### Are Happily Married Women more likely to have a second child? The Influence of Marital Quality on Fertility in South Korea

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#### Abstract

Using data from the three waves of the Korean Longitudinal Survey of Women & Families (KLoWF), I examine the impact of marital quality on fertility intentions and childbirth among married South Korean women with one child. Drawing on the multidimensional approach to marital quality, I measure marital quality with four dimensions, including marital satisfaction, positive interaction, negative interaction, and separation proneness. I use logistic regression to examine the influence of marital quality on 1) fertility intentions, and 2) actual childbirth of a second child between Wave 1 and Wave 3. My results indicate that women with intermediate levels of marital happiness and high levels of positive interaction with the husbands are more likely to give birth to a second child. This suggests that high quality marital relationship may provide the most hospitable environment for having a second child in South Korea.

#### 1. INTRODUCTION

As fertility is one of the central topics in sociology, research on this subject has identified determinants of fertility to explain ongoing trends in and prospects for fertility (Balbo et al. 2013). While previous studies focused on the influence of individual (women, in most cases) characteristics on fertility intentions and behavior, the literature has identified the importance of the impact of couple's characteristics (e.g., Corijn, Liefbroer, and De Jong Gierveld 1996; Lillard and Waite 1993; Spéder and Kapitány 2009; Thomson 1997) in recent years.

Evidence about the influence of marital quality on fertility is sparse. A majority of previous fertility studies concerning the role of partner relationship in the U.S. have suggested the positive influence of union stability on the timing of births (Lillard and Waite 1993; Myers 1997). However, studies of marital quality based on social-psychological perspectives during the 1980s and 1990s have suggested that marital quality is a multidimensional concept and marital stability is a single aspect of marital relationship (e.g., Amato and Booth 1997; Bradbury, Fincham, and Beach 2000; Johnson et al. 1986). In recent years, Rijken and her colleagues (Rijken and Liefbroer 2009; Rijken and Thomson 2011) have documented the curvilinear relationship between marital quality and fertility in Netherlands drawing on multidimensional approach to marital quality. Conversely, Lainiala (2011) found a linear positive influence of women's marital quality on the likelihood of having a second child.

The existing literature on this topic provides a puzzling picture regarding the impact of marital quality on fertility, although their studies are based on the context in which marriage and childbearing is relatively loosely connected in Western contexts (Buchmann and Kriesi 2011). Little attention has been paid to the importance of partner relationship quality in understanding

low fertility in non-Western contexts, such advanced Asian countries. There is a substantial contextual and institutional difference in ways in which the relationship between fertility and marriage operates in South Korea and in Western countries. For example, marriage and having a first child is relatively tightly linked so that non-marital childbearing has remained minimal—no more than 2% in South Korea (Statistics Korea 2013). Recently, there is a growing research on marital quality and its determinants in non-Western contexts, including Nepal (e.g., Allendorf and Ghimire 2013) and China, Japan, and South Korea (Oshio, Nozaki, and Kobayashi 2013) and this expansion into non-Western contexts provides opportunities for comparison across contexts (Allendorf and Ghimire 2013).

Building upon the literature on fertility and marriage, this study contributes to the literature by providing new evidence on the impact of marital quality on fertility for married South Korea women. I address the question of whether marital quality influences women's fertility intentions and fertility outcomes in South Korea. If so, what aspects of marital quality enable or impede women to have a second child? The South Korean context provides a new opportunity to examine what aspects of marital relationship affect women's childbearing decision-making in those contexts in which fertility is highly constrained by the institutional context. This study uses panel data from three waves of the Korean Longitudinal Survey of Women and Family (KLoWF) to answer my research questions.

#### 2. THEORY AND PREVIOUS FINDINGS

#### 2.1. Marital quality and fertility

The extensive literature on marital quality, or partner's relationship quality, has studied the impact of having children on marital quality (e.g., Glenn 1989; Helms-Erickson 2001; Keizer

and Schenk 2012; Kurdek 1999) or marital stability (e.g., Waite, Haggstrom, and Kanouse 1985). A recent longitudinal study found the U-shaped association between relationship satisfaction and the transition to parenthood, meaning couples became less satisfied with their relationship after the first birth and its satisfaction rebounds when the child reaches at a school age (Keizer and Schenk 2012). However, the literature has little paid attention to the influence of marital quality on fertility behavior, and the previous studies examining this relationship was limited to the effect of stable relationships on fertility (Lillard and Waite 1993; Rijken and Liefbroer 2009; Rijken and Thomson 2011).

The growth of unstable relationships, including high rates of divorce, has led increased attention to the influence of a union's stability or relationship quality upon childbearing (Balbo et al. 2013). Moreover, in contexts in which childbearing decision-making is based upon a joint decision among couples, stable partnerships are considered the most important factor for childbearing (Thornton and Young-Demarco 2001). Previous studies have identified two opposing mechanisms of the relationship between relationship stability and fertility. One point of view finds that stable marital relationship increases the chances of having a(nother) child. Lillard and Waite (1993) hypothesized that couples who are likely to separate are more likely to delay childbearing and this postponement also leads to longer birth intervals. Couples perceive that having children will increase the cost of marital dissolution so couples with higher levels of marital instability are less likely to have a child.

Conversely, building on the rational choice model of fertility, Friedman, Hechter and Kanazawa 1994) proposed that union instability is positively associated with childbearing since having children is a source of reducing uncertainty within marriage and enhance marital solidarity in developed societies. They assumed that rational couples seek to reduce uncertainty

in their marriage by having a child, thereby increasing spouses' dependence on each other and marital solidatiry. They took into account risk of divorce and social class as examples of uncertainty in the marriage and conceptualize marital solidarity as the multistranded quality of the relationship based on financial ties, occupational ties, and ties of common interest (p. 386). They also assume that marital solidarity or satisfaction decreases as marital duration increases.

There is empirical evidence supporting the first theoretical framework. Lillard and Waite (1993) found the negative impact of marital dissolution on the timing of childbearing in the U.S. This confirms the previous findings regarding the negative relationship between marital disruption and childbearing (Thornton 1978). However, Koo and Janowitz (1983) found no impact of separation on childbearing throughout marriage, using data for white women in the U.S. Myers (1997) tested a set of hypotheses concerning the impact of marital solidarity or uncertainty on the likelihood of childbearing derived from Friedman et al.'s (1994). However, they found support for the opposite mechanism, the positive impact of marital solidarity and compatibility on the transition to parenthood and higher-order births in the U.S.

Reviewed studies above focused mainly on the role of marital (in)stability on the likelihood of childbearing (Rijken and Liefbroer 2009). However, marital quality can be assessed more broadly not just based on the marital stability. Several scholars conceptualized and operationalized marital quality with multiple dimensions suggested that three marital dimensions, including marital happiness, marital interaction, and divorce proneness (e.g., Amato and Booth 1997; Amato et al. 2003; Johnson et al. 1986).

Drawing on the multidimensional approach to marital quality, Rijken and Liefbroer (2009) expand marital quality into multidimensional measures, including positive and negative interaction, value consensus, and separation proneness. They provided evidence of the

curvilinear relationship between marital quality and the timing of births. Couples were most likely to give birth when they experienced a medium-quality relationship (i.e., not having either excessively negative or positive interaction) with partners using data for Dutch couples. A recent study of Rijken and Thomson (2011) also confirmed the curvilinear relationship between perceived relationship quality and fertility for Dutch women, while Lainiala (2011) found the positive linear relationship between women's relationship quality on second births.

#### 2.2. Marital quality, division of household labor, and fertility

As briefly mentioned above, literature on family and marriage has paid attention to identifying determinants of marital quality, and studies concerning the association between marital satisfaction and the division of household labor have been a central theme (Oshio, Nozaki, and Kobayashi 2013). Some studies using data from the U.S. found that perceived unfairness of the division of household labor is negatively associated with both wives' and husbands' marital happiness (Amato, Booth, and Johnson 2007; Frisco and Williams 2003). Recently, Greenstein (2009) suggested the importance of national context in understanding of its relationship.

A substantial institutional difference between Asian context and Western context may be national gender equity levels. In its latest Global Gender Rap Report, the World Economic Forum places South Korea as the 124<sup>th</sup> out of 142 countries showing gender gap in economic participation (World Economic Forum 2014). China and Japan were place higher as of 76<sup>th</sup>, and 102<sup>th</sup>, respectively. Conversely, countries in Northern Europe and North America were ranked very high. For example, the U.S. was ranked at 4<sup>th</sup>. Given the differences in institutional and contextual background, the association between marital quality, the division of household labor, and fertility may play out differently. Lee et al. (2004) found that South Korean married women who reported difficulties with balancing family work and paid work showed higher levels of depression, than the counterparts those who did not.

Moreover, recent literature on fertility has examined the role of the division of household labor in explaining low fertility at the individual-level. Several studies found that more equal division of household labor between couples are positively associated with fertility intentions (e.g., Mills et al. 2008; Tazi-Preve et al. 2004) or the likelihood of births (e.g., Cooke 2009; Torr and Short 2004),

Overall, my review suggests that marital quality affects childbearing, in either positive, negative, or both ways. Findings support for positive impact of marital quality in the U.S. and for the curvilinear relationship in Netherlands. Due to limited evidence in other contexts, it is not clear whether the mechanism of the impact of marital quality on fertility might be different. Moreover, although studies examining the case of non-Western contexts have paid increasing attention to marital quality in recent years (e.g., Allendorf and Ghimire 2013), its implications for fertility have been little studied. In contexts where most of childbearing occurs within the marriage, marital quality may be a strong determinant of fertility. Further, if the inhospitable institutional environment attributes to very low fertility in the advanced East Asian countries (McDonald 2013), the role of marital quality and family itself may be critical for couples' fertility decision-making.

Following the multidimensional approach to marital quality (Amato and Rogers 1997; Amato et al. 2003; Rijken and Liefbroer 2009), I view marital quality as multidimensional that includes evaluative and behavioral aspects in both positive and negative ways. I document the impact of four dimensions of marital quality, including marital happiness, marital interaction

(both positive and negative), and separation proneness. Marital happiness, marital interaction, and separation proneness are distinctive dimensions of marital quality that previous studies have identified (Johnson et el. 1986). I differentiate positive interaction from negative interaction to examine if the two have opposite impacts on fertility. As previous studies have identified the division of household labor as a correlate with marital quality and fertility, I take into account the division of household labor in this study. Using four dimensions of marital quality allows me to test whether evaluative or behavioral aspects of marital relationship may affect fertility decisionmaking. I take advantage of a South Korean panel survey to examine this issue.

#### 3. DATA AND METHODS

#### 3.1. Data and Sample

This study draws data from three waves of the Korean Longitudinal Survey of Women & Families (KLoWF), conducted by the Korean Women's Development Institute in 2007, 2008 and 2010. The survey was designed to provide a longitudinal database of women's lives, including their attitudes and behavior regarding marriage, childbearing and rearing, family relationship, and work experience. Using a stratified, two-stage probability sampling based on 2005 South Korean Census districts, a total of 9,997 women between the ages of 19 and 64, were surveyed in Wave 1 and 7,883 of them have comprised all three waves. I use data on marital quality, fertility intentions, and all other independent variables from Wave 1 and data on actual childbirths from Wave 2 and 3. For this study, I selected married women who aged 19-40 years at the time of Wave 1 and had one child (N=). Since only a few women progress to third births by Wave 3, I focus on the transition to second births.

#### 3.2. Variables

*Fertility intention and childbirth*. This study uses two dependent variables of fertility. Fertility intention was measured with the question asked in Wave 1: "Do you plan to have any child?" (0=no/don't know, 1=yes). A second dependent variable is the likelihood of a woman gave birth to her second child between Wave 1 and Wave 3 (2007-2010) or that the woman was pregnant at Wave 3.

*Marital quality* is operationalized in a multidimensional way, including four distinctive aspects. I used one item to measure *marital happiness*: "All in all, what is the best description of your feeling about your current marital life with your husband?" Answers were scored on a seven-point scale ranging from 1 (very unhappy) to 7 (very happy). I recoded it into a low, medium, and high category. To measure *positive interaction*, I used four items: "I usually talk a lot with my husband," "I have similar views with my husband," "I am satisfied with my marital life (sexual relationship) with my husband," and "I trust my husband." Alpha coefficients of the positive interaction scale are .85. The responses were scored on a four-point scale ranging 1 (strongly agree) to 4 (strongly disagree). The reverse-coded items were summed and classified into quartiles since it has a highly skewed distribution. I used the lowest quartile as a reference category and compared this with the remaining three categories.

To measure *negative interaction*, I used one item: "Have you had any argument with your husband over sharing housework, including childcare?" Responses were scored in the direction of frequent argument (1= never, 2=seldom, 3=sometimes, and 4=often). Due to little responses of 'often', I combined sometimes and often into a category. Women who reported no argument with the husbands were compared with other two categories. Lastly, *separation proneness* is measured by one item: "Have you ever thought you'd be better off living apart from your husband for the past month?" Answers were coded as a dichotomous variable (0=no, 1=yes).

As previous studies of fertility have identified the role of socio-demographic variables, I take into account respondents' age groups, education, employment status, sibling size, and husbands' monthly income as control variable. Given the fact that the average age of a first birth for women in South Korea was 30.25 in 2011 (Statistic Korea 2012), I compared married women aged less than 30 years with women aged between 30 and 34, and 35 or above at Wave 1. I measured employment as a dummy variable (0=unemployed, 1=employed). I used highest educational level attained to measure education and collapsed into two categories (0=below a bachelor's degree, 1=bachelor's degree or higher).

Lastly, I included variables that may relate to structural aspect of marriage. Marital duration was calculated based on responses for the married year from data at Wave 1. Given the fact that the national average marital duration for South Korean parents having a second child is 4.55 years (Statistics Korea 2013), I compared women married '5 years or less' with those married 'more than 5 years.' Because negative interaction was measured based on the sharing housework and childcare, I controlled for the respective spent hours on housework and childcare per day for men and women. I classified responses into quartiles and compared the lowest quartile with the remaining groups. Table 1 presents descriptive statistics for the sample.

[Table 1 about here]

#### 3.3.Method

I estimated logistic regression models of the probability of having fertility intention at Wave 1 to test the impact of marital quality on fertility intention. Then I examine whether or not marital quality have significant impact on the probability of having a second child between Wave 1, 2 and Wave 3 controlling for fertility intention at Wave 1. The model with socio-demographic variables only (Model 1) is nested in the model with socio-demographic variables and marital quality (Model 2). As previous studies have identified fertility intention as a strong predictor of childbirth (e.g., Lainiala 2011; Schoen et al. 1999), I included fertility intention in the models with the childbirth as a dependent variable. Likewise, I estimated three models with the second dependent variable: one with socio-demographic control variables only, one with socio-demographic and marital quality variables, and one with all predictor variables including fertility intention. This method allows me to examine the impact of marital quality on the actual childbirth and the relationship between fertility intention and outcomes.

#### 4. FINDINGS

#### 4.1. Descriptive results

Table 2 shows the distribution of fertility intentions at Wave 1 and of the birth of a second child by Wave 3 and being in pregnant in Wave 3 by each dimension of marital quality among married mothers of a child. Overall, it appears that marital happiness is significantly associated with women's fertility intentions and the birth of a second child. Women who reported higher levels of marital happiness at Wave 1 are more likely to have fertility intentions and have a second child by Wave 3. Women with higher levels of positive interactions with the husband intend to have a second child and have a second child by Wave 3 more than those with lower levels of positive interactions.

On the basis of the bivariate analyses, negative interactions with the husband and separation proneness show no clear patterns with fertility intentions and the birth of a second child. Behaviors surrounding the division of household labor may explain these relationships of marital quality and fertility intentions, and the birth of a second child. To examine whether

bivariate relationships from Table 2 persist when adjusting for other determinants, I below present multivariate models that include all of the independent variables.

[Table 2 about here]

#### 4.2. Multivariate analyses

The left column of Table 3 shows the logistic regression results predicting the likelihood of fertility intentions, and the right column indicates the results predicting the likelihood of second birth between Wave 1 and Wave 3, or being pregnant with a second child at Wave 3. I first focus on the impact of marital quality in explaining women's fertility intentions and second births or being pregnant with a second child. Then I move on the impact of control variables.

The odds of fertility intentions for a second child are highest for women those who falls in 3<sup>rd</sup> quartile of positive interactions with the husband, who are four times as likely to have fertility intentions for a second child as those with the lowest quartile of positive interactions. Women with the highest level of positive interactions with the husband are twice times as likely to have fertility intentions as those with the lowest quartile of positive interactions. Women with intermediate level of marital happiness are twice likely to have fertility intentions for a second child as those with low level of marital happiness. Interestingly, women with high level of marital happiness have an odds ratio of 1.10, not significantly different from the odds ratio of those with the low level of marital happiness. Both negative interactions with the husband and separation proneness show no significant impact on the likelihood of fertility intentions for a second child, when controlling for control variables.

Women who aged 35 or older at Wave 1 were significantly less likely to have fertility intentions for a second child that those who aged below 30. With regard to marital duration,

women those who have been married 5 years or less are about 3.7 times more likely to have fertility intentions than those who have been married longer than 5 years. Women who spent the least amount of time on housework and childcare are twice more likely to have fertility intentions than those who spent more time on housework and childcare. Employment status, educational attainment, husband's income, sibship size, and husband's hours spent on housework and childcare do not have effects on the likelihood of fertility intentions.

In model presented in the right column, I examined the impact of marital quality on the likelihood of the birth of a second child. The model is parallel to the one estimated for fertility intentions, except that I control for fertility intentions at Wave 1 as a predictor of the likelihood of a second birth. I find that marital happiness positively affects the likelihood of a second birth. Women with high level of marital happiness are twice likely to have a second birth than women with low level of marital happiness. My results do not provide evidence that negative interaction or separation proneness have a significant impact on the likelihood of a second birth.

Expectedly, fertility intentions at Wave 1 have a large effect on the likelihood of a second birth. Women who reported fertility intentions are 8 times more likely to have a second child than those who did not. Consistent with the impact of age on fertility intentions from the previous model, women those who aged 35 or older at Wave 1 also showed lower likelihood of having a second birth. The odds ratio of women who aged 30 to 34 was not significantly different from that of women who aged below 30. Husband's hours spent on housework and childcare per day have a significant effect on the likelihood of a second birth. Women whose husbands spent the least amount of time on housework and childcare were less likely to have a second child than those whose husbands spent more time on housework and childcare. Other remaining control variables do not influence the likelihood of a second birth.

#### [Table 3 about here]

#### 5. DISCUSSION AND CONCLUSION

The aim of this study is to provide new evidence on the impact of marital quality on fertility intentions and the likelihood of having a second child, using data from the KLoWF (2007, 2008, and 2010). Moving beyond the unidimensional approach to marital quality, I conceptualized marital quality as a multidimensional concept that encompasses both positive and negative, and both appraisal and behavioral aspects of marital relationship with the husband. Does marital quality have an effect on fertility intentions or the likelihood of a second birth? If so, what aspects of marital quality have an effect in what ways? To answer my question, I tested the impact of four dimensions of marital quality, including marital happiness, positive interactions, negative interactions, and separation proneness on both of my dependent variables.

I find that marital happiness and positive interactions with the husband influence women's fertility intentions for having a second child and the likelihood of a second birth. My findings are consistent with the previous finding of Myers (1997) in the U.S. As couples with higher marital solidarity were more likely to have children in the U.S., South Korean women with higher levels of marital happiness and positive interactions with the husband showed higher fertility intentions and higher likelihood of a second birth. At the same time, my finding about the impact of positive interaction on fertility intentions or the likelihood of a second birth does not support the recent findings of Rijken and Liefbroer (2009) suggesting the negative impact of positive interactions on the timing of births in Netherlands. Although my finding indicates the non-linear relationship between positive interaction and fertility intentions for a second child, the direction of its impact stay in the same positive direction. Taken together, these results may

reinforce the importance of maintaining good marital relationships for having a second child. Happily married women are more likely to report their intention to have a second child and to have a second child in three years.

The other two dimensions of marital quality – negative interactions with the husband and separation proneness – show little impact on fertility intentions or the likelihood of a second birth. Since the measure of negative interactions with the husband is based on the division of household labor, taking into account the actual amount of spent hours on housework and childcare in interpreting the results may provide a better understanding of the relationship between the negative interactions and fertility intentions or having a second child. Women who spent the least amount of time on housework and childcare reported higher fertility intentions, while women whose husbands spent the least amount of time on housework and childcare showed lower likelihood of having a second child. The effects of wives' and husbands' spent hours on fertility may reflect the role of gender equity in the family (e.g., Torr and Short 2004) or 'power imbalances' (e.g., Friedman et al. 1994; Myers 1997). My finding is consistent with the positive impact of gender equity in the family, while contradicting the positive impact of power imbalances on the likelihood of having a child. This all together may suggest that behavioral aspects of marital relationships that could lead to more equal division of household labor positively influence fertility intentions and the likelihood of having a second child. Lastly, the finding about the impact of separation proneness is inconsistent with the previous studies positing the negative impact of separation or divorce proneness on the likelihood of having a child in the U.S. (e.g., Lillard and Waite 1993; Myers 1997).

This study fills the gap in the literature on marital quality and fertility by investigating the impact of marital quality on fertility intentions and the likelihood of the birth of a second child in

South Korea. It also emphasizes the importance of marital happiness and positive interactions with the husband to having a second child. Interestingly, negative dimensions of marital quality, such as negative interactions with the husband or separation proneness do not decrease the likelihood of having a second child. My findings underline that specific characteristics of marital quality may be more tied to women's fertility decision-making process and these characteristics depend on the studied contexts.

A limitation of this study is that I could not take into account men's perspectives on marital quality or their intention for having a second child. Rijken and Thomson (2011: 494) found that women's marital quality and men's marital quality influence fertility in different ways. It is also possible that couples may have different plans for having a second child. It would be fruitful to examine how the dynamics of both partners' fertility intentions and their appraisal on marital quality affect fertility outcomes. Moreover, further research is needed to consolidate the findings of this study in other non-Western setting. This study exclusively focused on women with a single child. It would be valuable to examine the role of marital quality on the likelihood of having a first child among childless women in which there exists a substantial proportion of childless couples.

#### References

- Allendorf, Keera and Dirgha J. Ghimire. 2013. "Determinant of Marital Quality in An Arranged Marriage Society," *Social Science Research* 42: 59-70.
- Amato, Paul R. and Stacy J. Booth. 1997. "A longitudinal Study of Marital Problems and Subsequent Divorce." *Journal of Marriage and Family* 59(3): 612-624.
- Amato, Paul R, David R. Johnson, Alan Booth and Stacy J. Rogers. 2003. "Continuity and Change in Marital Quality Between 1980 and 2000." *Journal of Marriage and Family* 65(1): 1-22.
- Balbo, Nicoletta, Francesco C. Billari, and Melinda Mills. 2013. "Fertility in Advanced Societies: A Review of Research," *European Journal of Population* 29: 1-38.
- Berrington, Ann. 2004. "Perpetual Postponers? Women's, Men's and Couple's Fertility Intentions and Subsequent Fertility Behaviour." *Population Trends* 117: 9-19.
- Bongaarts, 2001. "Fertility and Reproductive Preferences in Post-Transitional Societies." *Population and Development Review* 27(Supp.): 260–281.

\_\_\_\_\_. 2002. "The End of the Fertility Transition in the Developed World," *Population and Development Review* 28: 419-443.

- Bradbury, Thomas N., Frank D. Fincham, and Steven R.H. Beach. 2000. "Research on the Nature and Determinants of Marital Satisfaction: A Decade in Review." *Journal of Marriage and Family* 62: 964-980.
- Bumpass, L.L., R. Rindfuss, M. K. Choe, and N.O. Tsuya. 2009. "The institutional context of low fertility: The case of Japan." *Asian Population Studies* 5(3), 215-235.
- Carlson, M. J. 2007. "Trajectories of Couple Relationship Quality After Childbirth: Does Marriage Matter?" Working paper 897, Princeton University, Woodrow Wilson School of Public and International Affairs, Center for Research on Child Wellbeing.
- Corijn, Martine, Aart C. Liefbroer, and Jenny de Jong Gierveld. 1996. "It Takes Two to Tango, Doesn't It? The Influence of Couple Characteristics on the Timing of the Birth of the First Child," *Journal of Marriage and Family* 58(1): 117-126.
- Friedman, Debra, Michael Hechter and Satochi Kanazawa. 1994. "A Theory of the Value of Children." *Demography* 31(3): 375-401.
- Glenn, Norvald D. 1989. "Duration of Marriage, Family Composition and Marital Happiness." *National Journal of Sociology* 3: 3-24.
- Glenn, Norvald D. and Sara McLanahan. 1982. "Children and Marital Happiness: A Further Specification of the Relationship." *Journal of Marriage and Family* 44(1): 63-72.

- Goldstein, Joshua, Wolfgang Lutz and Maria Rita Testa. 2003. "The Emergence of Sub-Replacement Family Size Ideals in Europe." *Population Research and Policy Review* 22(5/6): 479-496.
- Hagewen, Kellie J. and S. Philip Morgan. 2005. "Intended and Ideal Family Size in the United States, 1970-2002," *Population and Development Review* 31: 507-527.
- Heaton, Tim B., Cardell K. Jacobson and Kimberlee Holland. 1999. "Persistence and Change in Decisions to Remain Childless." *Journal of Marriage and Family* 61(2): 531-539.
- Helms-Erickson, Heather. 2001. "Marital Quality Ten Years after the Transition to Parenthood: Implications of the Timing of Parenthood and the Division of Housework." *Journal of Marriage and Family* 63(4): 1099-1110.
- Hin, Saskia, Anne Gauthier, Joshua Goldstein and Christoph Bühler. 2011. "Fertility Preferences: What Measuring Second Choices Teaches Us." *Vienna Yearbook of Population Research* 9: 131-156.
- Johnson, David R., Lynn K. White, John N. Edwards and Alan Booth. 1986. "Dimensions of Marital Quality: Toward Methodological and Conceptual Refinement." *Journal of Family Issues* 7(1): 31-49.
- Korean Statistical Information Service.http://kosis.kr/index/index.jsp.
- Kurdek, Lawrence A. 1999. "The Nature and Predictors of the Trajectory of Change in Marital Quality for Husbands and Wives over the First 10 Years of Marriage." *Developmental Psychology* 35(5): 1283-1296.
- Lesthaeghe, Ron. 2010. "The Unfolding Story of the Second Demographic Transition." *Population and Development Review* 36(2): 211-251.
- Lillard, Lee A. and Linda J. Waite. 1993. "A Joint Model of Marital Childbearing and Marital Disruption." *Demography* 30: 653–681.
- Morgan, S. Philip. 1985. "Individual and Couple Intentions for More Children: A Research Note." *Demography* 22: 125-132.
- Morgan, S. Philip and Miles G. Taylor. 2006. "Low Fertility at the Turn of the Twenty-Frist Century." *Annual Review of Sociology* 32: 375-399.
- Morgan, S. Philip and Heather Rackin. 2010. "The Correspondence Between Fertility Intentions and Behavior in the United States." *Population and Development Review* 36(1): 91-118.
- Morgan, S. Philip and Christine A. Bachrach. 2011. "Is the Theory of Planned Behaviour an Appropriate Model for Human Fertility?" *Vienna Yearbook of Population Research* 9: 11-18.
- Myers, Scott. 1997. "Marital Uncertainty and Childbearing." Social Forces 75(4): 1271-1289.

- Oshio, Takashi, Kayo Nozaki, and Miki Kobayashi. 2013. "Division of Household Labor and Marital Satisfaction in China, Japan, and Korea," *Journal of Family and Economic Issues* 34(2): 211-223.
- Philipov, Dimiter. 2009. "Fertility Intentions and Outcomes: The Role of Policies to Close the Gap." *European Journal of Population* 25: 355-361.
- Rijken, Arieke J. and Aart C. Liefbroer. 2009."The Influence of Partner Relationship Quality on Fertility." *European Journal of Population* 25: 27-44.
- Rijken, Arieke J. and Elizabeth Thomson. 2011. "Partners' Relationship Quality and Childbearing." *Social Science Research* 40: 485-497.
- Schoen, Robert, Nan Marie Astone, Young J. Kim, Constance A. Nathanson, and Jason M. Fields. 1999. "Do Fertility Intentions Affect Fertility Behavior?" *Journal of Marriage and Family* 61(3): 790-799.
- Spéder, Zsolt. 2006. Childbearing behavior in the New EU member states: Basic trends and selected attitudes. In W. Lutz, R. Richer, & C. Wilson (Eds.), The new generations of Europeans. Demography and families in the enlarged European Union (pp. 59–82). London: Earthscan.
- Spéder, Zsolt and Balázs Kapitány. 2009. "How are Time-Dependent Childbearing Intentions Realized? Realization, Postponement, Abandonment, Bringing Forward." *European Journal of Population* 25: 503-523.
- Thomson, Elizabeth. 1997. "Couple Childbearing Desires, Intentions, and Births." *Demography* 34(3): 343-354.
- \_\_\_\_\_. 2002. "Motherhood, Fatherhood and Family Values." In R. Lesthaeghe (Ed.), *Meaning and Choice: Value Orientations and Life Course Decisions* (pp. 251–272). The Hague/Brussels: Nidi/CBGS publications.
- Thornton, Arland. 1989. "Marital Dissolution, Remarriage, and Childbearing." *Demography* 15(3): 361-380.
- Thornton, Arland and Linda Young-Demarco. 2001. "Four Decades of Trends in Attitudes toward Family Issues in the United States: The 1960s through the 1990s." *Journal of Marriage and Family* 63(4): 1009-1037.
- Toulemon, Laurent and Marita Rita Testa. 2005. "Fertility Intentions and Actual Fertility: A Complex Relationship." *Population & Societies* 415.
- Quensnel-Vallée, Amélie and Philip Morgan. 2003. "Missing the Target? Correspondence of Fertility Intentions and Behavior in the U.S." *Population Research and Policy Review* 22(5/6): 497-525.

- Van de Kaa, Dirk J. 2002. "The Idea of A Second Demographic Transition in Industrialized Countries." Paper 6<sup>th</sup> Welfare Policy Seminar, National Institute of Population and Social Security, Tokyo, 29 January.
- Westoff, Charles F. And Norman B. Ryder. 1977. "The Predictive Validity of Reproductive Intentions." *Demography* 14(4): 431-453.
- Williams, Kristi. 2003. "Has the Future of Marriage Arrived? A Contemporary Examination of Gender, Marriage, and Psychological Well-Being." *Journal of Health and Social Behavior* 44(4): 470-487.

## Appendix

Variable	Percent (weighted)
Fertility intention (yes)	60.45
Had birth between Wave 1 and Wave 3 (or women pregnant at Wave 3)	44.11
Age	
Less than 30	36.17
30-34	35.58
35-40	28.25
Employment (employed)	24.42
Education (college degree +)	35.34
Husband's income (top 25%)	25.37
Sibling size (more than 3)	41.90
Marital duration (5 years or less)	66.08
Wife's housework hours per day	
1 <sup>st</sup> quartile	22.17
Husband's housework hours per day	
1 <sup>st</sup> quartile	25.71
Marital happiness	
Low	46.89
Intermediate	32.62
High	20.49
Positive interaction	
1 <sup>st</sup> quartile	24.69
2 <sup>nd</sup> quartile	33.35
3 <sup>rd</sup> quartile	15.46
4 <sup>th</sup> quartile	26.50
Negative interaction	
Never	30.48
Seldom	40.32
Sometimes/often	29.19
Separation proneness (yes)	10.42

Table 1 – Descriptive statistics for married women, age 40 or younger with one child at Wave 1, KLoWF Wave 1 – 3, 2007, 2008, 2010 (N=459)

		Intentions to have another child at Wave 1 (%)	Had a child by Wave 3 or still in pregnant at Wave 3 (%)
Marital happiness	Low	50.61	33.92
	Medium	68.93	46.19
	High	69.48	64.15
Positive interaction	1 <sup>st</sup> quartile	42.57	30.88
	2 <sup>nd</sup> quartile	52.82	33.83
	3 <sup>rd</sup> quartile	81.11	57.26
	4 <sup>th</sup> quartile	74.08	61.73
Negative interaction	Never	62.73	41.28
	Seldom	59.70	45.63
	Sometimes/often	59.10	44.05
Separation proneness	Yes	53.78	36.98
	No	61.23	44.94

# Table 2 – Weighted percentages of intentions to have another child at Wave 1 and childbirth by Wave 3 or in pregnancy at Wave 3 by marital quality at Wave 1, KLoWF 2007, 2008, and 2010

\*Significant test statistics:

Marital happiness, intentions to have another child at Wave 1 chi-square (uncorrected)=259.65, Design-based F=6.18, p=.0021

Marital happiness, had a child by Wave 3 chi-square (uncorrected) = 389.66, Design-based F=9.79, p=.0001 Positive interaction, intentions to have another child at Wave 1 chi-square (uncorrected)=668.12, Design-based F=10.64, p=.0000

Positive interaction, had a child by Wave 3 chi-square (uncorrected) = 551.80. Design-based F=8.93, p=.0000

	Fertility intentions at Wave 1			Childbirth by Wave 3 or in pregnancy at Wave 3		
Variable	Coef.	S.E.	Odds ratio	Coef.	S.E.	Odds ratio
Age (relative to less than 30)						
30-34	25	.35	.78	33	.33	.72
35-40	-1.50	.41	.22***	-1.38	.46	.25**
Employment (employed)	07	.37	.94	35	.36	.70
Education (college degree +)	24	.31	.79	21	.29	.81
Husband's income (top 25%)	12	.32	.88	.13	.36	1.13
Sibling size (more than 3)	.00	.29	1.0	.08	.30	1.08
Marital duration (5 years or less)	1.30	.33	3.68***	.09	.36	1.09
Wife's housework hours per day						
(lowest quartile)	.96	.33	2.61**	.35	.39	1.42
Husband's housework hours per day	1 5	20	07	F 7	21	F.C.
(lowest quartile)	15	.30	.86	57	.31	.56+
Marital happiness (relative to low)			0.401			
Intermediate	.75	.31	2.12*	.14	.33	1.16
High	.10	.40	1.10	.85	.42	2.35*
Positive interaction (relative to lowest quartile)						
2 <sup>nd</sup> quartile	03	.36	.97	46	.39	.63
3 <sup>rd</sup> quartile	1.46	.45	4.3***	03	.44	.97
4 <sup>th</sup> quartile	.77	.41	2.16+	.20	.46	1.22
Negative interaction (relative to never)						
Seldom	.05	.31	1.05	.31	.32	1.36
Sometimes/often	.21	.41	1.24	.37	.38	1.45
Separation proneness (yes)	.06	.47	1.06	12	.43	.88
Fertility intention (yes)				2.13	.34	8.41***
Constant	62	.66	.54	-1.48	.68	.23***

Table 3 - Logistic regression predicting 1) patterns of fertility intentions and 2) the likelihood of childbirth by Wave 3 or in pregnancy at Wave 3 for married Korean women, age 40 or younger with parity one at Wave 1, KLoWF 2007, 2008, and 2010 (N=459)

Note: <.10; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001. S.E. denotes standard error.