Goldscheider et al., 2010; Miettinen, Basten, & Rotkirch, 2011). At the country level, gender roles in the public sphere have a negative relationship with fertility (Westoff & Higgins, 2009) and the relationship between gender ideology and childbearing intentions shows extensive variation across gender role dimensions, gender and societies (Lappegård, Neyer, & Vignoli, 2012). At the individual level, by contrast, men's egalitarian attitudes have a positive relationship with their fertility (Puur et al., 2008). Bernhardt and Goldscheider (2008) contrast long-held attitudes toward division of labor with the reality of housework and childcare once children arrive. They find that, indeed, a clash between expectations and reality results in a reduced likelihood of having another child. By contrast, those couples with an unequal division of labor are just as likely as those with an equal division to have another child if they view the division as equitable. Gender role attitudes might thus be particularly important in moderating the relationship of equality and equity in household labor with childbearing (Kluwer et al. 2002). In our individual level study, we test for this moderating effect of gender role attitudes in both research questions.

Data and Methods

Data

We use data from the Norwegian Generations and Gender Survey (GGS) conducted in 2007 (Vikat et al., 2007) and childbearing records from the respondents for the three years after the interviews from administrative registers. The Norwegian GGS is a nationally representative survey conducted by telephone, with a response rate of 60%. The final dataset comprises 14,892 respondents (Lappegård & Veenstra, 2010). The survey includes multiple measures of domestic responsibilities, including housework and childcare tasks and the level of satisfaction with these arrangements. In addition to the information obtained directly from the respondents, the Norwegian GGS includes individual-level data from administrative registers linked by a system of universal ID numbers (Røed & Raam, 2003). In Norway, all births are reported to the Norwegian Population Register, allowing us to include all children born to respondents for the three years following the initial survey. This means that our data did not suffer from the usual problem of attrition in panel data.

Sample

Our sample includes men and women living in a co-residential, heterosexual union where the woman (the respondent or the partner of the respondent) is aged between 18 and 40 at the time of the interview, is physically capable of childbirth, but is not currently pregnant. Childless, one-child and two-child couples at the time of the interview are analyzed separately. For couples with children, only those with children from the current partnership and where the youngest is aged three or less at time of the interview are included in our sample. Thus, these couples are in relatively similar situations, as subsequent childbearing normally happens within a few years. Our selected sample consists of 1,537 couples.

Dependent variable. The birth of a first or subsequent child within three years after the interview is the dependent variable in our analysis. The time window of 36 months (three years) is the same for all respondents included in our sample and the variable is coded as a dummy variable.

Explanatory variables. Our model includes four main explanatory variables: division of housework and childcare (equality), and perception of fairness (equity) of each division. An indicator of equality in housework is based on the division of four different tasks: cooking, dish washing, food shopping, and housecleaning. Respondents were asked to indicate who usually performed each task (*'always respondent'*, *'usually respondent'*, *'respondent and partner about equally'*, *'usually partner'*, *'always partner'* and an additional sixth category *'usually someone else'* which was not used by any respondent in our sample). We recoded the answers into men's and women's part in each task: *'1 - always the woman'*, *'2 - usually the woman'*, *'3 - woman and man share it about equally'*, *'4 - usually the man'* and *'5 - always the man'*. A sum score for these four tasks led to an index with a theoretical range from 4 to 20, where a value of 4 indicates that the woman always does all, a value of 12 represents a balanced division between the two partners and a value of 20 that the man always does all tasks. In our data the maximum value was 18, indicating that no men performed all tasks. As we did not expect a linear association between man's involvement in housework and childbirth, we distinguished between four categories. Values from 4 to 9 were coded as *'unequal; woman does more'*, values of 10 and 11 were coded as *'semi-equal'* (i.e. the woman does more but the man contributes), values of 12 were coded as *'equal'*, and values higher than 12 were coded as *'unequal; man does more'*.

A similar indicator was created for the division of childcare. This was based on four tasks: dressing children, putting children to bed, staying at home with sick children, and playing with children and/or taking part in leisure activities with them. The same response choices as for the housework tasks were used in the survey. We recoded them in the same way as for the division of housework tasks and again distinguish between the four categories in terms of how the couples share the childcare duties.

Our variables on equity are represented by satisfaction with the division of labor, which is in line with prior research (i.e. Buber, 2002; Neyer et al., 2013). Satisfaction with the division is not the same as perceiving it as fair, but satisfaction proxies for fairness by assuming that people would not be satisfied if they perceive the division as unfair or unjust. For both housework and childcare, the respondents were asked to indicate their level of satisfaction with the division of labor in each of these two areas. The scales for these variables ranged from 0 to 10 where 10 denoted ‘*very satisfied*’ with the division. We created two categories of equity, where equitable division is represented by responses 7–10 (‘*more satisfied*’) and inequitable division is represented by responses of 0–6 (‘*less satisfied*’). This coding is used for the division of housework as well as for the division of childcare.

Other variables. We also include several other background variables in our model. To evaluate the possible association between gender roles attitudes and childbearing or the possible moderating effect of gender role attitudes on the association between the equity and equality with childbearing, we include a variable based on the following statement: “A pre-school child is likely to suffer if his/her mother works”. Respondents could agree or disagree with this statement on a five-point scale. Those disagreeing with the statement (4–5) are coded as ‘*expressing egalitarian attitudes*’. Those agreeing (1-2) or neither agreeing nor disagreeing (3) are coded as ‘*expressing less egalitarian attitudes*’. This item was evaluated in a self-administrated paper survey in the Norwegian GGS, which had a lower response rate (43%) than the telephone survey. Missing values were imputed based on respondent’s gender, highest level of education, and age. Other variables that are included in our models are the woman’s age, age difference between the partners, union type, duration of the union, level of education, and employment situation of the respondent and the partner; all of which are measured at the time of the interview. We also control for the gender of the respondent and, among parents, for the age of the youngest child.

Method

We conduct logistic regression analyses to study the relationship between gender equality and equity of housework and childcare and childbearing. The models are run separately by parity, as we want to examine whether and – if so, how – the associations vary across different birth transitions. We also tested Cox regression models as an alternative to logistic regression models. The time until a possible birth (in months) was used as the dependent variable and the same independent variables were included in the models. These Cox models gave us similar results as the logistic regression models. As the exposure time was quite short, we chose to use the method presented here.

Descriptive Statistics

A descriptive overview of all variables used in the analyses is presented in Table 1, and this section will highlight the explanatory variables. In most couples in our sample men contribute at least some extent to daily housework tasks. In only one fifth of the couples do the women do all or most of the housework, but this proportion is highest for those with children. Across all parities the semi-equal category, where women do more than men but men contribute some, constitute the largest group (38% of the total sample). Equal division of housework is found in over one fifth of all couples, but this proportion is smaller among those with children. In 18% of all couples men do more housework than women. A closer look at the tasks reveals that when men are more involved, it is in tasks such as cooking, dish washing, and buying food, but rarely housecleaning. The male partner in childless couples often contributes more than do men in couples with children. In couples where men do more housework, there is a slight overrepresentation of female partners with health problems, full-time working women and part-time working men, in comparison to couples with another division of housework. Additional analyses of the cases where men did more housework show that male respondents are overrepresented. A similar pattern is found for couples where

the woman is doing most (e.g. female respondents are overrepresented), and therefore our models will control for the gender of the respondents. Almost 90% of all respondents express a high level of satisfaction with the division of housework. Although the differences are not very large, the highest levels of satisfaction are found among childless couples, and lowest among two-child couples, which may be related to the increasing amount of housework required in larger families.

Turning to the division of childcare, fewer couples fall into the two unequal categories where either the woman or the man does most, as compared to the division of housework. In line with this, the semi-equal group (where the woman does more but where the man is also involved) and the equal group are somewhat larger for childcare than housework. This indicates that, relative to housework, both parents are usually involved in childcare. Only in a few cases do men provide more childcare than women (about 8%, compared to 18% of men doing more housework than their partner). One reason might be that women are more willing to reduce time spent on housework than on time spent with their children. When it comes to satisfaction with the division of childcare, fewer than 10% express low levels of satisfaction with the division. Differences between respondents in couples with one or two children are quite small. This may reflect both more equal sharing of tasks and the perception of childcare as more fulfilling than housework.

Results

Of all respondents in our sample, 38% had a first or subsequent child within three years after the interview. This varies by parity, with the majority (64%) of one-child couples making the transition to a second child within three years after the interview (Table 1). Only 22% of two-child couples made the transition to a third child during the same time period, in line with findings showing that comparatively few couples in Norway with two children have a third child (Lappegård, 2000). In the same period, 37% of the childless couples made the

transition to parenthood. This might seem somewhat low, but it should be noted that 39% of the respondents in this group were below the age of 25, and that the mean age at first childbearing among women in Norway is around 28 years.

The results from the logistic regression models are presented in Table 2. All additional results discussed are available on request. Our estimates show the relationship between gender equality and equity in housework and childcare and couples' childbearing by parity. Gender equality is measured by the division of housework and childcare between the female and male partner in their union. In the model, we use semi-equal couples (where women do more of the task but men were substantially involved) as our reference group. The descriptive analysis (Table 1) shows that this category has the highest proportion of respondents and represents a typical division of housework in Norway today.

The Hosmer and Lemeshow Test (Hosmer & Lemeshow, 2000) indicates a good fit of all the three models presented in Table 2. Including the explanatory variables improves the goodness of fit statistics, especially for one-child couples. In order to test the strength of the significant associations found we included the *generalized R²* (Allison, 2012) for all groups. Comparing the value for the *generalized R²* with the results from models where we excluded the main explanatory variables, the *generalized R²* reduced from 0.17 to 0.16 for the childless couples, from 0.20 to 0.15 for one-child couples and from 0.17 to 0.13 for two-child couples. A stepwise selection of the independent variable indicates that the significant categories of the division of housework variable are among the five most important selected predictor variables in all three groups and that satisfaction with the division of childcare is especially relevant in the model for one-child couples.

The first research question compares the division of housework and the division of childcare. We find a significant association between the division of housework and childbearing for all three birth transitions. For couples with no children and those with one

child, couples in which the man does more housework than the woman show a significantly lower likelihood of having a child compared to semi-equal couples. Among two-child couples, we find that unequal couples where the woman does all or most of the housework have a significantly lower likelihood of having a third child compared to the semi-equal group. Overall, it appears that unequal couples are less likely to have a first or subsequent child, regardless of whether it is the man or the woman that does more housework.

The division of childcare between partners with one or two children has no significant association with a subsequent birth. The categories at either end of the scale, where either the woman does more or where the man does more, are less frequent than for the division of housework (Table 1). This means that partners usually share childcare tasks to a high degree, and if this is not the case, it may be the result of specific agreements which are not associated with continued childbearing. From these results it seems that the division of housework has more relevance for childbearing than the division of childcare.

The association between division of housework and childcare and childbearing might be mediated by gender role attitudes. To test this, we ran the models with and without gender ideology, but the association remains the same. We further tested this by including interaction terms between division of housework or childcare and gender role attitudes, and in this case there is a significant interaction between division of childcare and gender role attitudes among couples with two children. That is, among those with less egalitarian gender role attitudes, an unequal division where the women does more is associated with a higher likelihood of third birth compared to semi-equal or equal division of childcare. This means that coherence between a more traditional division of childcare and traditional gender role attitudes seems to be positively associated with having a third child.

To be sure that the result of division of housework and childcare are not a product of multicollinearity, we tested for multicollinearity in two ways. Collinearity diagnostics, which

are computed by regressing each variable on all the other explanatory variables, indicate no problems of multicollinearity (Allison, 2012). In addition we ran the models including the measures for division of housework and childcare separately and the associations remained the same.

Another issue that needs to be considered is that when measuring the division of housework and childcare using multiple items, our measurement may be biased due to some tasks being more time-consuming and the division might be different. In order to test whether our findings were consistent when taking this into account, we weighted the items by the average time spent on each task based on data from the Norwegian Time Use Survey 2010 (Vaage, 2012). By including a time-sensitive index on housework, the share of women that perform all or most of the tasks (e.g. use most time) was higher than in the index used in the presented models in Table 2, while the category of couples where the men were doing more became smaller. Compared to the original index on childcare, the category including couples with an equal division of childcare was larger in the time-sensitive index, while the group with a semi-equal division was smaller. Applying the time-adjusted indexes for the division of housework and childcare instead of the original indexes in logistic regression models produced almost the same results as those presented in Table 2.

Our second research question investigates the differences between gender equality and equity. Gender equity is included in our models by measuring satisfaction with the division of housework and childcare. While the actual division of housework is significantly associated with all birth transitions, we find no significant association of the satisfaction with division of housework and childbearing. By contrast, satisfaction with the division of childcare has a positive and significant association with second births.

As with the first question, gender role attitudes might mediate the association of satisfaction with childbearing (Kluwer et al., 2002). We tested interaction models as

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described above, and results from these interaction models showed that there was no interaction effect and thus no mediation by gender role attitudes. Another mediation effect could be exerted by the division of household labor. We tested this possibility by including interaction terms for the division of housework or childcare and satisfaction with the division. Due to few respondents reporting dissatisfaction with the division of housework or childcare, such a model does not provide meaningful result for respondents with children. Among childless, the result shows that being satisfied with the division of housework is positively associated with childbearing if the women actually do most of the housework. Among couples that share the housework equally, the association between being satisfied and childbearing is negative.

To be sure that collinearity between the division of household labor and the satisfaction with division does not affect our results, we ran the models including each explanatory variable separately as well as additional models that included either division of housework and satisfaction with the division of housework or division of childcare and satisfaction with the division of childcare. All associations remained the same, indicating no bias through multicollinearity.

Other variables included in the model operate in line with findings from previous research. We have already discussed how gender role attitudes might mediate the associations between gender equality and equity and childbearing, but gender role attitudes also have a significant direct association with childbearing. More specifically, couples where the respondent expresses less egalitarian attitudes have a higher likelihood of a first birth and a third birth compared to couples where the respondent expresses egalitarian attitudes.

There are variations in the association between women's age and childbearing by parity. Regarding childless couples, we find no significant difference between the four defined age groups. One-child couples where the woman is aged between 26 and 30 had a

higher likelihood of a birth than the two older age groups. The pattern is even stronger among two-child couples as the difference between the reference group and the oldest age group is even greater.

Only among one-child couples do we find a significant association between educational attainment and childbearing, which indicate that women with compulsory education and men with secondary education have a lower likelihood of a second birth than women and men with tertiary education. Men's employment situation is significantly associated with the transition to parenthood. Childless men not working full-time are mostly in education and such couples show significantly less likelihood of becoming parents for the first time than couples where he works full-time. There is no significant association between men's employment status and second or third births. Childless couples where the woman is not employed are less likely to have a first child compared to couples where the woman works full-time. For two-child couples, the women's working part-time rather than full-time is negatively associated with having a third child. As the division of household work may be especially important for the childbearing decisions of dual-earner couples, we also tested for interactions between couples' employment status and the division of housework and childcare. Results of these models indicate no specific association between the division of household work and childbearing by employment status, but it must be noted that the sample size may be too small to reveal such differences.

Even though most couples in Norway today cohabit before they eventually marry and the majority of first births occur during cohabitation, being married is still a strong predictor for becoming a parent (Wiik & Dommermuth, 2011; Statistics Norway, 2012). Our results are consistent with these findings, as married childless couples are more likely to have a first child compared to unmarried co-residential couples. A similar association is found for two-child couples, but not for one-child couples. Among two-child couples, being married may

more often be associated with stronger family orientation and stronger preference for more children.

For childless couples, the longer the duration of the union, the less likelihood there was of transition to parenthood. Possible explanations for this are a decision not to have children, continuous postponement of parenthood or involuntarily childlessness. The age difference in the couple, the gender of the respondent and the age of the youngest child have no significant associations with childbearing.

Discussion

Most developed societies are in a process of changing gender roles, with countries moving towards gender equality at different paces (Goldscheider et al. 2010). In this study we investigate how gender equality and gender equity of the division of housework and childcare are linked with childbearing transitions. Both equality and equity have become important to understanding low fertility in modern societies, but there is little research comparing them (for exceptions, see Buber 2002; Neyer et al. 2013). Here we compare equality and equity within a context of high gender equality on the societal level but varied gender equality in the family (Kitterød & Pettersen, 2006).

Our first research question asks whether the division of housework and the division of childcare are differently linked with childbearing. Contrary to our assumptions, we find a stronger association between division of housework and childbearing than between division of childcare and childbearing. This finding differs from prior work which has shown second births more strongly associated with childcare than with housework (Cooke, 2004; Schober, 2013). This difference may be due to differing measurements of childcare and housework, particularly our study's identification of couples where the man did more than the woman, where he did less, and where the two were equal or semi-equal. The difference with other

studies may also be related to contextual differences. It appears that in the Norwegian context it is housework rather than childcare that challenges the work-family balance. This may be because the amount of housework is higher than the amount of childcare and housework may be perceived as less meaningful than childcare (Coltrane, 2004; Mannino & Deutsch, 2007). In contrast to many countries, the amount of time parents spend on childcare is smaller in Norway, as the majority of even the youngest children attend kindergarten and most of parents' childcare is done in the evenings and the weekends. Childcare can in general be viewed as more pleasant and fulfilling than housework which may be reflected in the fact that most fathers in Norway take at least a substantial share of childcare (Kitterød & Pettersen, 2006). This may explain our result that in the Norwegian context the division of childcare is less relevant than the division of housework for subsequent childbearing.

We found that couples with an unequal division of labor are less likely to have a first or subsequent child than couples with an equal or semi-equal division of housework. There is an important gender difference, however, which our research was uniquely able to observe. Childless couples or one-child couples where the man performs more housework are less likely to have a first or second child, whereas two-child couples where the woman performs most of the housework are less likely to have a third child. The finding that couples where men perform more housework are less likely to have a first or second child may indicate that men face the same dilemma as women regarding the effect that having a child has on their career. As women with health problems are also overrepresented among these couples, this may also contribute to the lower childbearing rates of this group.

Our second research question asks whether gender equality and equity are differently associated with childbearing. Our assumption of a stronger relationship between gender equity and childbearing than between gender equality and childbearing is only partly confirmed. This is not surprising given that a previous study of ten European countries shows

a varied pattern with differences by gender and parity (Neyer et al. 2013). We find somewhat different patterns for housework and childcare. For housework, it is equality rather than equity in division of labor which is linked to childbearing. As pointed out above, those with an unequal division of housework are less likely to have a first or subsequent child. For childcare, it is equity rather than equality in division of labor which is linked to childbearing, but only for one-child couples. When the respondents are satisfied with the division of childcare, one-child couples are more likely to have a second child regardless of how childcare is actually divided. Our argument for assuming a stronger relationship between gender equity and childbearing than between gender equality and childbearing was that people's perceptions about what is fair and satisfactory may be more important than the actual division. Due to the different character of housework and childcare it might be that equity and equality play distinct roles for the two types of household labor. There is less equal division in housework than in childcare in Norway (Kitterød & Pettersen, 2006) and the incomplete gender revolution may therefore be more centered on housework. In general our results show that couples with an unequal division of housework have lower childbearing than other couples. Also, housework is something many will try to avoid or try to negotiate themselves away from (Mannino & Deutsch, 2007), which may result in a stronger weight to the actual division than the satisfaction with the division.

This study uses a dataset with the unique advantage of containing records of all births subsequent to a national survey, enabling comparison between equity and equality of housework and childcare, and enabling examination of different childbearing transitions. The dataset is limited, however, as other longitudinal data are lacking. No information was available whether the couples remained together after the survey, whether the division of housework or satisfaction with the division changed substantially or whether other life changes occurred that may have influenced their childbearing. As the respondents were

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followed for only three years after the interview, it is most likely that these factors remained relatively stable. The analyses also rely on a survey in which only one person in the household was interviewed, which means that it is uncertain whether the partners shared the same perception of the division of housework and childcare and whether the respondents were more or less satisfied with the division than their partner. Although this information was lacking, other characteristics of the partners which may influence their childbearing behavior are part of the analyses. Finally, interactions between equality and equity could not be computed for all different birth transitions due to the small size of the combined groups.

Our examination of how gender equity and equality are linked to couples' childbearing focuses on Norway, a country which scores high on gender equality, but still contains variation in gender equality at the individual level. Our study contributes to an understanding of why and how gender equality and equity in the family are linked to childbearing in countries with differing national-level gender equalities. A key question is whether gender equality has become a prerequisite for increased fertility. At the macro level, a positive relationship between a country's high level of gender equality and increasing fertility level has been found (Myrskälä, Kohler, & Billari, 2011). In Norway, gender equality has become a social norm, and the country is high in political empowerment, economic participation and opportunity, health and survival, and educational attainment. Our study reveals that Norway has a long way to go in terms of fully egalitarian division of childcare, and particularly housework between men and women. The situation could be more accurately described as a case of "gender equality light" (Rønsen & Skrede, 2006), meaning that men take an active part in family life but women perform the main share of the domestic responsibility. Many factors influence couples' childbearing decisions, and the division of housework and childcare, as well as their perception of the division, play only a part. Nevertheless, from our study we can conclude that in Norway, gender equality in the

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household – either through fully egalitarian sharing or through semi-egalitarian sharing – and gender equity are associated with higher fertility at the household level. For housework the actual division, e.g. gender equality, seems to be more important. Still, housework is less often shared equally between couples than childcare tasks. As most couples share childcare equally, equity seems to become more important here. These findings suggest that countries with high national-level gender equality also need household-level equity and equality to see an increase in fertility. Countries with low national-level gender equality may require improved gender equality at both the national level and in the family to prevent fertility falling too far.

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Table 1

Descriptive statistics

	No children	One child	Two children	All
Birth of a(nother) child within 3 years after the interview	37%	64%	22%	38%
Division of housework				
Unequal, woman more	15%	23%	29%	21%
Semi-equal	35%	41%	41%	38%
Equal	27%	20%	18%	23%
Unequal, man more	23%	16%	12%	18%
Division of childcare				
Unequal, woman more		21%	11%	15%
Semi-equal		41%	40%	40%
Equal		31%	40%	36%
Unequal, man more		7%	8%	8%
Satisfaction with division of housework	89%	88%	85%	88%
Satisfaction with division of childcare		91%	92%	91%
Less egalitarian gender role attitudes	31%	31%	27%	30%
Respondent is a women	53%	52%	48%	51%
Couple is married (vs. cohabiting)	22%	46%	65%	41%
Mean duration of union in years	3,9	5,6	8,6	5,8
Age diff. between couple (mean)	-0,33	-0,27	-0,38	-0,33
Her age at the interview				
18-25 years	39%	19%	6%	23%
26-30 years	34%	37%	27%	32%
31-35 years	20%	33%	45%	31%
36-40 years	8%	11%	22%	13%
Her highest level of education				
Compulsory education	11%	17%	9%	12%
Secondary education	33%	32%	33%	33%
Tertiary education	56%	51%	59%	56%
His highest level of education				
Compulsory education	12%	11%	9%	11%
Secondary education	41%	44%	46%	43%
Tertiary education	47%	45%	45%	46%
Her employment situation				
Full-time employment	62%	38%	39%	49%
Part-time employment	13%	21%	26%	19%
Currently not working ¹	25%	41%	36%	32%
He working full time	76%	80%	86%	80%
Age of youngest child				
0 years		32%	28%	29%
1 year		30%	25%	27%
2 years		26%	27%	27%
3 years		12%	20%	17%
<i>N</i>	691	348	498	1537

¹ Including under education, parental leave, homemakers and others

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Table 2

Logistic regression coefficients (standard error): Birth of a(nother) child, by number of children at the time of interview

	No Children		One child		Two children	
Intercept	-0.58	(0.41)	1.26	(0.81)	0.33	(0.76)
Division of housework						
Unequal, woman more	-0.25	(0.28)	0.02	(0.37)	-1.04**	(0.34)
Semi-equal (reference)						
Equal	-0.03	(0.22)	-0.25	(0.35)	0.03	(0.32)
Unequal, man more	-0.48*	(0.23)	-0.88*	(0.54)	-0.32	(0.39)
Division of childcare						
Unequal, woman more			0.33	(0.39)	0.46	(0.42)
Semi-equal (reference)						
Equal			0.35	(0.30)	0.11	(0.27)
Unequal, man more			0.53	(0.54)	0.16	(0.45)
Satisfaction with division of housework	0.25	(0.29)	-0.02	(0.46)	-0.13	(0.37)
Satisfaction with division of childcare			1.21*	(0.52)	-0.34	(0.48)
Less egalitarian gender attitudes (vs. egalitarian)	0.44*	(0.19)	-0.15	(0.27)	0.47 [†]	(0.28)
Respondent is a man	0.12	(0.22)	-0.09	(0.32)	-0.12	(0.32)
Couple is married (vs. cohabiting)	0.41 [†]	(0.22)	0.04	(0.26)	0.67*	(0.28)
Duration of union in years at interview	-0.10**	(0.03)	-0.05	(0.05)	-0.05	(0.05)
Age difference between the couple	0.00	(0.02)	-0.01	(0.03)	0.01	(0.03)
Her age at the interview						
18-25 years	-0.12	(0.22)	-0.46	(0.37)	0.62	(0.49)
26-30 years						
31-35 years	-0.14	(0.24)	-0.95**	(0.32)	-0.95**	(0.30)
36-40 years	-0.87	(0.41)	-1.44**	(0.44)	-1.68	(0.41)
Her highest level of education						
Compulsory education	-0.34	(0.35)	-0.80*	(0.40)	-0.58	(0.50)
Secondary education	-0.36	(0.23)	-0.53	(0.32)	-0.15	(0.31)
Tertiary education (reference)						
His highest level of education						
Compulsory education	-0.31	(0.35)	0.02	(0.50)	-0.41	(0.46)
Secondary education	-0.29	(0.22)	-0.81*	(0.33)	-0.30	(0.28)
Tertiary education (reference)						
Her employment situation						
Full-time employment (reference)						
Part-time employment	-0.32	(0.26)	0.41	(0.35)	-0.81*	(0.33)
Currently not working ¹	-0.95***	(0.23)	-0.57	(0.35)	-0.07	(0.36)
He working full time (vs. part-time or other)	0.91***	(0.23)	0.24	(0.32)	-0.13	(0.34)
Age of youngest child at interview						
0 years						
1 year			-0.22	(0.36)	0.18	(0.38)
2 years			-0.36	(0.37)	0.19	(0.40)
3 years			-0.50	(0.45)	0.54	(0.44)
Generalized R ²	0.17		0.20		0.17	
n / n with birth (% with birth)	691 / 253 (37%)		348 / 221 (64%)		498 / 110 (22%)	

Notes: [†]p < .10; *p < .05; **p < 0.01; ***p < 0.001.

¹ Including under education, parental leave, homemakers and others