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factors for family formation and
dissolution processes among males.
Evidence from Swedish register data**

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The prospective power of personality factors for family formation and dissolution processes among males

Evidence from Swedish register data

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Abstract

Personality plays an essential role in important life outcomes, such as educational attainment or career success. Although these outcomes are linked with family formation processes, the association between personality and family formation (dissolution) has been underexplored in demographic research. My study contributes to existing research by examining the prospective association between two personality facets (social maturity (SM) and emotional stability (ES)) and family formation and dissolution processes, i.e., 1) marital status, 2) fertility, and 3) partnership dissolution as both a) divorce and b) cohabitation dissolution, based on a large set of Swedish register data. Poisson regression, linear probability, and Cox proportional hazard models are applied for different outcomes. My findings suggest that males with high SM and ES scores measured at the age of military conscription (ages 17-20) are more likely to get married by age 39 and older. Regarding fertility, SM and ES are found to be positively associated with the number of children and negatively associated with the probability of remaining childless by age 39 and older. Relationship dissolution is shown to be linked to SM via a U-shaped pattern; i.e., the highest and the lowest scores on this trait are associated with a higher risk of separation. Further analyses using sibling comparisons support these findings.

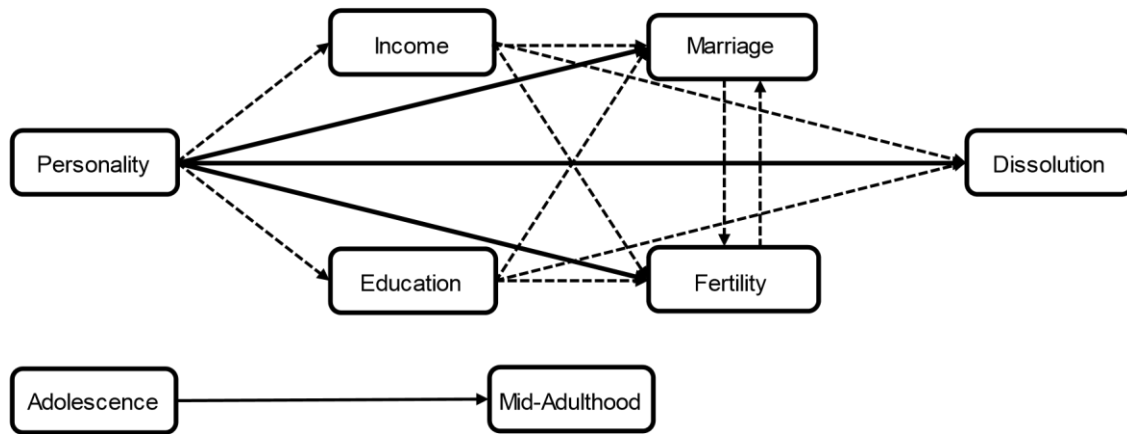
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Introduction

During the second half of the last century, demographic patterns changed drastically in many European countries. Marriage and fertility rates declined, while cohabitation and divorce rates increased (van de Kaa, 1987). The Second Demographic Transition (SDT) theory suggests that contraceptives and abortion contributed to fertility falling to below replacement levels by enabling individuals to decide whether and when to have a child (van de Kaa, 1987). Therefore, childbearing became more individualized. The SDT theory also addresses trends in individual attitudes and values. Individualization has become more important for family formation processes in particular (van de Kaa, 1987). Personality factors are among the most unique individual characteristics. Previous studies have examined the association between personality factors and family-related processes, such as marriage (Jokela et al., 2011; Lundberg, 2012), fertility (Allen, 2019; Jokela et al., 2009, 2011; Peters, 2022), and divorce (Boertien et al., 2017; Boertien & Mortelmans, 2018; Lundberg, 2012). However, research on personality and family formation (dissolution) based on large register data is scarce.

My study examines the prospective association between personality measured at younger ages and family formation outcomes by mid-adulthood (marriage, fertility, partnership dissolution). I make use of high-quality Swedish register data that capture all registered persons in Sweden. Personality factors shape early life experiences, such as education (Damian et al., 2015; Leikas & Salmela-Aro, 2015; Meyer et al., 2019; Usslepp et al., 2020) and partnership formation (Leone & B. Hawkins, 2019; Neyer & Asendorpf, 2001; Senia et al., 2016), which are, in turn, associated with family formation by mid-adulthood (Baizán et al., 2003; Balbo et al., 2013; Sobotka et al., 2017). Therefore, it is crucial to examine the association between personality at young ages and family formation by mid-adulthood. This relationship can be visualized, as has been done in Fig. 1 below. Personality may influence family formation and dissolution directly, as well as via income or education.

Figure 1: Conceptual model of how personality may affect family formation and dissolution processes



Note: Solid lines represent direct effects of personality on family formation and partnership dissolution; pathways with dashed lines show potential mediation paths.

Previous research on the relationship between personality and family formation focused on the Five Factor Model (FFM), which is the most widely accepted measure of personality. However, previous studies often used cross-sectional data (Alvergne et al., 2010; Avison & Furnham, 2015), or they used longitudinal data, but measured personality at relatively high ages (Jokela et al., 2011; Skirbekk & Blekesaune, 2014; Tavares, 2016). Moreover, previous research on the prospective association between personality and fertility (as a family formation indicator) was not based on large register data (Peters, 2022), or on personality facets other than FFM factors (Peters & Barclay, 2022). By contrast, Swedish register data can be used to conduct more in-depth analyses on the link between personality and family outcomes, including analyses that explore the role of potential socioeconomic mediators (income, education). Furthermore, fixed-effects approaches can be used to isolate the net influence of personality on family formation and dissolution processes from background factors that might bias the relationship.

Theoretical Background

Second Demographic Transition

Lesthaeghe and van de Kaa (1986) developed the Second Demographic Transition (SDT) theory to explain the demographic trends (fertility and marriage declines,

increasing divorce rates) observed in high-income countries in the second half of the last century (van de Kaa, 1987). For instance, during this period, the total fertility rate (TFR) of Sweden fell below replacement level, declining from around 2.5 in the mid-1960s to just above 1.6 in the early 1980s (The World Bank, 2022). The SDT theory considers both structural components (e.g., female labor market participation) and ideational factors (e.g., individualization, self-realization) as potential explanations for these trends (Lesthaeghe, 2014; van de Kaa, 1987). It has, for instance, been shown that as the use of contraceptives and abortion provided couples with more control over their fertility (van de Kaa, 1987), unplanned pregnancies became less common, and those couples who intended to stay childless were more likely to do so (Lesthaeghe, 2014; van de Kaa, 1987).

In this study, I consider the role of individualization facets (personality) in family formation (marriage, fertility) and dissolution (divorce, cohabitation dissolution). Individuals may decide whether and when to get married, to enter parenthood, or to end a partnership. Personality factors play an essential role in such decisions. For instance, individuals may refrain from having children because they believe that doing so will restrict their freedom (Langdridge et al., 2005), or because they think they have personality traits that make them unsuitable for parenthood (Park, 2005). Furthermore, personality may affect partnering and dissolution processes, e.g., via education and employment. Since it takes time for individuals to complete their education or to generate the assets needed to support a family, personality traits at younger ages are of particular interest in my study.

Social maturity and family formation

Previous research increasingly focused on personality and non-cognitive skills as determinants of family formation processes (Jokela et al., 2011; Jokela & Keltikangas-Järvinen, 2009; Peters & Barclay, 2022). Social maturity (SM) is among these factors. It includes facets such as extraversion, independence, or responsibility (Bihagen et al., 2013). Extraversion has played an important role in both Swedish military recruitment criteria (Larsson & Kallenberg, 2006) and previous research on personality and marital behavior (Jokela et al., 2011; Lundberg, 2012). Extraversion may shape the opportunity to get married early in life through partnering processes. Compared to introverts, extraverts tend to report higher levels of closeness to friends

and to place more importance on friendship (Neyer & Asendorpf, 2001). It has also been shown that extraverted females are more interested in short-term mating than introverted females (Schmitt & Shackelford, 2008). Furthermore, people with higher extraversion scores report higher levels of partnership satisfaction (Orth, 2013) and quality (A. S. Holland & Roisman, 2008), which may increase their probability of getting married. Additionally, extraversion has been positively linked with the chances of falling in love at young ages (Asendorpf & Wilpers, 1998). Thus, personality plays a role in people's partnering behavior starting early in life, which may, in turn, affect their marital behavior by mid-adulthood.

Empirically, previous research has suggested that there are strong (and positive) associations between extraversion and marriage, particularly among males (Jokela et al., 2011; Lundberg, 2012). Extraverted individuals are more likely to marry (Jokela et al., 2011; Lundberg, 2012) and to enter marriage earlier in the life course (Jokela et al. 2011). Therefore, my first hypothesis assumes a positive correlation between SM measured at younger ages and marriage:

Hypothesis 1: Social maturity is positively linked with the probability of getting married by mid-adulthood.

Additionally, personality may be connected with fertility through attitudes and intentions. For instance, agreeableness indicators are positively linked with the intention to have a child (Miller, 1992, 2011). Other traits such as shyness are negatively associated with parenthood expectations (Hutteman et al., 2013). Intentions and expectations are (directly) linked with fertility outcomes (Ajzen & Klobas, 2013; Miller, 2011). Additionally, fertility may be shaped by opportunities that are also associated with personality factors (see the section on partnering processes above). SES may also play a role in childbearing via access to resources that are relevant for family support. Holland (1958) argued that personality is linked with occupational and occupational choices, and thus with SES indicators in early life. Indeed, extraverted individuals are more likely to follow a vocational path after completing upper secondary education (Usslepp et al., 2020). These choices may affect whether individuals have access to resources in the early stages of life, and thus whether they are able to support a child financially.

Among all facets of SM, extraversion has received the greatest attention in previous research as a potential determinant of reproductive behavior. It has, for instance, been shown that extraversion is positively associated with the number of sex partners (Allen & Desille 2017; Miller et al. 2004; Nettle 2005, 2006; Schmitt 2004). However, other evidence indicates that sociability indicators are negatively linked with the desire to have a partner (Kislev, 2020) and fertility intentions (Miller, 1992). Nevertheless, previous research strongly suggests that there is a positive association between extraversion and childbearing. Studies have found that extraversion is positively related to a higher likelihood of having a first and a second child (Jokela et al., 2009, 2011), accelerated childbearing (Jokela et al. 2011; Tavares 2016), and a lower risk of remaining childless (Avison & Furnham 2015) among both men and women. There is, however, evidence that the association between extraversion and childbearing is stronger among males than among females (Peters, 2022). For instance, one study found that extraversion is positively linked with the number of children among men, but not among women (Allen 2019; Jokela et al. 2011; Skirbekk & Blekesaune 2014). Consequently, my second hypothesis is as follows:

Hypothesis 2: Social maturity is positively linked with fertility by mid-adulthood.

Emotional stability and family formation

Emotional stability (ES) refers to the ability of deal with nervousness, stress, and anxiety (Bihagen et al., 2013). ES has often been implicitly measured in previous research using the Five Factor Model (FFM). One factor of the FFM is neuroticism, which is the opposite of ES (Ashton & Lee, 2005; Goldberg, 1993; McCrae & Costa, 1987). Although previous research has focused on neuroticism, for the sake of simplicity, I will only refer to ES when citing other authors, even if they referred to its opposite (neuroticism).

Previous research has examined the link between ES and partnership outcomes. For instance, studies have shown that

ES is positively associated with partnership satisfaction (Fisher & McNulty, 2008; Karney & Bradbury, 1997; Malouff et al., 2010; McNulty, 2008) and relationship quality (Donnellan et al. 2004), which may lead to marriage. While no association between ES and the probability of getting married by age 35 was found for Germany

(Lundberg, 2012), a positive association between ES and the likelihood of getting married by the same age was observed in the Nordic context, particularly among men (Jokela et al., 2011). Therefore, my third hypothesis assumes a positive association between ES and marriage in the Swedish context:

Hypothesis 3: Emotional stability is positively linked with the probability of getting married by mid-adulthood.

In addition, several studies have examined the ES-fertility link. ES has been related to decreasing ambivalence regarding fertility decisions (Pinquart et al. 2008), and to lower depression risks (Gershuny & Sher 1998). Entry into parenthood increases stress levels (Epifanio et al., 2015), and it negatively affects social life (Johnson & Rodgers, 2006) and psychological well-being among adults (McLanahan & Adams, 1987). Thus, people with lower ES scores may expect parenthood to be more stressful than individuals with higher ES scores do, and these expectations could be transformed into fertility behavior. On the other hand, individuals with low ES scores may consider parenthood a stabilizing factor in their life (Johns et al., 2011) and in their partnership (Friedman et al. 1994).

Previous research has reported both positive and negative associations between ES and fertility. While positive links have been detected between ES and the probability of entering parenthood (Jokela, 2012), as well as having a second and a third child (Jokela et al., 2009); negative links between ES and fertility have also been observed (Jokela et al. 2011; Tavares 2016). Furthermore, ES seems to play a greater role in female than in male fertility. It has, for instance, been found that higher ES scores are associated with having more children among women, but not among men (Jokela et al. 2011). Based on the explanations above and given that my analyses include only men, I do not expect to find an association between ES and childbearing.

Hypothesis 4: Emotional stability is not linked with fertility by mid-adulthood.

Social maturity and relationship dissolution

Although SM is expected to be positively linked with marriage, this factor may also increase the risk of union dissolution. Previous research has shown that extraversion

is associated with a higher risk of infidelity (Orzeck & Lung 2005), which may, in turn, increase the risk of partnership dissolution. Indeed, previous studies have suggested that a higher level of extraversion is associated with an increased risk of divorce in high-income countries in Europe (Boertien et al., 2017; Boertien & Mortelmans, 2018), especially among males (Lundberg, 2012). Although extraversion has also been linked with greater partnership stability based on higher relationship satisfaction (as explained above), previous findings suggest that there is a positive association between extraversion and the risk of partnership dissolution, which is reflected in my hypothesis:

Hypothesis 5: Social maturity is positively linked with relationship dissolution by mid-adulthood.

Emotional stability and relationship dissolution

Previous research has shown that lower ES in a partner is linked with a higher risk of infidelity (Orzeck & Lung, 2005). Consequently, a low ES score may be associated with a higher risk of divorce (Boertien & Mortelmans, 2018; Lundberg, 2012) and of relationship dissolution (Solomon & Jackson, 2014). However, there is also evidence that ES is not linked to the risk of divorce (Boertien et al., 2017).

Although the evidence regarding a potential association between ES and divorce has been mixed, previous findings suggest that there is a negative association between ES and dissolution. Therefore, I expect ES to be negatively associated with the risk of divorce/cohabitation dissolution by age 39 and older among the men in my study sample:

Hypothesis 6: Emotional stability is negatively linked with relationship dissolution by mid-adulthood.

The role of socioeconomic status

People's personality traits at younger ages may affect their family formation and dissolution processes by mid-adulthood via socioeconomic status (SES). Extraversion and ES have been positively linked with higher education (Damian et al., 2015), annual income (Jonason et al., 2018), and occupational attainment (Roberts et al., 2007). Personality may play an important role in the transitions to education and employment, which usually occur early in life. For example, previous research

has found that extraversion is positively linked with job interview performance (Caldwell & Burger, 1998; Cook et al., 2000). Thus, extraversion may affect people's later life outcomes, as extraverted individuals tend to have greater career success over the course of their working life (Judge et al., 1999). Additionally, ES is positively associated with the tendency to define clear goals and to work efficiently (Judge & Ilies, 2002), and with career success (Judge et al., 1999). Higher SES may, in turn, be an attractive trait on the partner market that promotes marriage and reduces the risk of divorce.

SES indicators have been associated with marital behavior in the Nordic countries (Duvander & Kridahl, 2020; Sandström & Stanfors, 2020). For instance, high education has been positively linked with the intention to marry among males (Wiik et al., 2010). However, the correlation between income and marital behavior is less clear. On the one hand, there is evidence indicating that in Sweden, income does not play a large role in marriage intentions (Duvander & Kridahl, 2020). However, another study has suggested that income is positively linked with marriage intentions among males in Nordic countries (Wiik et al., 2010). A negative association between SES and relationship dissolution has been found using data for Norway (Lyngstad, 2004) and Finland (Jalovaara, 2001, 2013), although consideration of the partner's characteristics may attenuate this pattern (Jalovaara, 2003).

SES may also shape fertility behavior. Anthropologists have argued that higher SES provides important advantages with regard to survival and reproduction, particularly for males (Cummins, 2006). Higher SES individuals may be more attractive to potential partners because they have greater access to resources and are able to provide more protection (Buss, 1994, 2006; Cummins, 2006). As was shown above, personality is linked with SES indicators. Furthermore, previous research has found a positive association between SES indicators and fertility among males (Fieder et al., 2005; Hopcroft, 2006), particularly in the Nordic countries (Kolk, 2019; Kolk & Barclay, 2021). It has, for instance, been shown that among males in Sweden, income is positively linked with having a second and a third child (Andersson & Scott, 2007). There is also evidence that lower-educated men in Nordic countries have lower fertility and a higher probability of remaining childless over their life course (Jalovaara et al., 2019). Based on previous findings on SES and marriage/fertility, I consider it crucial to include factors such as income and education as potential mediators in my models. However, I also show results without these characteristics

in order to examine the extent to which personality effects may be explained by income or education. Beyond that, the models are stratified by SES indicators.

Confounding by family factors

Previous research has demonstrated that family background may influence both personality (e.g., Jokela et al., 2017) and family formation processes (e.g., Kramarz et al., 2021). For instance, sociability has been positively linked to maternal education, and negatively linked to sibling group size (Jokela et al., 2017). There is also evidence that genetics shape personality traits at least to some extent (Penke et al., 2007; Penke & Jokela, 2016; Van Gestel & Van Broeckhoven, 2003).

With regard to family formation processes, Cools and Hart (2015) have found that male fertility (probability of entering fatherhood, number of children) increases with each additional sibling. The positive association between the number of siblings and fertility appears to be stronger among firstborns than among later-born siblings (Morosow & Kolk, 2020). Kolk (2015), however, found that the number of siblings does not have a causal effect on completed fertility in Sweden. Furthermore, higher birth order has been negatively linked to completed fertility among Swedish women, but not among Swedish males (Morosow & Kolk, 2020). Other studies have suggested that there is no evidence of birth order effects on the number of children (Murphy & Knudsen, 2002). Potential associations between personality and fertility may weaken when controlling for shared background information, given that siblings tend to have similar fertility patterns (Buyukkececi & Leopold, 2021; Dahlberg & Kolk, 2018; Kolk, 2015; Lyngstad & Prskawetz, 2010). In my study, these factors are captured using fixed-effects models.

Data and Variables

Data

My analyses are based on Swedish register data. Each registered individual in Sweden receives a unique identification number through which information from various registers can be linked. Data on marital behavior, fertility, and educational level are collected in administrative civil registers. Tax registers provide information on income, and they are also used to define cohabitation in my analyses. Each individual

has to report his or her current address to the tax office, which is the most specific information on the area of residence in the Swedish registers (Thomson & Eriksson, 2013). This address may refer to a single-family dwelling or to a larger building in which up to 1,000 different households are residing (Thomson & Eriksson, 2013). Therefore, individuals may live at the same address without sharing a household (no cohabitation). However, if a man and a woman have a joint child together and are registered under the same property number, it may be assumed that they are cohabiting. This approach is in line with previous work by Thomson and Eriksson (2013).

The information on personality facets and cognitive skills comes from military conscription data, which are available for the 1983-1997 period. During this period, all young men were obliged to take the military tests. The information on siblings and family background is drawn from multigenerational registers. Only full siblings with same mother and father are included in the within-family analyses (fixed effects). The fixed-effects models control for unobserved heterogeneity between individuals in terms of genetics, parental background, or other shared information.

The analytical sample is restricted to a relatively homogeneous group of men who were between 17-20 years of age at the time of recruitment. This group includes the vast majority (98%) of males born in Sweden between 1963 and 1979. All men who left Sweden or died by age 39 are excluded. At the time of the last observation (2018), the men in the sample were between 39 and 55 years of age. This is a reasonable threshold for marriage and fertility analyses. After age 40, relative first marriage risks are very low (Ohlsson-Wijk, 2014) and fertility patterns do not change very much among Swedish men (Barclay & Kolk, 2020; Nisén et al., 2014). Additionally, robustness checks that consider marriage/fertility by higher ages (45/50 and older) were conducted. The analytical sample on marriage and fertility consists of 651,783 males. The sample sizes used in the dissolution models are smaller. Divorce models are run for males who ever married by 2018 (390,352 men). Analyses on cohabitation based on joint childbearing (only non-married males) are run for 129,823 men.

Outcomes

I consider the effect of personality on several outcomes. First, I examine marital status by age

39 and older (0 – “Never married,” 1 – “Ever married”). Second, I look at completed fertility by age 39 and older based on both the number of children (0-22) and childlessness (0 – “At least one child,” 1 – “Childless”). Third, I examine divorce risks over time (event: 0 – “Not divorced”, 1 – “Divorced”) for all married men. Finally, I run analyses on cohabitation dissolution risks over time for males who live with the mother of their child (event: 0 – “Not separated,” 1 – “Separated”).

Personality factors in Swedish registers

My main explanatory variables are social maturity (SM) and emotional stability (ES). Both factors are available as scores from 1 (“Low”) to 5 (“High”), which were collected for all men at the time of their recruitment. They are based on the findings of 20- to 30-minute interviews by licensed psychologists (Ludvigsson et al., 2022). The psychologists are experts on personality with an educational degree (Lindqvist & Vestman, 2010). Furthermore, they received some training in these tasks from the military (Ludvigsson et al., 2022), and specific instructions for the interviews with the recruits (Lindqvist & Vestman, 2010). For instance, the psychologists were asked to focus on personality factors only, instead of the recruits’ motivations for participating in military service (Lindqvist & Vestman, 2010; Ludvigsson et al., 2022). This instruction addresses potential interview manipulations of the recruits; e.g., in cases in which the recruits rejected military service or more responsible army positions (Lindqvist & Vestman, 2010). Assessments by experts such as psychologists are considered more reliable than the self-reports that survey data are usually based on.

For the males in the considered birth cohorts (1963-1979), participation in the military was compulsory, and only a small percentage of males were not conscripted, usually based on their health status (Ludvigsson et al., 2022). The recruitment procedure was identical for all males, and consisted of several steps. The conscription test started with a cognitive test in which the recruits had to perform different types of tasks (Mönstringshandboken, 2021). The recruits’ physical and cognitive skills were tested. Toward the end of the conscription process, the recruits were interviewed by psychologists (Mönstringshandboken, 2021).

The Swedish military seeks to identify potential candidates for more responsible positions within the army (Larsson & Kallenberg, 2006; Ludvigsson et al., 2022).

Almost one-third of the recruits of each cohort are trained as lower-ranking officers who spend approximately one year in the military (Grönqvist & Lindqvist, 2015). Previous research has shown that the personality of pilots is linked with the training performance of crew members (Chidester et al., 1991). The Swedish military may aim for similar effects by seeking to recruit officers with certain personality facets and skills (Grönqvist & Lindqvist, 2015). For instance, only recruits with IQ scores of 5 or higher are considered for different officer positions (Grönqvist & Lindqvist, 2015). Furthermore, levels of SM and ES play a role in officer recruitment (Larsson & Kallenberg, 2006). Officers need to have social skills to motivate recruits and to accompany them during their military service (Larsson & Kallenberg, 2006). An important facet of social maturity is extraversion. This trait may be particularly useful for officers, since extraverts typically like to spend time with other people (Larsson & Kallenberg, 2006). Moreover, extraverted team leaders tend to be self-confident, talkative, and easygoing (Larsson & Kallenberg, 2006), which may make it easier for recruits to establish a connection with them. Winning the trust of the recruits is one of the essential goals of officers, since recruits may be more willing to take risks if they have a relationship to their team leader that is based on trust and loyalty (Grönqvist & Lindqvist, 2015). This may, in turn, increase both the motivation and efficiency of recruits during their military service. ES is the ability to control one's own emotions, which may be particularly important in stressful situations in the military context (Larsson & Kallenberg, 2006). Under stressful conditions, clear orders are needed (Grönqvist & Lindqvist, 2015). A low ES score may indicate a higher risk of experiencing negative emotions, such as fear, anger, or depression (Larsson & Kallenberg, 2006), which may, in turn, be associated with insecurity when making decisions. The military's definition of ES is based in part on the most common psychological measures of ES (Larsson & Kallenberg, 2006).

More detailed information on the Swedish military's expectations of its officers and on the personality characteristics measured during the conscription tests can be found in Grönqvist & Lindqvist (2015) and Larsson & Kallenberg (2006). The specific steps of the military conscription process are outlined in Mönstringshandboken (2021), while Lindqvist & Vestman (2010) and Ludvigsson et al. (2022) provide more information on the interviews.

Control variables

My analyses include further covariates. All models control for categorized and normally distributed cognitive skills (1 “Low” to 9 “High”), birth year (1963-1979), birth order, and sibling group size (including sisters). Additionally, I compare models with and without SES indicators in order to examine the role of SES. The indicators are highest educational level obtained by age 39 (1 – “No Basic Education,” 2 – “Primary,” 3 – “Lower Secondary,” 4 “Upper Secondary,” 5 – “Post-Secondary,” 6 – “Tertiary,” 7 – “Doctor”) and income (cumulated by age 39). Beyond that, education and income serve as stratification factors. Marriage and divorce models also control for parenthood status (0 – “No Parent,” 1 – “Parent”), while civil status (“Single,” “Cohabiting,” “Married,” “Divorced/Widowed”) serves as another potential mediator and stratification factor in the fertility analyses.

Statistical models

I apply linear probability models (LPM) to examine marital status by age 39 and older. The LPM for my analyses take the following forms:

$$Pr(Y_i = 1|X_i = x_i) = \beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i \quad (1)$$

$$Pr(Y_i = 1|X_i = x_i) = \beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i + \beta_7 \ln(income)_i + \beta_8 education_i + \beta_9 parent \quad (2)$$

Marital status, the outcome of equations (1) and (2), is binary coded. In the LPM, it can be understood as the probability of getting married, which depends on a set of variables. The intercept 0 describes the baseline value of the model. Social measures the SM, and emotion_stable refers to the ES of the young men at the time of military recruitment. Cognitive skills are included as the cognitive categorical variable. Furthermore, I control for birth cohorts (birth_year) in the models. The birth_order covariate provides information on the birth order among all siblings in the family (brothers and sisters), while the sibling_group_size covariate provides information on the total number of siblings including the individual. Sibling group size is excluded as a covariate from the fixed-effects analyses since this information is shared between brothers, which is captured by these models. Equation (2) also includes potential mediators. Income refers to the cumulated income by age 39, and I take its

standardized logarithm. Education refers to the highest educational level reached by age 39. Furthermore, I consider whether each recruit has or has not ever entered parenthood (parent).

Offspring counts are analyzed using Poisson regression models. Formally, this approach can be described as follows:

$$\log(E[Y_i|X_i]) = \beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i \quad (3)$$

$$\log(E[Y_i|X_i]) = \beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i + \beta_7 \log(income)_i + \beta_8 education_i + \beta_9 married_i \quad (4)$$

The logarithm of the expected number of children Y for each individual i depends on the vector of explanatory X of each individual. The control variables are identical to those in equations (1) and (2) except for parenthood, which is replaced by marital status. Again, sibling group size is eliminated as a covariate from the fixed-effects models, as they require variation in all of the covariates by default. Analyses on childlessness are based on LPM as shown in equations (1) and (2), including covariates from equations (3) and (4).

Risks of partnership dissolution (divorce and cohabitation dissolution) are examined using Cox Proportional Hazard (Cox PH) models. The underlying time scales are time since marriage and time since first childbirth within an assumed cohabitation, respectively. The observation ends with the time at dissolution or the end of the study (2018), whichever comes first. The Cox PH model censors the data since not all individuals had experienced the event of interest by the end of observation time. The formal models are shown in equations (5) and (6):

$$h(t|x_i) = h_0(t) \exp\{\beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i\} \quad (5)$$

$$h(t|x_i) = h_0(t) \exp\{\beta_0 + \beta_1 social_i + \beta_2 emotion_stable_i + \beta_3 cognitive_i + \beta_4 birth_year_i + \beta_5 birth_order_i + \beta_6 sibling_group_size_i + \beta_7 \ln(income)_{i,t-1} + \beta_8 education_{i,t-1} + \beta_9 parent_{i,t-1}\} \quad (6)$$

The hazard h on each time point t depends on the vector of independent variables x for each individual i . It is the product of the baseline hazard h_0 (time-variant) and the

exponentiated sum of the estimated intercept (0) and the independent variables, which are multiplied by the corresponding coefficients b . The set of explanatory is identical to that in equations (1) and (2) above. However, education, income, and parenthood are included as both time-varying and lagged variables (i.e., information from year $t-1$). Piecewise-constant hazard models may also be applied. These models assume a constant risk of experiencing the event (dissolution) within a certain time interval (one year). This risk can change across time intervals. However, Cox PH models allow me to stratify the calculations by sibling groups so that brothers can be compared to each other. Additional analyses indicate that the piecewise-constant hazard models reveal patterns similar to those found by the Cox PH models for the between-family analyses.

Results

Descriptives

Of the men in the 1963-1979 birth cohorts, 50.54% have never been married by age 39, and 49.46% have ever been married. About one-fifth (20.64%) have remained childless, 14.76% have one child, 42.81% have two children, and 16.71% have three children. Both personality factors follow a relatively normal distribution, with the largest shares of recruits having a mid-range score of 3 (SM: 44.73%; ES: 49.43%). The proportion of missing values is relatively large for both SM (19.58%) and ES (19.65%). Most recruits have a score of 4 (15.35%), 5 (23.64%), or 6 (16.62%) on cognitive skills. The majority of the men in my sample have a lower secondary (31.18%), an upper secondary (22.85%), or a tertiary degree (21.17%). Further information is shown in Table A1 in the Appendix.

Table 1 displays important descriptive statistics for my different analytical samples (marriage/fertility, divorce, cohabitation dissolution). Since the marriage analyses focus on males who have been married by age 39 and older (i.e., 39-55), the proportion of married males is larger than the 49.46% of the men who have ever been married by age 39. By age 39 and older, 59.06% of the men have ever been married, and this probability increases with higher SM and ES scores. The overall average number of children in my analytical sample is 1.73. This value varies between 1.37 and 2.03 by SM scores, with higher SM being linked to higher fertility. Furthermore,

men with lower SM scores are more likely to have remained childless (e.g., 37% among males with a score of 1) than men with higher SM scores (e.g., 10% among men with a score of 5). Higher SM scores are also shown to be associated with higher levels of IQ, education, and income, and with a higher probability of having ever been married. Similar patterns are found for ES. Furthermore, partnership dissolution risks decrease with higher SM and ES scores, as shown in the bottom part of Table 1.

Table 1: Mean values according to SM and ES

Factor	Married	# Children	Childlessness	Cogn. Ability	Education	Inc. Dec.	N
<i>SM</i>							
Missing	0.59	1.71	0.22	4.88	3.97	5.18	127,630
1	0.38	1.37	0.37	3.15	3.22	3.49	8,290
2	0.46	1.48	0.32	3.97	3.58	4.47	77,430
3	0.58	1.72	0.20	5.05	4.08	5.56	291,519
4	0.69	1.90	0.14	5.98	4.71	6.35	135,715
5	0.75	2.03	0.10	6.60	5.11	7.07	11,199
<i>ES</i>							
Missing	0.59	1.71	0.22	4.88	3.97	5.18	128,046
1	0.42	1.44	0.33	3.53	3.46	3.90	10,341
2	0.48	1.52	0.30	4.18	3.71	4.66	87,545
3	0.59	1.73	0.20	5.13	4.13	5.60	322,200
4	0.70	1.92	0.13	6.06	4.77	6.54	96,837
5	0.74	2.03	0.10	6.62	5.12	7.25	6,814
<i>Total</i>	0.59	1.73	0.21	5.08	4.14	5.52	651,783

Divorce Risks

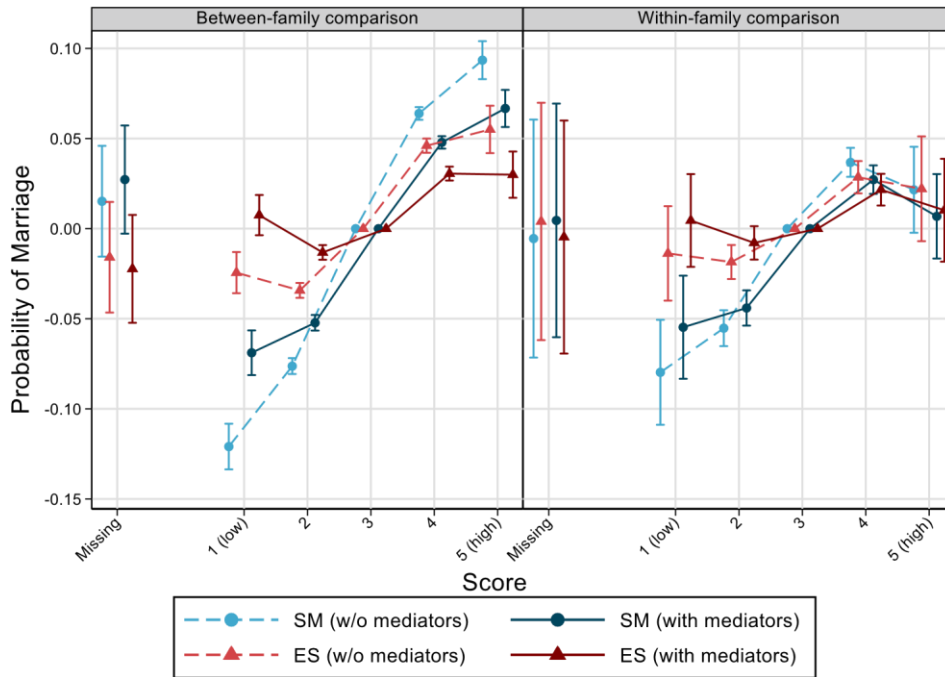
Cohabitation Dissolution

	Person-time	Events	Rate	Person-time	Events	Rate
<i>SM</i>						
Missing	11,836,138	21,346	0.002	288,605	10,619	0.037
1	353,389	1,263	0.004	14,275	868	0.061
2	4,598,812	11,384	0.002	161,686	7,526	0.047
3	25,617,130	41,989	0.002	707,342	23,734	0.034
4	14,862,720	21,232	0.001	276,818	8,491	0.031
5	1,328,600	1,869	0.001	18,294	572	0.031
<i>ES</i>						
Missing	11,867,411	21,412	0.002	289,617	10,646	0.037
1	510,086	1,597	0.003	19,025	1,076	0.057
2	5,535,766	13,169	0.002	180,055	8,109	0.045
3	29,215,193	47,036	0.002	770,352	25,825	0.034
4	10,683,985	14,776	0.001	196,570	5,792	0.029
5	784,348	1,093	0.001	11,401	362	0.032
<i>Total</i>	58,596,789	99,083	0.002	1,467,020	51,810	0.035

Personality and marriage

SM and ES are positively linked with the probability of getting married by age 39 and older (Fig. 2). Without potential mediators (income, education, parenthood), men with the highest SM score (5) have an almost 10% higher probability of getting married than men with the reference score of 3, holding all other covariates constant. This represents an increase of approximately 15.8% compared to the baseline probability (59%). By contrast, men with the lowest SM score (1) are 12% less likely to get married by age 39 and older, which represents a reduction of around 20.5% compared to the baseline probability in the entire sample. Regarding ES, the probability of getting married is not found to differ for males with low scores (1-3). The coefficients of scores 1 (-0.02) and 2 (-0.03) are relatively small. Individuals with ES scores of 4 and 5 are more likely to enter marriage (coefficients approximately 0.05). Associations attenuate when income and education are included in the models. However, the patterns remain even though the correlations between the two personality factors and SES indicators are distinct (Fig. A1 and A2). When brothers are compared to each other (within-family comparison), the magnitudes decrease slightly, but the general patterns persist. The results do not change very much across models with and without IQ, as can be seen in the Appendix (Fig. A3 and A4).

Figure 2: The relationship between personality factors measured at ages 17-20 and the probability of getting married by age 39 among Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



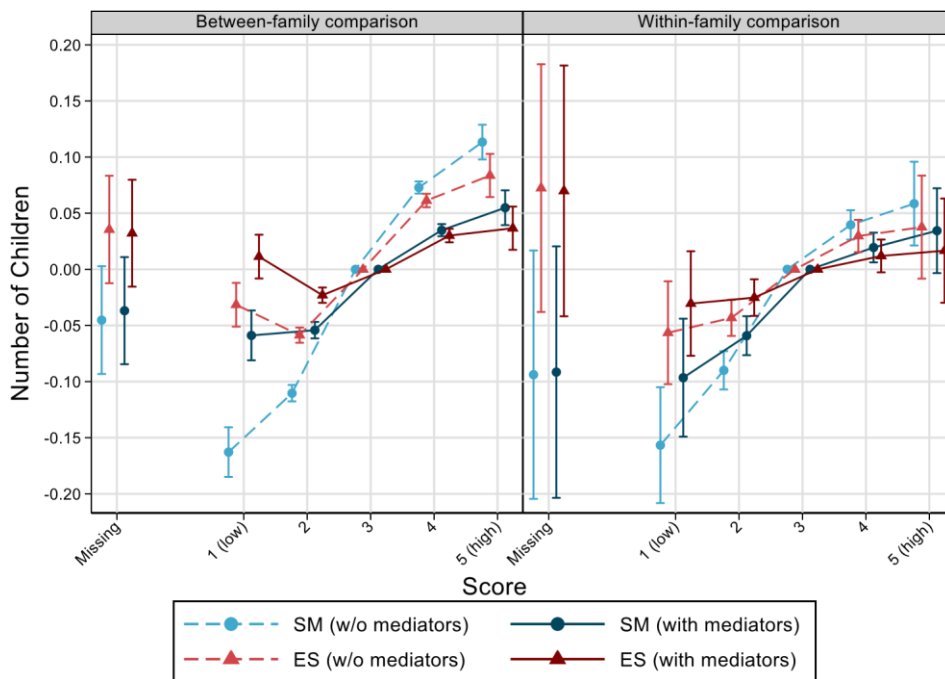
Note: Models without mediators control for cognitive abilities, birth year, birth order, and, in case of between-family considerations, sibling group size. Models with mediators also include income, education, and parental status.

Personality-marriage associations are further explored by stratifying for income deciles (Fig. A5 in Appendix). The findings indicate that the positive relationship between SM and marriage does not change much across income groups. For ES, the curves are relatively flat, such that only a slightly positive association within any income decile can be detected, if any. Furthermore, SM and ES are positively associated with marriage, particularly among high-educated men (Fig. A6 and A7). The ES magnitudes are somewhat smaller.

Personality and fertility

The findings from the Poisson regression models indicate that SM and ES are positively associated with the number of children (Fig. 3). Models without mediators reveal stronger positive associations with fertility for both SM and ES. For instance, men with the lowest SM scores have, on average, 0.16 fewer children by age 39 and older than men with a score of 3, conditioned on all other covariates being fixed. However, the magnitude of this coefficient turns to -0.06 when income, education, and marital status are included. Compared to the overall average number of children in the total population (1.73), this represents a reduction of around 3.5%. The patterns for ES are similar, but at a lower level. Comparisons between brothers (within-family analyses) do not change the results much.

Figure 3: The relationship between personality factors measured at ages 17-20 and number of children by age 39 among Swedish men born 1963-1979. Poisson regression models, error bars are 95% confidence intervals.

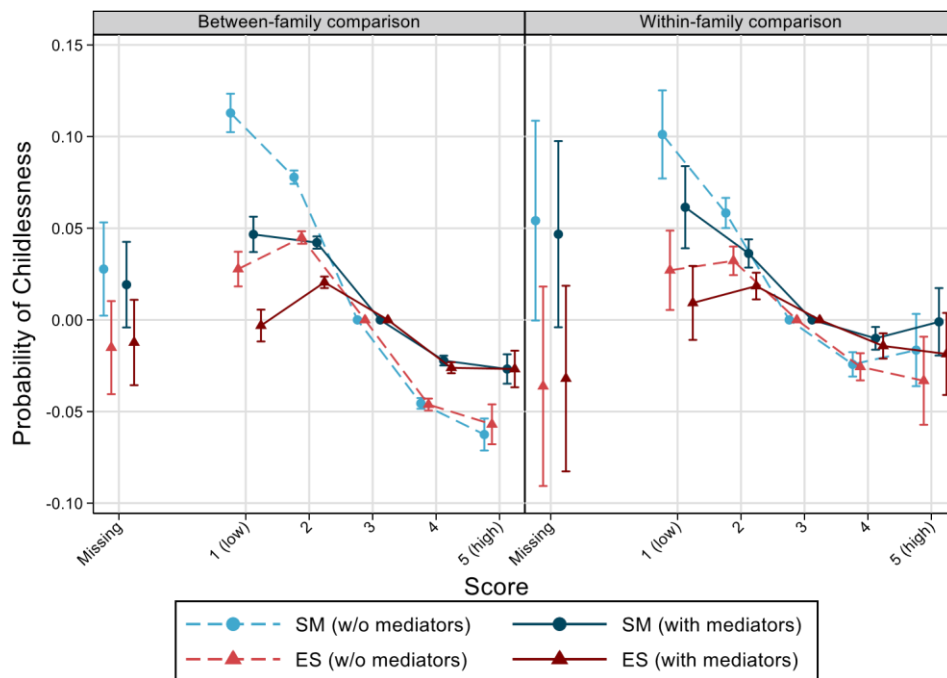


Note: Models without mediators control for cognitive abilities, birth year, birth order, and, in case of between-family considerations, sibling group size. Models with mediators also include income, education, and marital status.

Figure 4 depicts the negative association between both personality factors and childlessness. For instance, a young male with a SM score of 1 has a roughly 5%

higher probability of remaining childless by age 39 and older (after including potential mediators) than another young male with a SM score of 3 (given that all other covariates are kept constant). This represents a 22% higher probability than the baseline level (0.21) of remaining childless. In contrast, a male with a SM score of 5 has a 2.7% lower probability of remaining childless, which represents an approximately 13% lower likelihood of remaining childless compared to the overall probability of the total sample (0.21). The results for ES are similar, but at a lower level, particularly among men with lower scores. The findings for both personality factors persist in the brother comparisons despite higher statistical uncertainties. Additionally, the coefficients from the models without SES indicators and marital status are about twice as large as the findings from the full models, which suggests that SES and marital status play important mediating roles in the personality-childlessness link. By contrast, the estimates of the models with and without IQ are similar, as can be seen in Fig. A8 and A9 in the Appendix.

Figure 4: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 among Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.

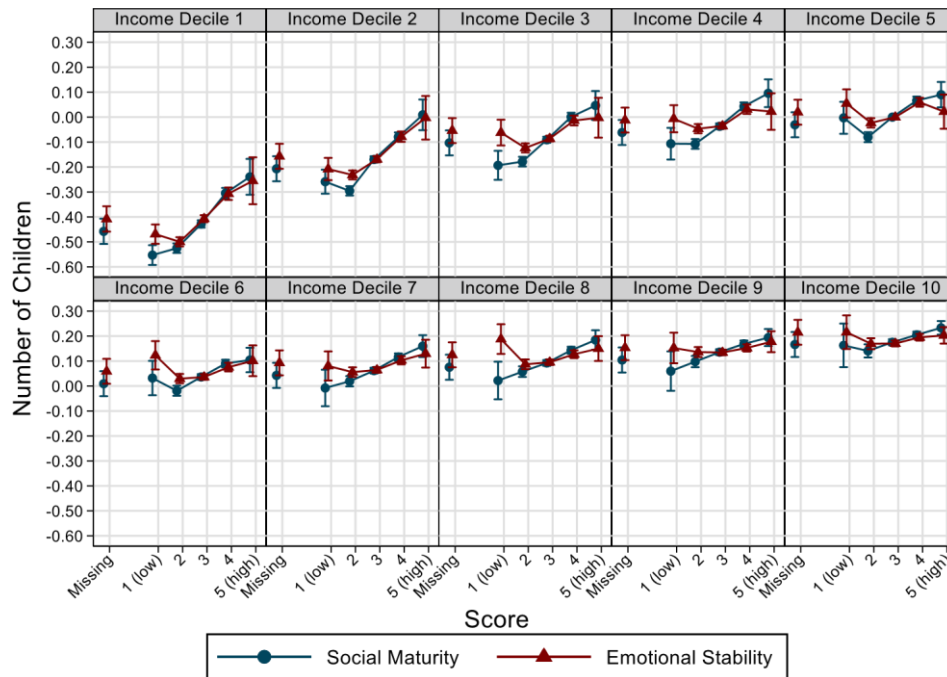


Note: Models without mediators control for cognitive abilities, birth year, birth order, and, in case of between-family considerations, sibling group size. Models with mediators also include income, education, and marital status.

Figure 5 illustrates that the positive association between SM and offspring count varies across income deciles, with the lowest income deciles showing the steepest curves. For instance, men in income decile 1 with a SM score of 1 have, on average, about 0.55 fewer children compared to the reference group (SM score of 3, income decile 5). This represents a reduction of around 32% compared to the average number of children in the total sample (1.73). Men with the highest SM score (5) in the lowest income group have, on average, around 0.24 fewer children compared to the reference group, which represents a reduction of about 14% compared to the average number of children (1.73). Among men in the highest income decile (10), this relationship flattens (coefficients between 0.14 and 0.23; i.e., 8-13% more children than the baseline level of the total sample).

Generally, fertility levels increase across income groups. While men with even the highest SM scores in the income decile 1 group have fewer children (-0.24) compared to the reference group (income decile 5, SM score of 3), men in the highest income group consistently have more children (0.14-0.23) on average by age 39 and older independent of their SM scores. Similar patterns can be found for ES among men in the lowest income deciles (1 and 2). However, among men in higher income groups (deciles 3-10), no clear associations can be detected. The findings regarding childlessness by age 39 and older show are similar (Fig. A10). Furthermore, fixed-effects models (within-family analyses) have been run, but do not reveal large differences compared to between-family considerations (Fig. A11-A14 in the Appendix). In addition to stratification by income, I have run models including interactions between both personality factors and the other potential mediators (education, marital status). The findings, presented in Fig. A15-A18, show particularly strong positive associations among highly-educated and never-married men. The patterns are slightly more distinct for associations with respect to SM than to ES.

Figure 5: The relationship between personality factors measured at ages 17-20 and number of children by age 39 among Swedish men born 1963-1979. Poisson regression models by income deciles, error bars are 95% confidence intervals.

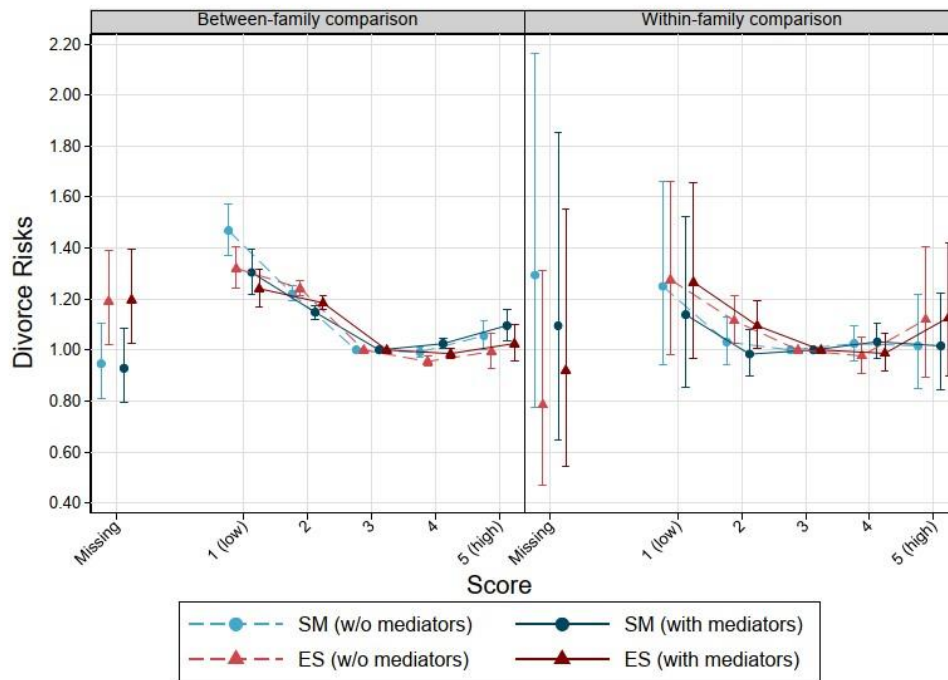


Note: Models control for cognitive abilities, birth year, birth order, sibling group size.

Personality and divorce

Figure 6 depicts the association between SM/ES and divorce risks. In the between-family analyses, married men with low SM and ES scores (1 and 2) have higher divorce risks compared to the reference group (score of 3). For instance, males who received a SM score of 1 at the time of military conscription and who married before age 39 have a more than 45% higher risk of getting divorced by age 39 and older (all other covariates held constant). Including income, education, and parental status reduces this risk to 30%. Men with high scores on both SM and ES do not differ significantly from the reference group (score of 3). Similar patterns are found when brothers are compared to each other (Fig. 6). However, statistical uncertainty increases.

Figure 6: The relationship between personality factors measured at ages 17-20 and divorce risks by age 39 among Swedish men born 1963-1979. Cox PH models, error bars are 95% confidence intervals.



Note: Models without mediators control for cognitive abilities, birth year, birth order, and, in case of between-family considerations, sibling group size. Models with mediators also include income, education, and parental status.

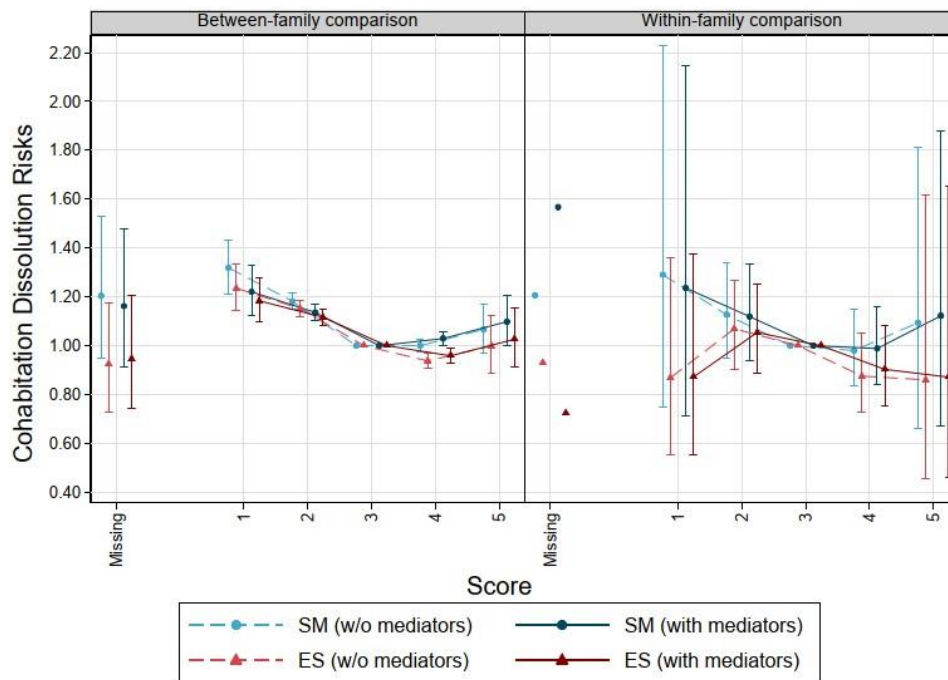
Figures A19-A21 in the Appendix show stratifications by income and education groups. While the estimates suggest that there is a negative association between the two personality factors and the risk of divorce among men in the lower income deciles, there are no clear trends among men in the highest income groups. Additionally, no clear patterns emerge across educational groups. Whereas the estimates from between-family comparisons have U-shaped (SM + low/medium education) or negative associations (SM + high education, ES + all educational levels), the patterns from sibling comparisons become less clear due to large statistical uncertainty.

Personality and cohabitation dissolution

I also examine the association between the two personality factors and the risk of cohabitation dissolution for individuals who live with a partner based on joint parenthood (marriages excluded). Results are shown in Fig. 7. Low SM and ES scores

are associated with a higher risk of cohabitation dissolution. Including SES indicators (income, education) attenuates this association to some extent. Males with the lowest personality scores have a risk of experiencing cohabitation dissolution that is 22% (SM) or 18% (ES) higher than that of the reference group (score of 3, all covariates fixed). This risk decreases among men with scores of 2 and 3. The risk of dissolution among men with ES scores of 3, 4, and 5 do not differ much, but the risk among men with SM scores of 4 and 5 increases. Males with a SM score of 5 have a risk of separation that is almost 10% higher than that of the reference group (score of 3). In the brother comparisons, the trends are similar for SM, but no clear patterns are found for ES, and statistical uncertainty is comparatively high.

Figure 7: The relationship between personality factors measured at ages 17-20 and cohabitation dissolution risks by age 39 among Swedish men born 1963-1979. CoxPH models, error bars are 95% confidence intervals.



Note: Models without mediators control for cognitive abilities, birth year, birth order, and, in case of between-family considerations, sibling group size. Models with mediators also include income and education. Point estimates or confidence intervals that are not shown are left out for visualization purposes here. Estimates are available upon request.

Stratification by education indicates that there are no differences across educational levels for either personality factor. However, the confidence intervals are relatively large, particularly for the fixed-effects analyses. The income stratifications do not

show clear patterns. While a negative trend can be observed within the lowest income groups, this association attenuates in the middle income deciles before developing a U-shaped pattern in income deciles 8 and 9. Strong negative associations between personality factors and the risk of cohabitation dissolution are found for the highest income group (decile 10). The corresponding graphs are shown in the Appendix (Fig. A22-A24).

Robustness checks

I have run several robustness checks. First, different age thresholds (45 and 50) were tested for both marriage (Fig. A25-A26) and fertility analyses (Fig. A27-A30). The results show that the patterns do not change but the statistical power decreases. Additionally, previous research suggests that personality-marriage associations may change across birth cohorts: e.g., a positive relationship between extraversion and marriage was found among older cohorts of German men, but not among younger cohorts (Lundberg, 2012). However, additional analyses I conducted on Swedish cohorts did not find similar patterns (Fig. A31 and A32). Furthermore, logistic regression models were run for analyses on binary-coded fertility and marriage outcomes. The coefficients from models with and without potential mediators (income, education, civil status/parenthood) are shown in Fig. A33 and A34. The observed patterns are consistent with findings from LPM, which are shown in Fig. 2 and Fig. 4 above.

Discussion

Conclusions

This study examined the prospective association between personality factors measured at younger ages (SM and ES) and family formation processes by mid-adulthood among males using Swedish register data. The findings support most of my hypotheses. As expected, my analyses found that SM is positively related to the probability of getting married by age 39 and older. The pattern observed for ES is less clear. While lower ES scores (1-2) were not shown to be linked with higher or lower marriage probabilities, higher scores were found to be associated with a higher likelihood of getting married.

Regarding fertility, positive relationships with personality factors were found, as I hypothesized based on previous research. SM and ES were shown to be positively associated with offspring counts and negatively associated with the probability of remaining childless by age 39 and older among males in Sweden. The correlations can be described as (reversed) S-shaped patterns, with the curves being steeper for SM than for ES. Stratification analyses revealed that these patterns are particularly distinct for males who are in the lower income deciles, have higher educational levels, and have never been married. These findings suggest that SES indicators and marital status may play important mediating roles in the personality-fertility link. Similar associations could be found in brother comparisons.

Additionally, my findings indicate that lower scores on both SM and ES are associated with a higher risk of divorce by mid-adulthood. However, no link was found between higher scores on both of these factors and the risk of divorce. These findings are partly in line with my hypothesis regarding ES, but contradict my expectations regarding SM. Previous research generated mixed findings on the association between personality and divorce (Bleidorn et al., 2018). It has, for example, been shown that among males, extraversion (as an important facet of SM) is positively associated with long-term life satisfaction after getting married (Boyce et al., 2016), which may, in turn, influence marital stability and the risk of divorce. Furthermore, previous findings indicate that males tend to become more introverted and more emotionally stable after marriage, which can also affect marital satisfaction (Lavner et al., 2018), and, in turn, marital stability. However, the data did not allow me to examine potential changes in SM or ES. Further information on potential pathways between personality and divorce via marital satisfaction can be found in Solomon and Jackson (2014). Previous evidence suggests that the associations between divorce and extraversion (positive) and ES (negative) are relatively robust across marriage cohorts (Boertien & Mortelmans, 2018).

With regard to the risk of cohabitation dissolution, similar patterns emerged. The findings indicate that low scores on both traits are linked with a higher separation risk for partners who live in the same residential unit and have a child together. However, the curves display a U-shaped pattern, at least for SM, which suggests that higher SM scores are also linked with a higher risk of dissolution. These trends were found to persist in within-family comparisons, but with larger statistical uncertainty.

Strengths and limitations

My study has some weaknesses and strengths. One important limitation relates to the focus on males, since data for women were not available. Thus, I was able to compare brothers, but not sisters. Evidence from previous research suggests that different ties might affect individual family formation processes differently. For example, older brothers could influence women's fertility differently than older sisters do (Sear et al., 2003).

Another limitation of my study refers to the interests of the military when measuring personality. As I discussed in the manuscript, the personality measures used by the military differ from those that are commonly used in demographic/psychological research. Additionally, a substantial portion of the men (approximately 20%) did not receive SM or ES scores. Additional bivariate analyses between IQ (or physical fitness) and personality assessments did not reveal clear patterns that would explain why the SM and the ES of one-fifth of the men were not assessed.

Personality may change over longer time periods (Harris et al., 2016; Hopwood & Bleidorn, 2018), although there is some evidence that personality remains relatively stable over the life course (Damian et al., 2015; Lucas & Donnellan, 2011). The measures used by the military are based on interviews, which usually produce less stable personality levels than self-reports from questionnaires (Hopwood & Bleidorn, 2018). Therefore, the associations I analyzed can be considered prospective, but not causal. However, evidence from previous studies supports the hypothesis that while personality can predict certain life events such as changes in relationship status (Neyer & Asendorpf, 2001) and SES indicators (Damian et al., 2015; Leikas & Salmela-Aro, 2015), life events do not lead to large personality changes (Costa Jr. et al., 2000; Neyer & Asendorpf, 2001), particularly over the long term (Allemand et al., 2015).

On the other hand, this study also has strengths. The power of personality has often been underrated in demographic research, despite indications that personality is even more strongly associated with family-related outcomes (e.g., divorce) than SES indicators are (Roberts et al., 2007). The Swedish register data allowed me to link personality factors measured at young ages to demographic events at a population level. My analyses obtained additional power due to sibling comparisons, which

enabled me to control for unobserved but constant heterogeneity, such as parental background or childhood experiences.

In general, fewer selection problems arise when using register data than when using survey data. Survey participation is voluntary, and can be rejected for different reasons. Non-participating individuals may have specific fertility or marital behavior patterns. For instance, disadvantaged males might be less likely to participate in a survey, or to have children or to marry. However, my analyses covered the vast majority of men born in Sweden between 1963 and 1979, including men who would have rejected survey participation. Therefore, I can assume that my findings are less biased than those of studies using survey data. Although the proportion of missing values for the personality measures was non-negligible (SM: 19.58%; ES: 19.65%), I was still able to include these individuals in my analyses since family formation outcomes were available. Males with missing values on SM were found to be slightly more likely to marry, but to have lower fertility (fewer children, higher childlessness) and a higher risk of cohabitation dissolution compared to the reference group (SM score of 3). The risk of divorce for these men was not found to differ from that of men with SM scores of 3. For males with missing values on ES, the opposite patterns were observed (less likely to get married, more children, lower childlessness). Individuals with no information on ES were also shown to have a higher risk of divorce (but not of cohabitation dissolution) than the reference group with an ES score of 3.

Implications and Outlook

My study has shown that personality factors can influence family formation processes (marriage, fertility, dissolution). The findings indicate that while the magnitudes vary between outcomes and personality factors, they are generally higher for SM. The marriage models found SM coefficients between -0.06 (score of 1, reference group: score of 3) and 0.07 (score of 5). These results are, therefore, comparable with those for educational gradients, which show that only a doctoral degree is more strongly associated with marriage (coefficient: 0.13). However, the SM coefficients were found to be generally smaller than the income estimates (between -0.23 and 0.13). Similar conclusions were reached with respect to fertility (offspring counts, childlessness). Analyses on the risk of dissolution showed that lower personality

scores have a particularly strong impact on the risk of cohabitation dissolution. For instance, the lowest score (1) was found to be linked with a 30% (SM) and a 24% (ES) higher risk of getting divorced (compared to a score of 3). Higher risk levels could only be detected in extremely low incomes (decile 1: 57% higher risk) or across the highest and the lowest educational levels.

My findings have a number of practical implications, including with regard to mating processes and health outcomes. Having high SM and ES scores may be beneficial on the partner market, which could, in turn, result in inequalities in the likelihood of entering a stable partnership. Some males may struggle to enter a stable partnership union, while others may have several such unions over the life course. My findings support these hypotheses, as they show that males with higher ES and SM scores are more likely to get married. I also found that partnership status is linked with health outcomes. Previous studies have shown that singles have higher mortality risks (e.g., Roelfs et al., 2011) and worse well-being (e.g., Wright & Brown, 2017), while partnered individuals have better mental health (e.g., Willits et al., 2004). This means that compared to men with higher SM and ES scores, men with lower SM and ES scores are not only less likely to get married and more likely to experience partnership dissolution, they are also more likely to suffer from poor health.

Similar effects may be hypothesized with regard to fertility. Males with higher ES and SM scores are more likely to enter parenthood and to have more children. Since they also have considerable advantages on the marriage market, they may benefit from opportunities to reproduce (i.e., by entering a stable relationship). From an evolutionary perspective, findings on personality and fertility are of particular interest, as certain personality combinations may become extinct in the long run. Low SM scores are linked with higher levels of childlessness, which may indicate that higher SM scores are desired in the context of partnering and parenthood. Therefore, inequalities with regard to personality facets should be addressed in future research that examines fertility and marital behavior.

More research is needed on the prospective association between personality and family formation. The Swedish military provides information on other factors that may influence marital behavior and fertility, such as intensity and psychological energy. Additionally, it would be interesting to examine the link between personality and family formation among women, since previous research indicates that

personality plays an important role in family formation among females as well among males (Jokela, 2012; Jokela et al., 2011). The personality-family formation link may also be studied in other cultural contexts, in particular regarding the positive association between SES and fertility, which is a specific characteristic of Nordic countries.

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Appendix

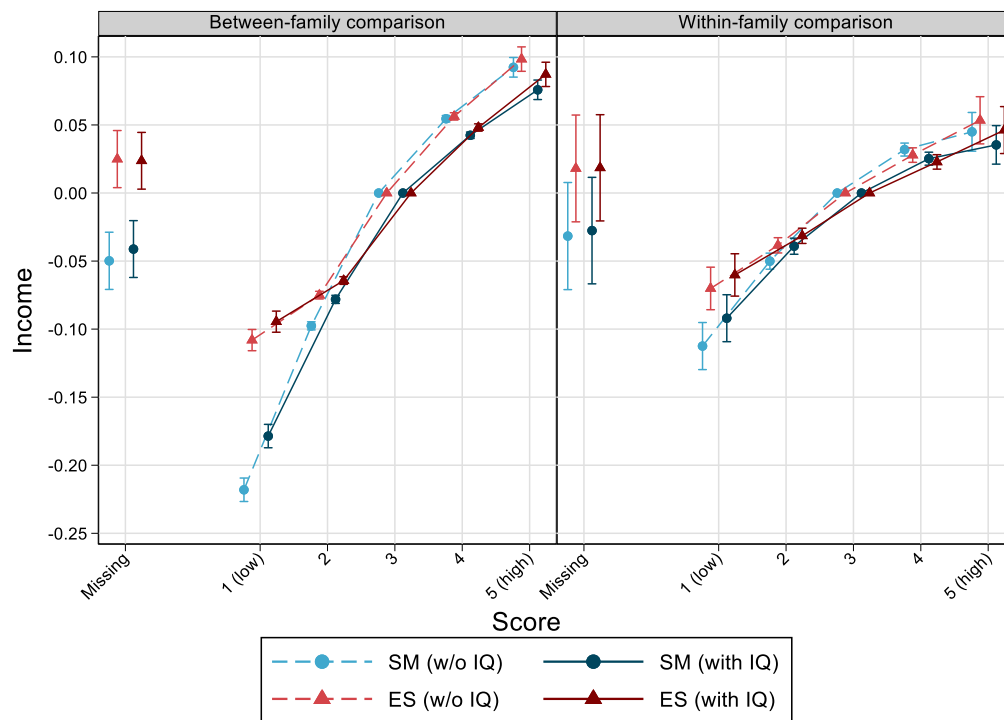
Table A1: Descriptive Statistics - Variables

Variable	Category	N	%
# Children	0	134,502	20.64
	1	96,183	14.76
	2	279,012	42.81
	3	108,897	16.71
	4	24,769	3.80
	5	5,879	0.90
	6	1,655	0.25
	7	487	0.07
	8	205	0.03
	9 or more	194	0.03
Social Maturity	1	8,290	1.27
	2	77,430	11.88
	3	291,519	44.73
	4	135,715	20.82
	5	11,199	1.72
	Missing	127,630	19.58
Emotional Stability	1	10,341	1.59
	2	87,545	13.43
	3	322,200	49.43
	4	96,837	14.86
	5	6,814	1.05
	Missing	128,046	19.65
Cognitive Skills	1	21,093	3.24
	2	45,168	6.93
	3	69,778	10.71
	4	100,048	15.35
	5	154,058	23.64
	6	108,354	16.62
	7	80,287	12.32
	8	47,158	7.24
	9	25,839	3.96

Table A1: Descriptive Statistics – Variables (cont.)

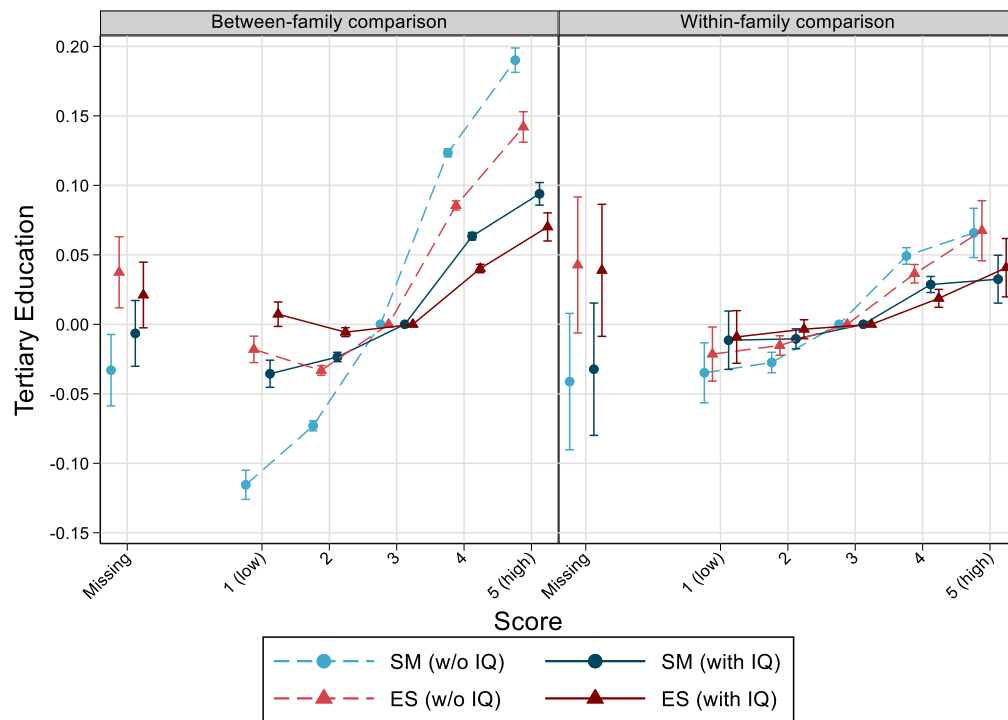
Variable	Category	N	%		
Educational Level	No Basic Education	696	0.11		
	Primary	53,466	8.20		
	Lower Secondary	203,223	31.18		
	Upper Secondary	148,940	22.85		
	Post-Secondary	98,559	15.12		
	Tertiary	137,985	21.17		
	Doctor	8,914	1.37		
Birth Order	1	466,060	71.51		
	2	150,762	23.13		
	3	28,467	4.37		
	4	4,965	0.76		
	5	1,100	0.17		
	6	290	0.04		
	7 or higher	139	0.01		
Sibling Group Size	1	321,959	49.40		
	2	245,767	37.71		
	3	67,597	10.37		
	4	12,561	1.93		
	5	2,771	0.43		
	6	739	0.11		
	7	241	0.04		
	8 or more	148	0.02		
Civil Status	Never Married	329,387	50.54		
	Ever Married	322,396	49.46		
	Observations	Mean	Std.dev.	Min	Max
Income by age 39	651,783	132.60	110.14	-2,409.68	46,742.79
Birth Year	651,783	1971.24	4.11	1963	1979

Figure A1: The relationship between personality factors measured at ages 17-20 and cumulated income by age 39 amongst Swedish men born 1963-1979. Linear regression models, error bars are 95% confidence intervals.



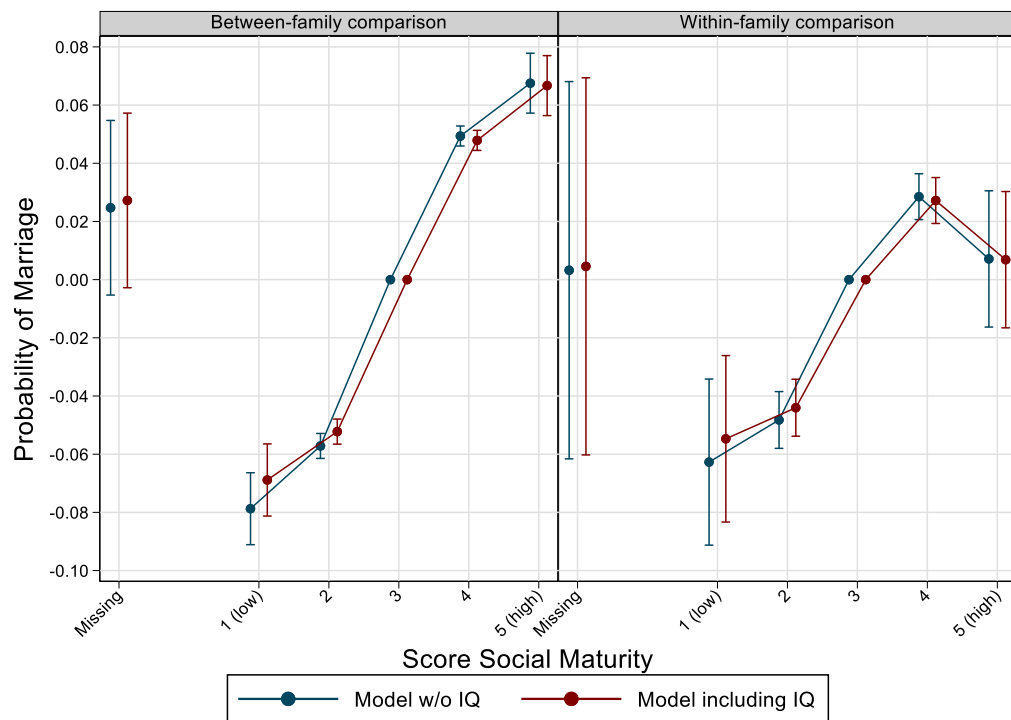
Note: Models without IQ control for birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A2: The relationship between personality factors measured at ages 17-20 and the probability to obtain tertiary education by age 39 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



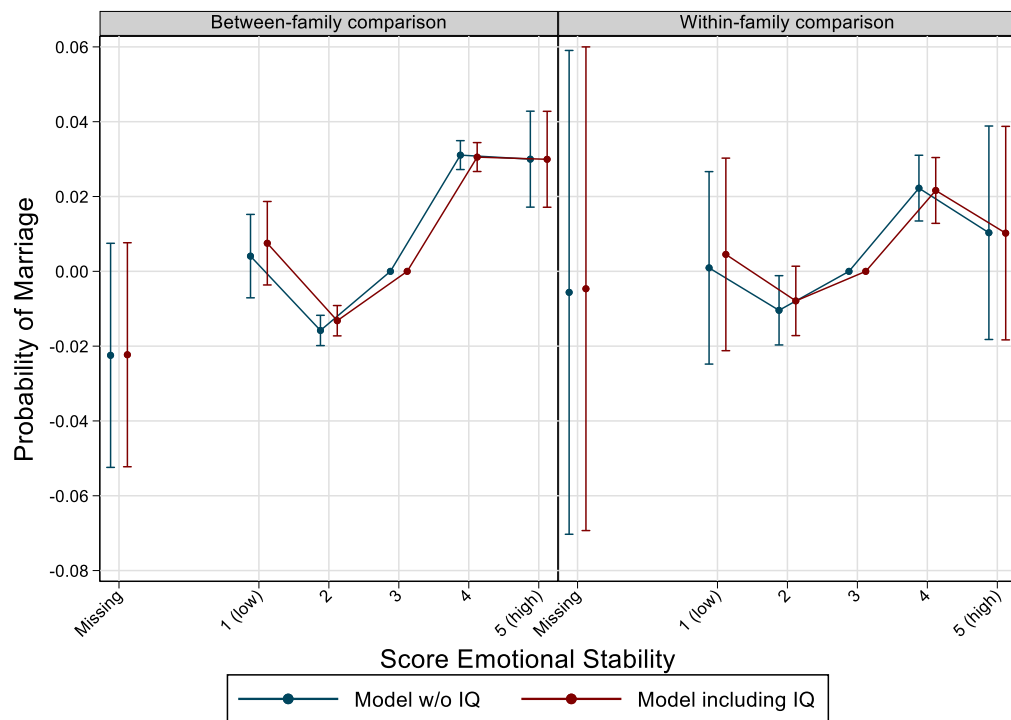
Note: Models without IQ control for birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A3: The relationship between social maturity measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



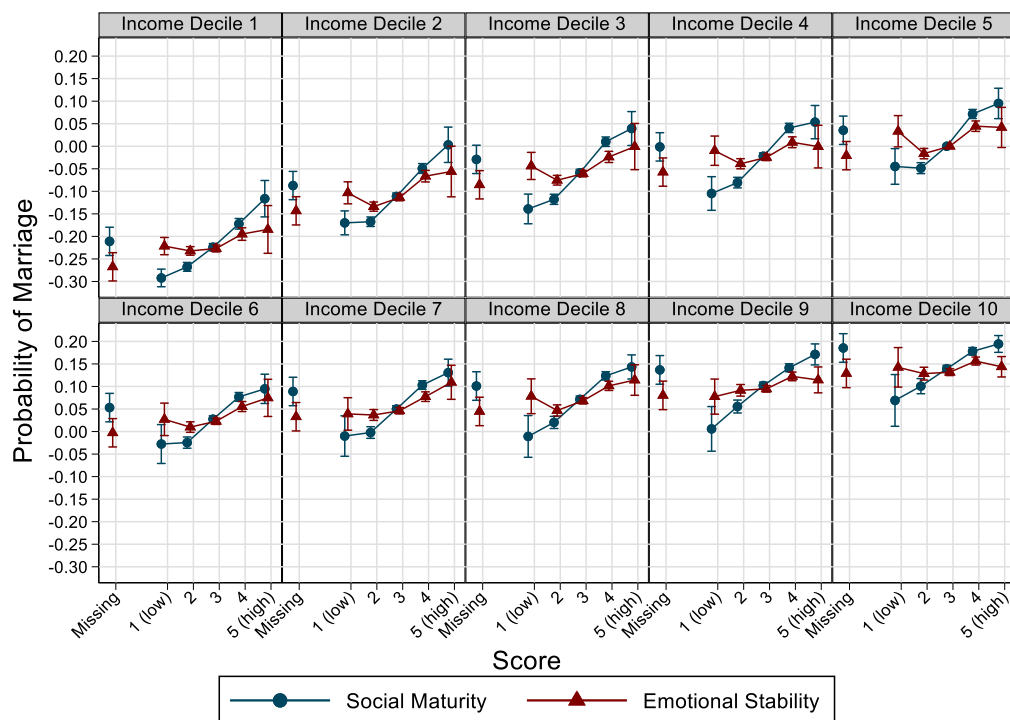
Note: Models without IQ control for emotional stability, birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A4: The relationship between emotional stability measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



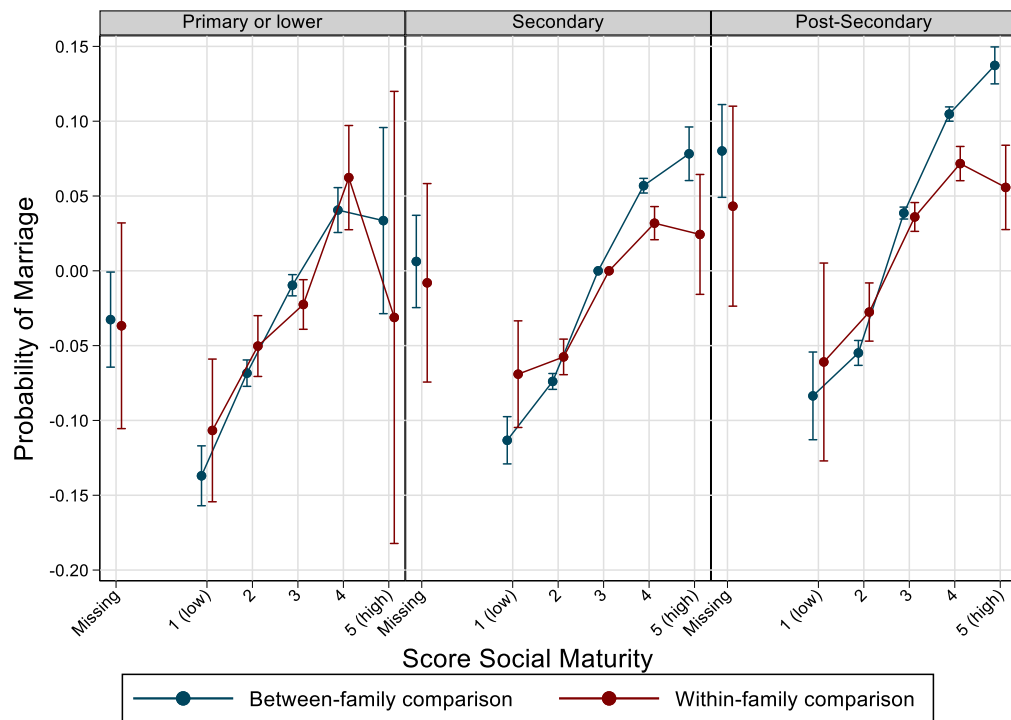
Note: Models without IQ control for social maturity, birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A5: The relationship between personality factors measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Linear probability models by income deciles, error bars are 95% confidence intervals.



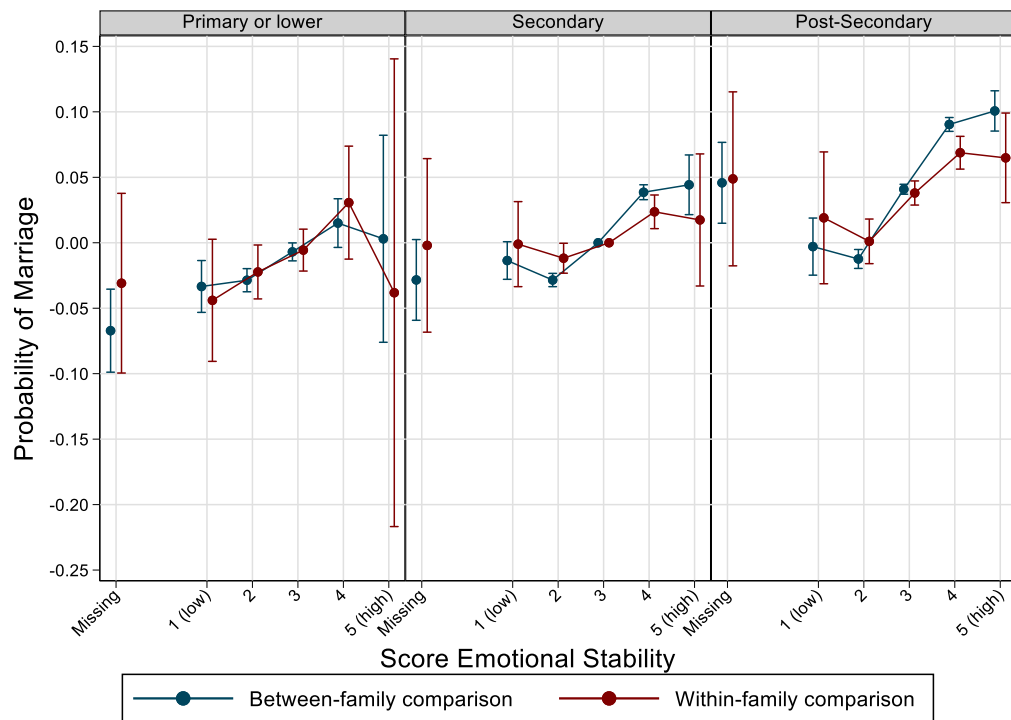
Note: Models control for cognitive abilities, birth year, birth order, and sibling group size.

Figure A6: The relationship between social maturity measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Linear probability models by educational levels, error bars are 95% confidence intervals.



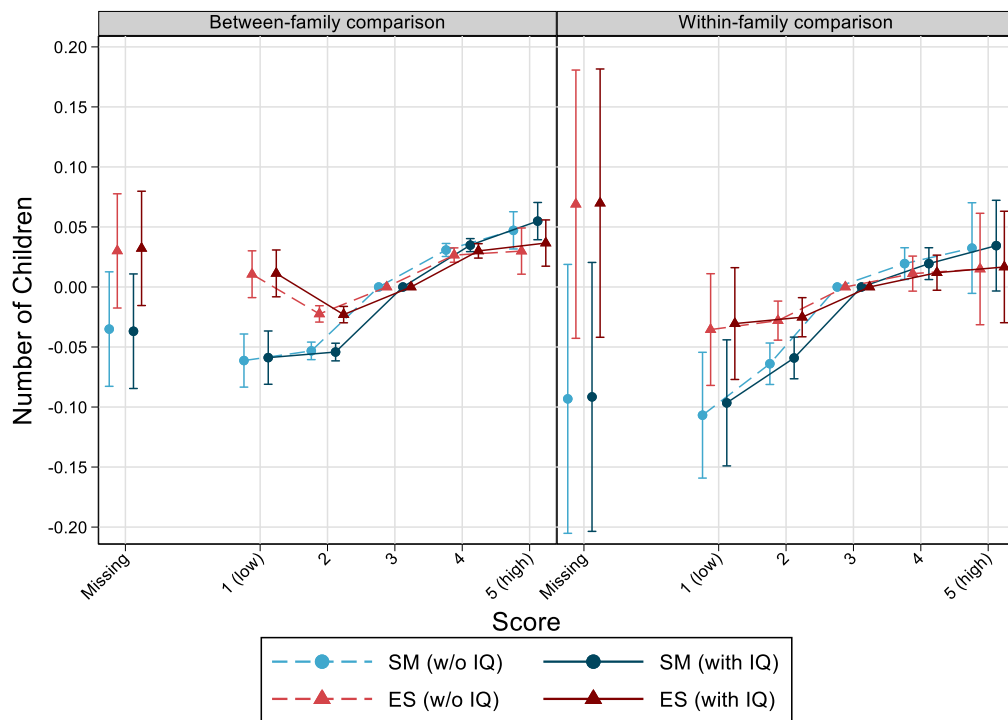
Note: Models control for emotional stability, cognitive ability, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A7: The relationship between emotional stability measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Linear probability models by educational levels, error bars are 95% confidence intervals.



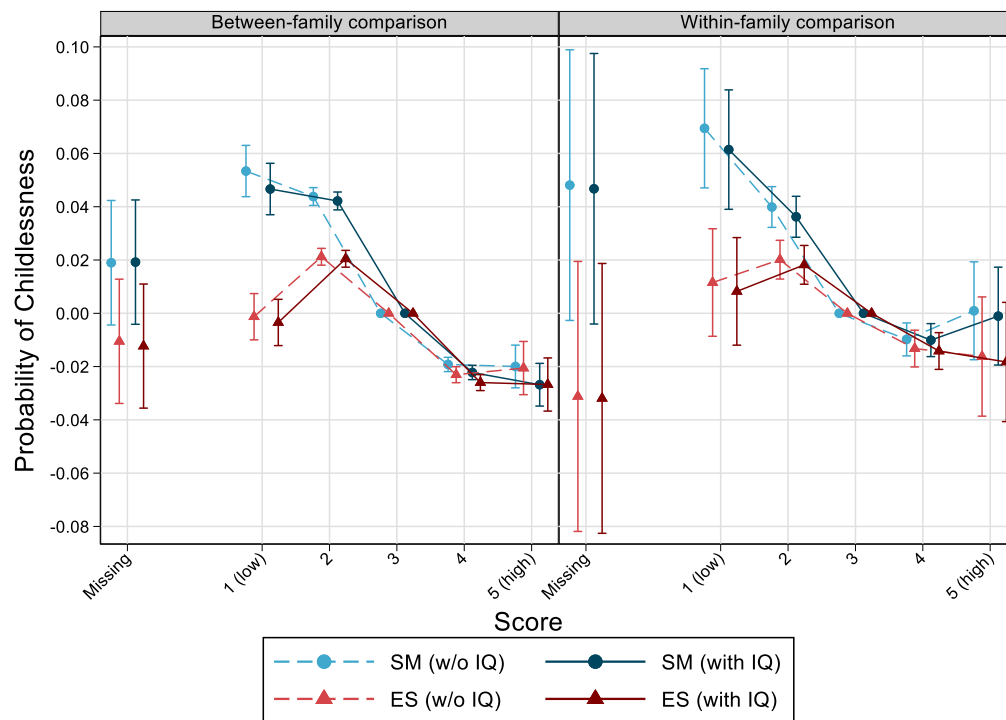
Note: Models control for social maturity, cognitive ability, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A8: The relationship between personality factors measured at ages 17-20 and number of children by age 39 amongst Swedish men born 1963-1979. Poisson regression models, error bars are 95% confidence intervals.



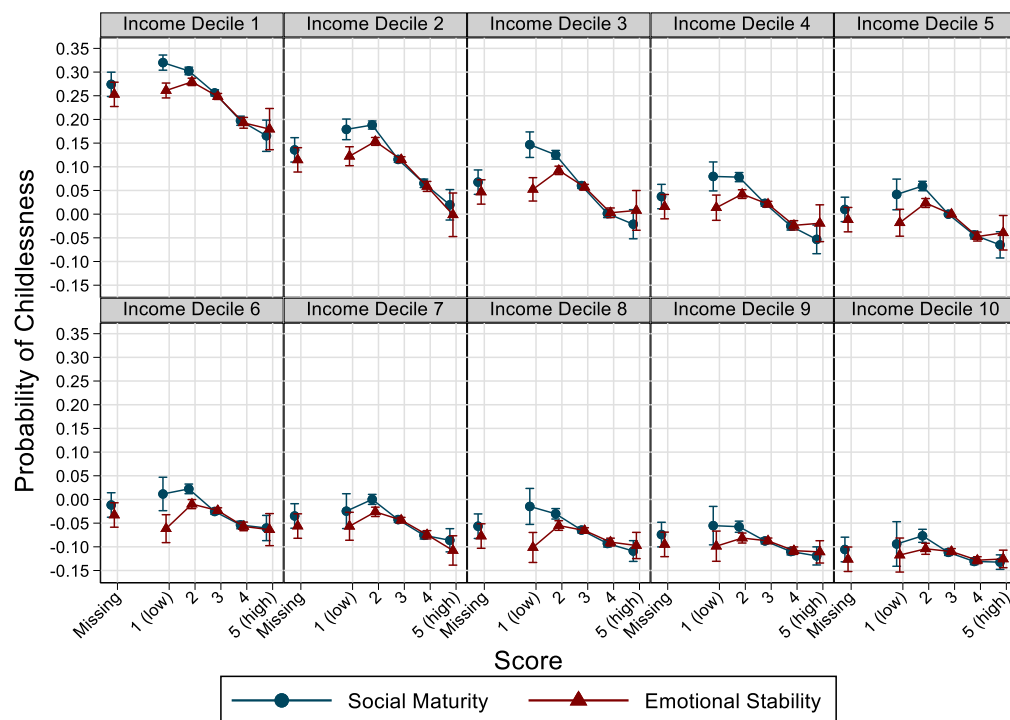
Note: Models without IQ control for birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A9: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



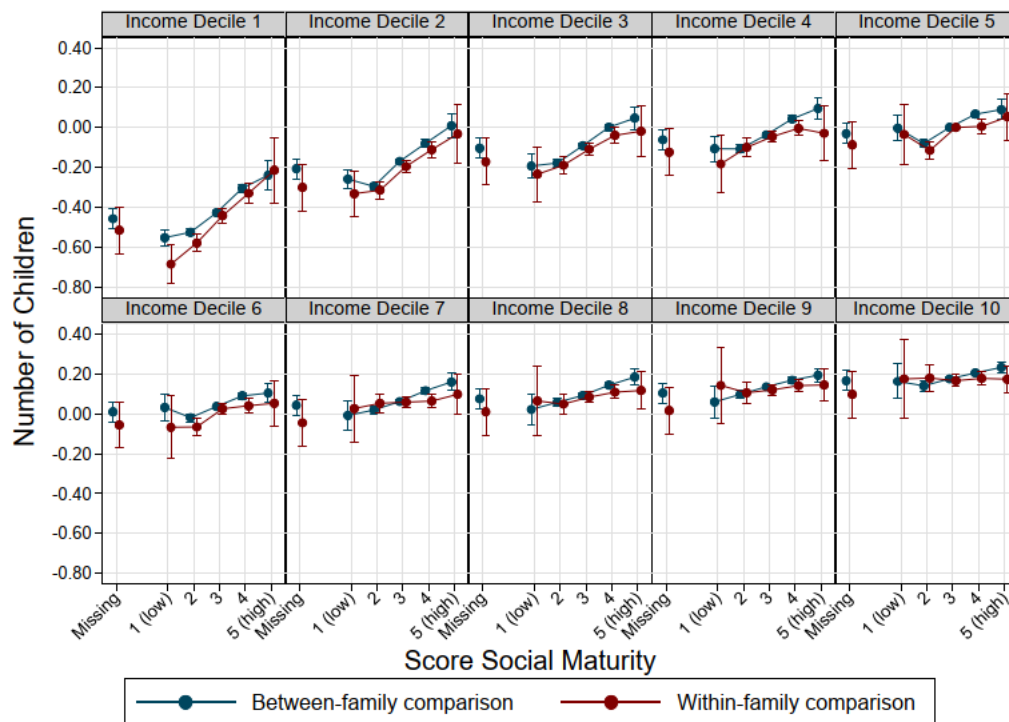
Note: Models without IQ control for birth year, birth order, and in case of between-family considerations for sibling group size. Results for models including cognitive ability are shown separately.

Figure A10: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models by income deciles, error bars are 95% confidence intervals.



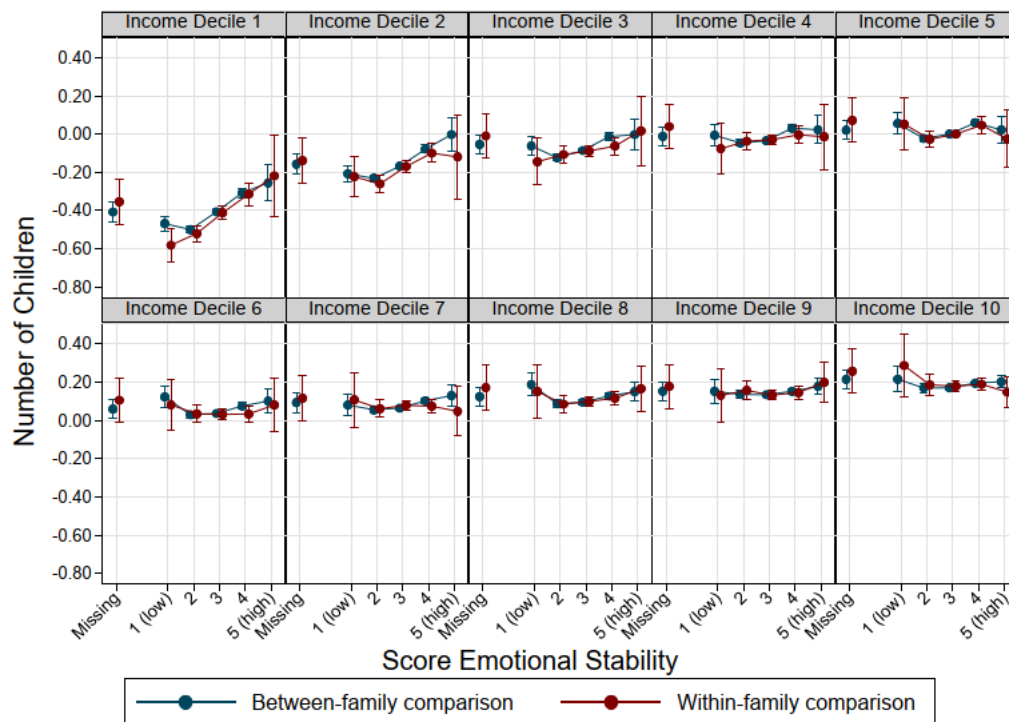
Note: Models control for cognitive abilities, birth year, birth order, and sibling group size.

Figure A11: The relationship between social maturity measured at ages 17-20 and number of children by age 39 amongst Swedish men born 1963-1979. Poisson regression models by income deciles, error bars are 95% confidence intervals.



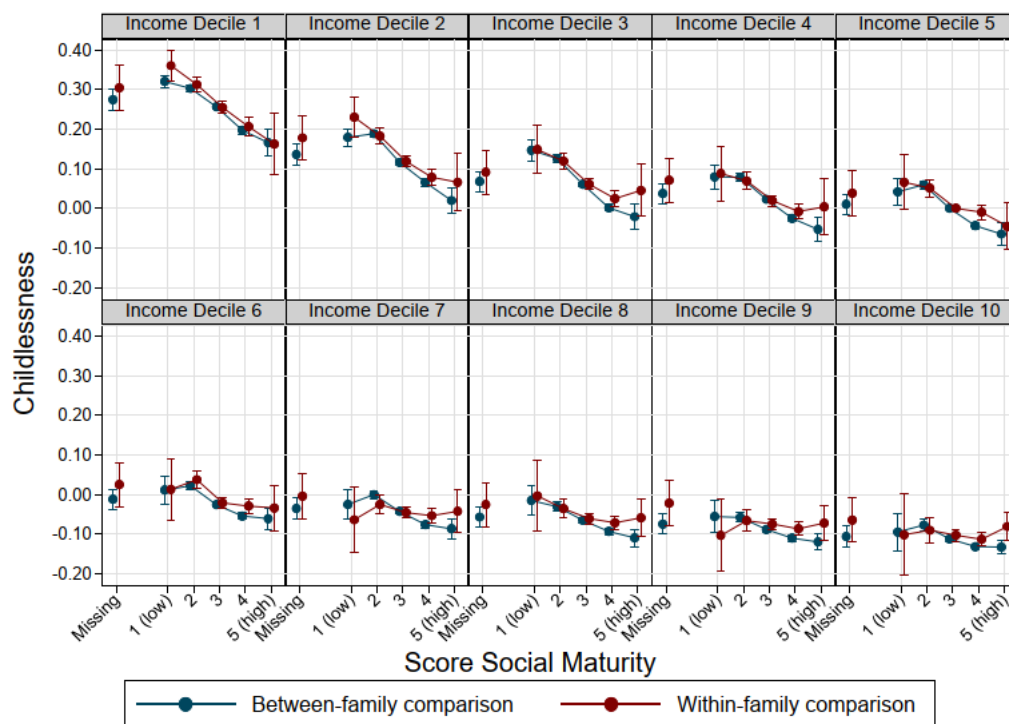
Note: Models control for emotional stability, cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A12: The relationship between emotional stability measured at ages 17-20 and number of children by age 39 amongst Swedish men born 1963-1979. Poisson regression models by income deciles, error bars are 95% confidence intervals.



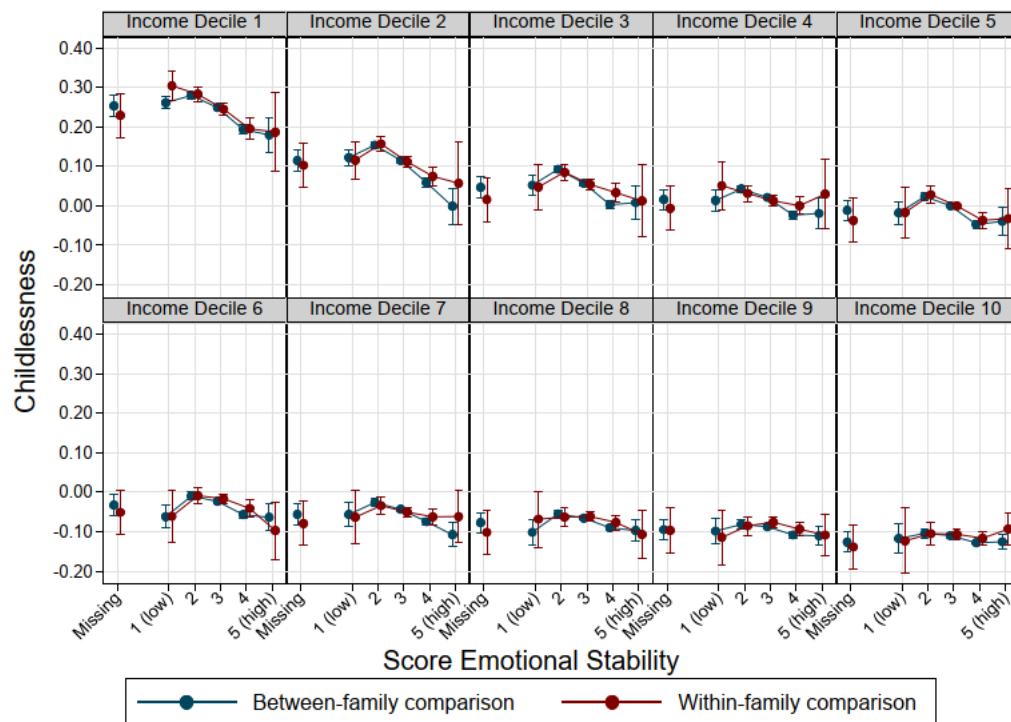
Note: Models control for social maturity, cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A13: The relationship between social maturity measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models by income deciles, error bars are 95% confidence intervals.



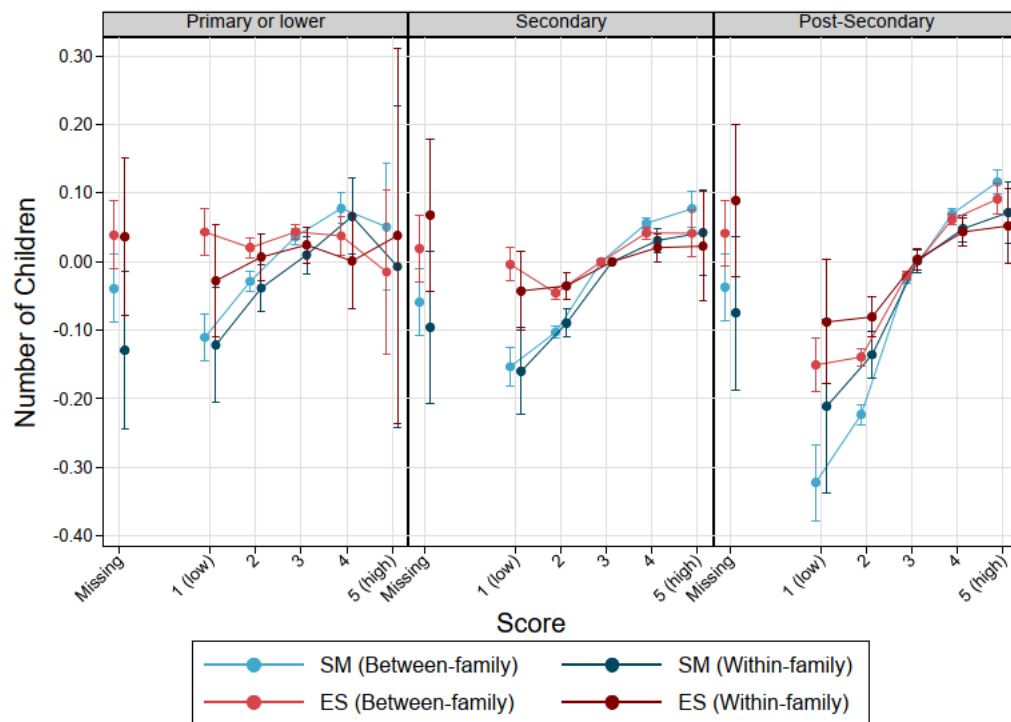
Note: Models control for emotional stability, cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A14: The relationship between emotional stability measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models by income deciles, error bars are 95% confidence intervals.



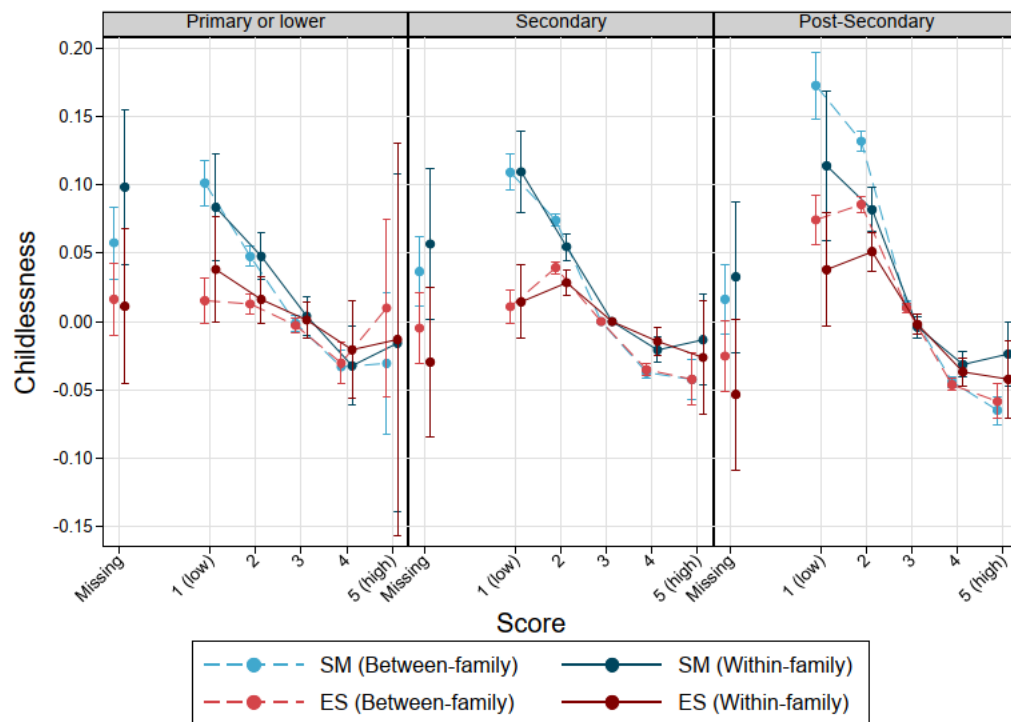
Note: Models control for social maturity, cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A15: The relationship between personality factors measured at ages 17-20 and number of children by age 39 amongst Swedish men born 1963-1979. Poisson regression models by educational levels, error bars are 95% confidence intervals.



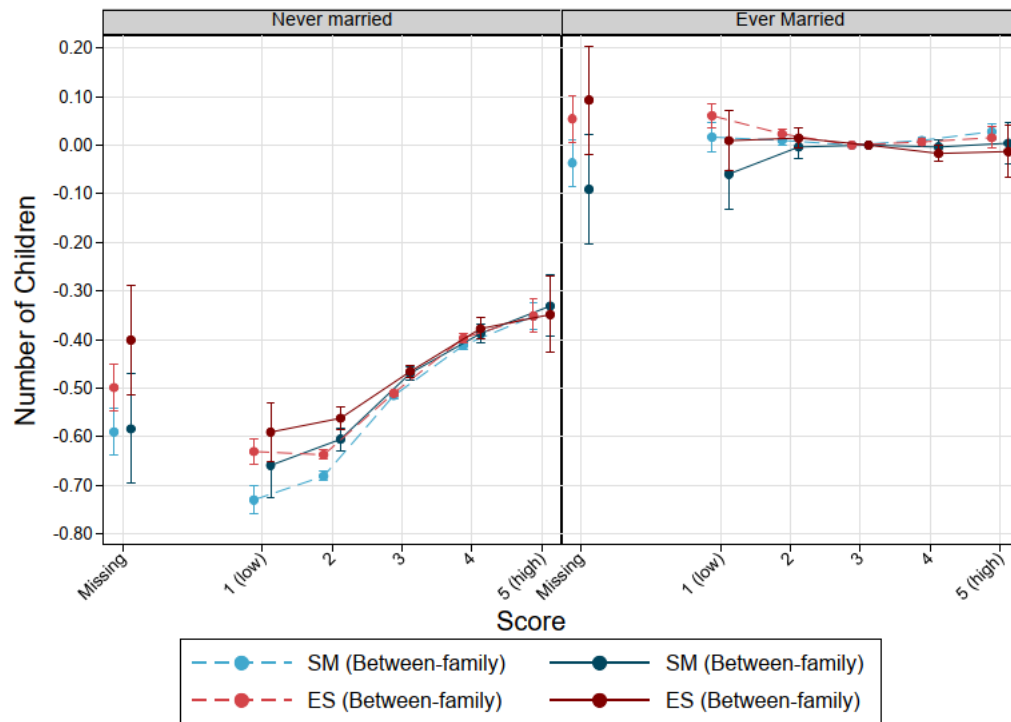
Note: Models control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A16: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models by educational levels, error bars are 95% confidence intervals.



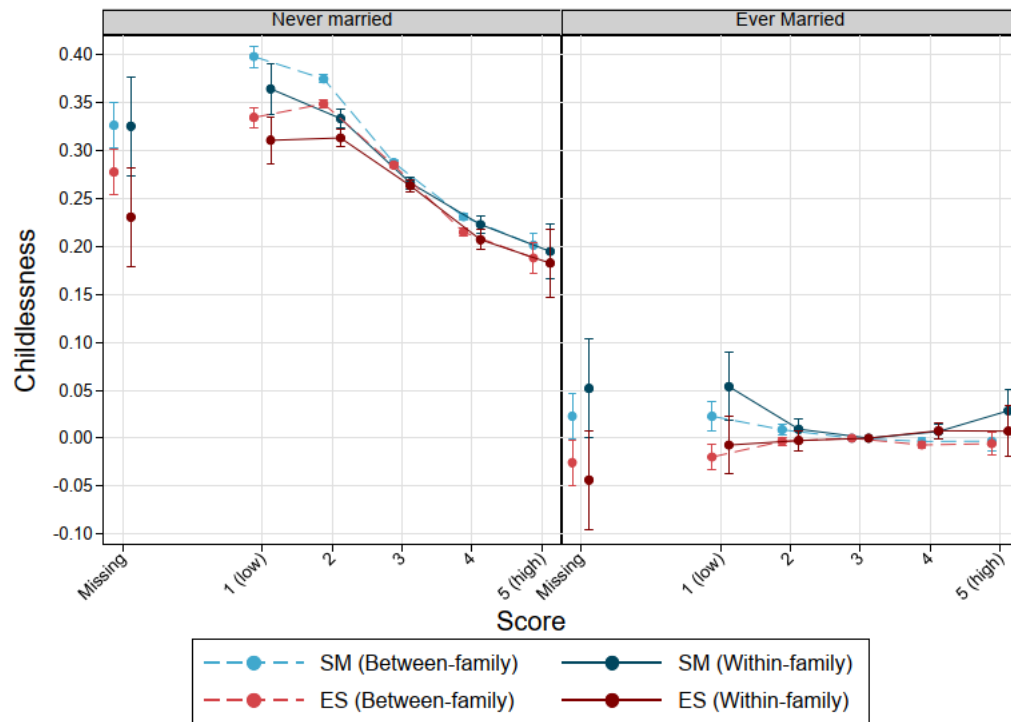
Note: Models control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A17: The relationship between personality factors measured at ages 17-20 and number of children by age 39 amongst Swedish men born 1963-1979. Poisson regression models by marital status, error bars are 95% confidence intervals.



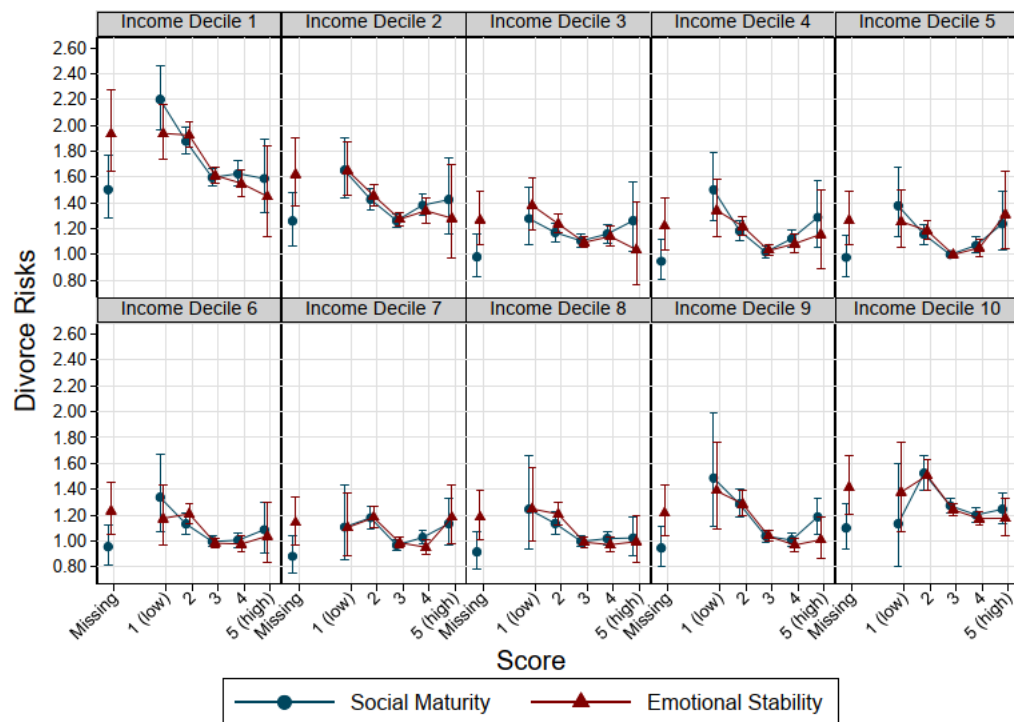
Note: Models control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A18: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Linear probability models by marital status, error bars are 95% confidence intervals.



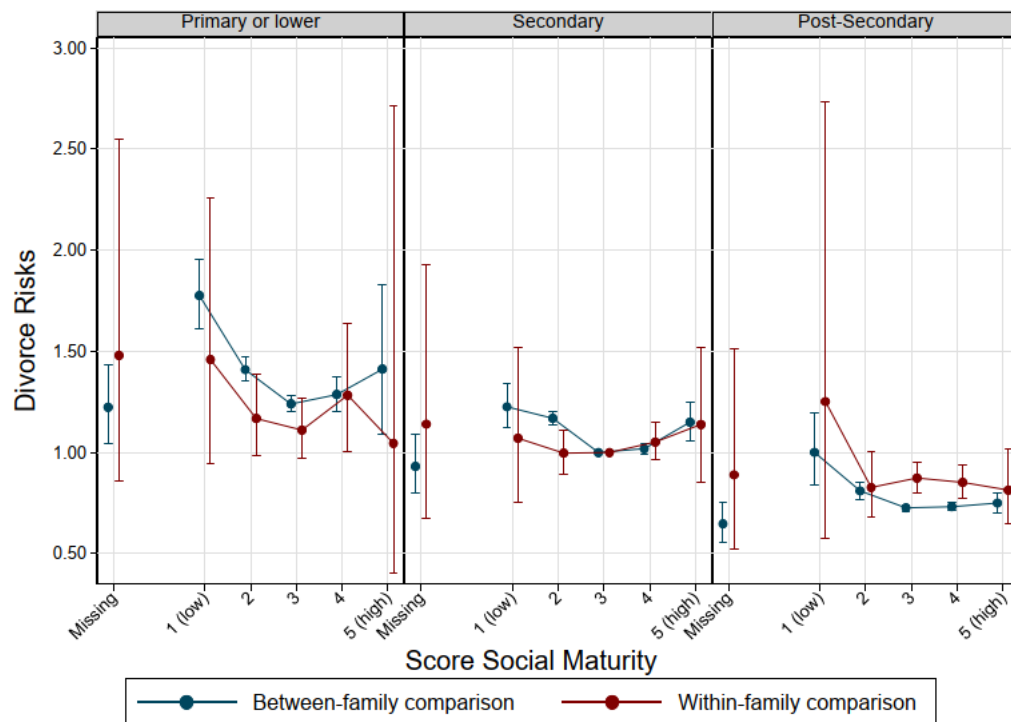
Note: Models control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size.

Figure A19: The relationship between personality factors measured at ages 17-20 and divorce risks by age 39 amongst Swedish men born 1963-1979. Cox PH models by income deciles, error bars are 95% confidence intervals.



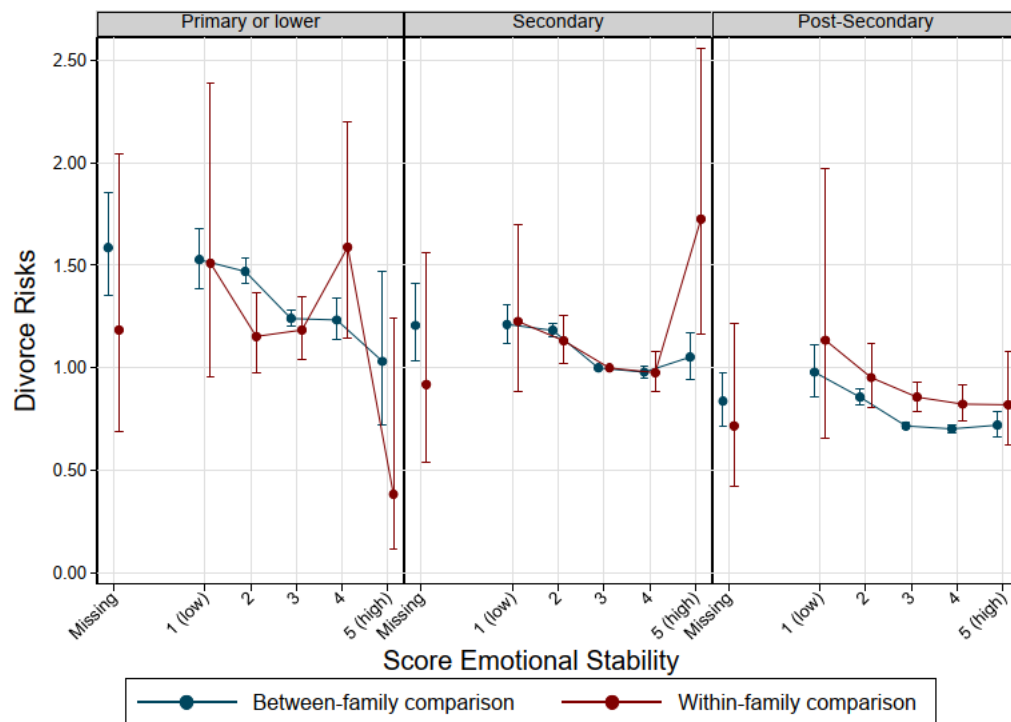
Note: Models control for cognitive abilities, birth year, birth order, sibling group size, education, and parental status.

Figure A20: The relationship between social maturity measured at ages 17-20 and divorce risks by age 39 amongst Swedish men born 1963-1979. Cox PH models by educational levels, error bars are 95% confidence intervals.



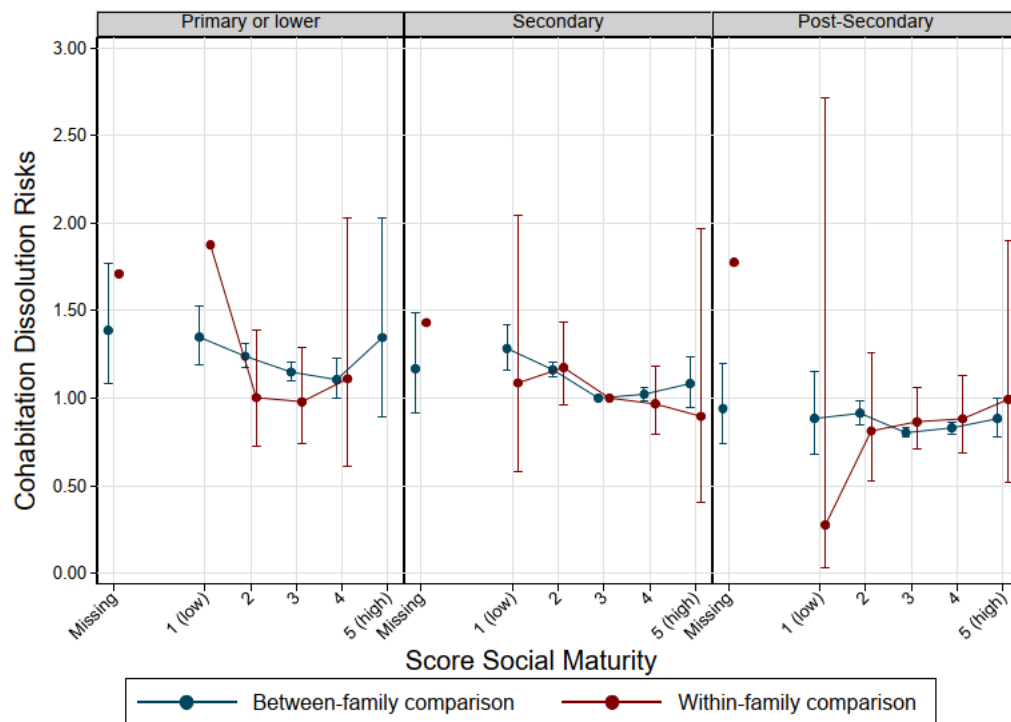
Note: Models control for emotional stability, cognitive abilities, birth year, birth order, income, parental status, and in case of between-family considerations for sibling group size.

Figure A21: The relationship between emotional stability measured at ages 17-20 and divorce risks by age 39 amongst Swedish men born 1963-1979. Cox PH models by educational levels, error bars are 95% confidence intervals.



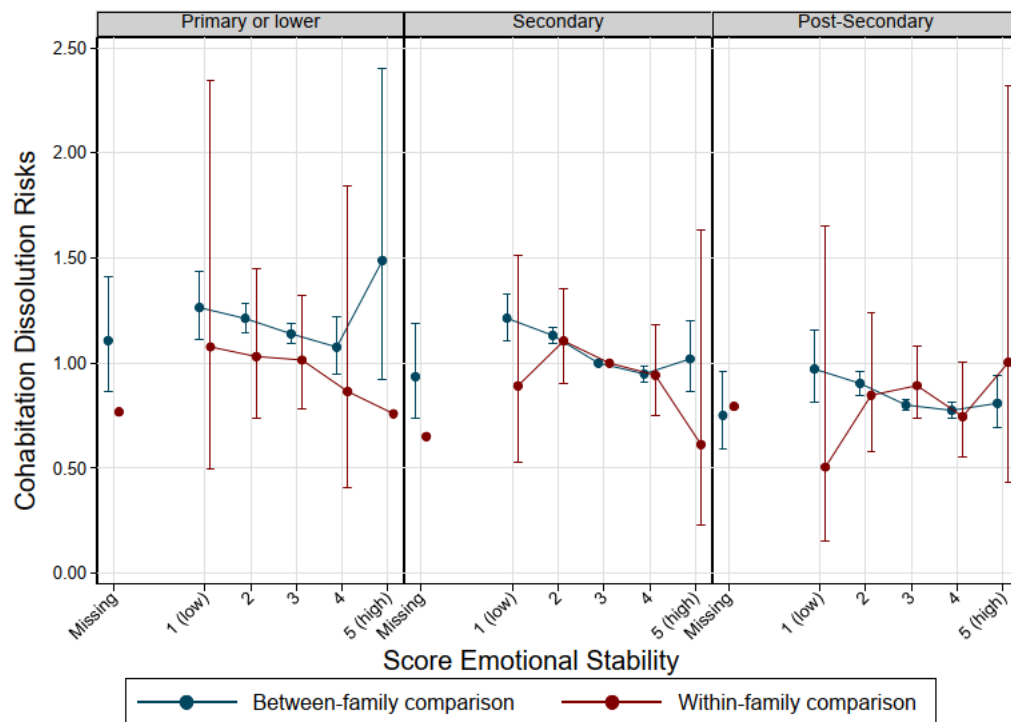
Note: Models control for social maturity, cognitive abilities, birth year, birth order, income, parental status, and in case of between-family considerations for sibling group size.

Figure A22: The relationship between social maturity measured at ages 17-20 and cohabitation dissolution risks by age 39 amongst Swedish men born 1963-1979. Cox PH models by educational levels, error bars are 95% confidence intervals.



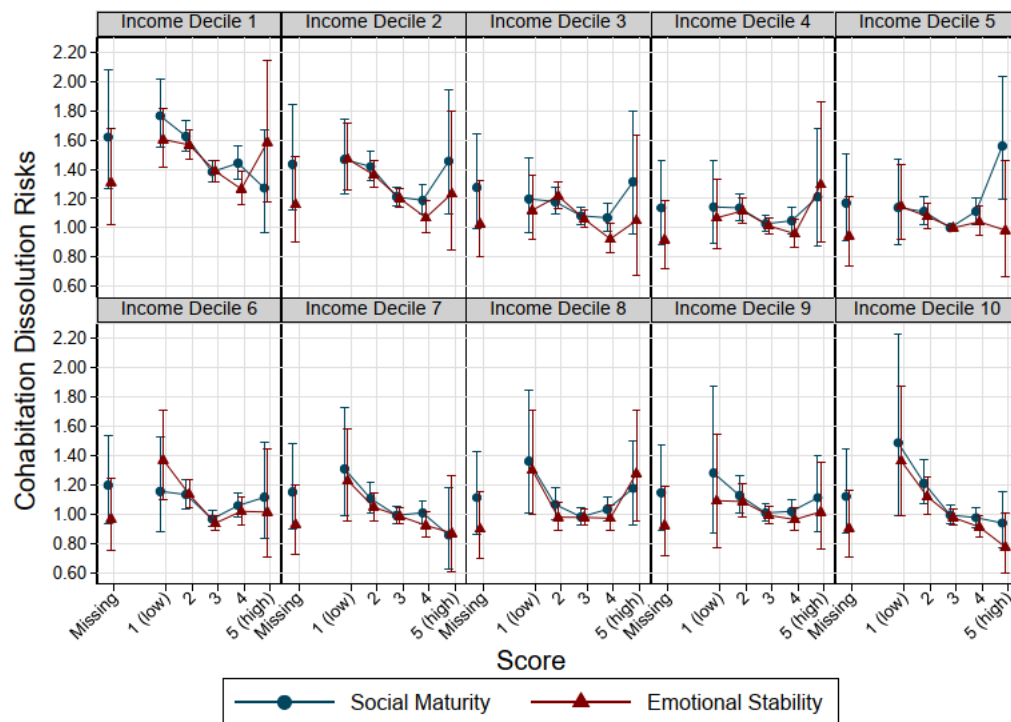
Note: Models control for emotional stability, cognitive abilities, birth year, birth order, income, and in case of between-family considerations for sibling group size. Point estimates or confidence intervals that are not shown are left out for visualization purposes here. Estimates are available upon request.

Figure A23: The relationship between emotional stability maturity measured at ages 17-20 and cohabitation dissolution risks by age 39 amongst Swedish men born 1963-1979. Cox PH models by educational levels, error bars are 95% confidence intervals.



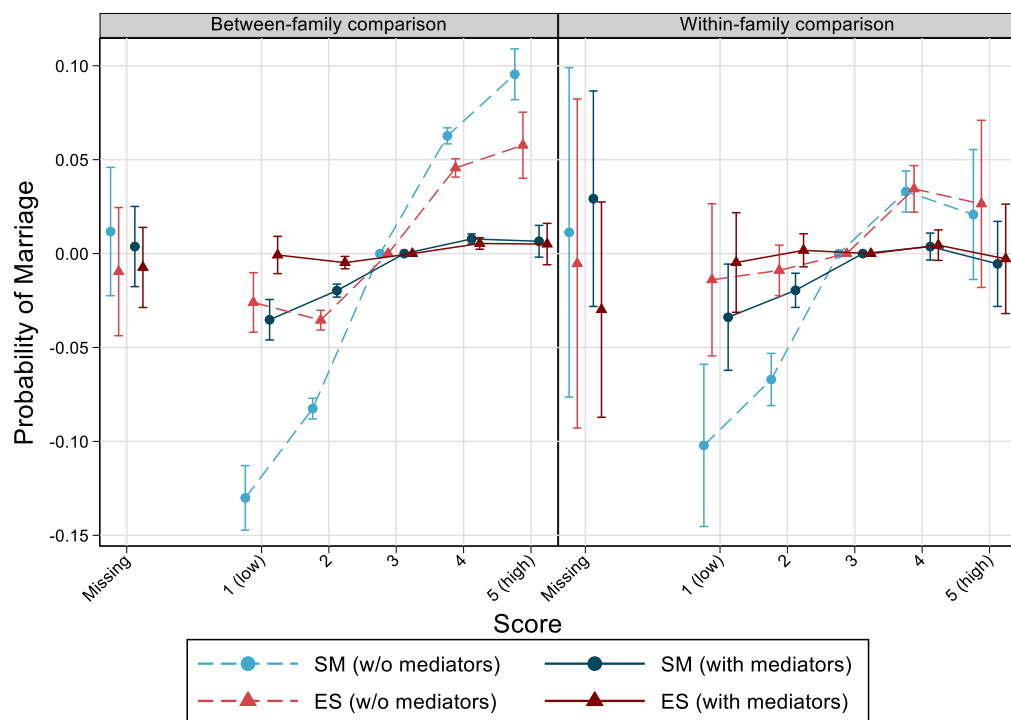
Note: Models control for social maturity, cognitive abilities, birth year, birth order, income, and in case of between-family considerations for sibling group size. Point estimates or confidence intervals that are not shown are left out for visualization purposes here. Estimates are available upon request.

Figure A24: The relationship between personality factors measured at ages 17-20 and cohabitation dissolution risks by age 39 amongst Swedish men born 1963-1979. CoxPH models by income deciles, error bars are 95% confidence intervals.



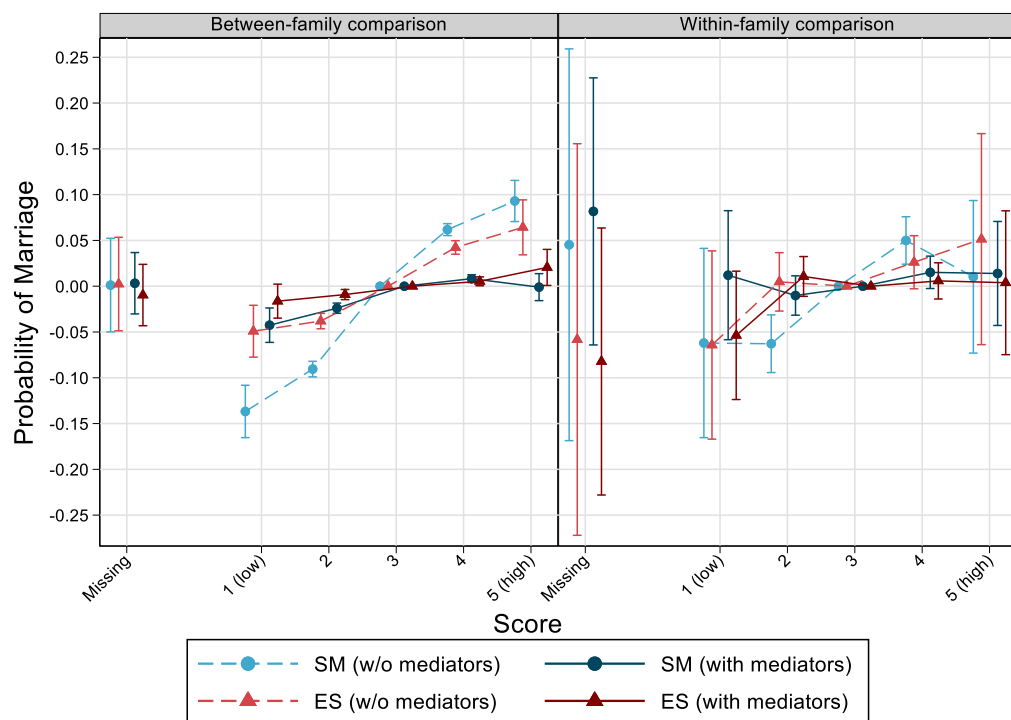
Note: Models control for cognitive abilities, birth year, birth order, sibling group size, and education. Point estimates or confidence intervals that are not shown are left out for visualization purposes here. Estimates are available upon request.

Figure A25: The relationship between personality factors measured at ages 17-20 and the probability to get married by age 45 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



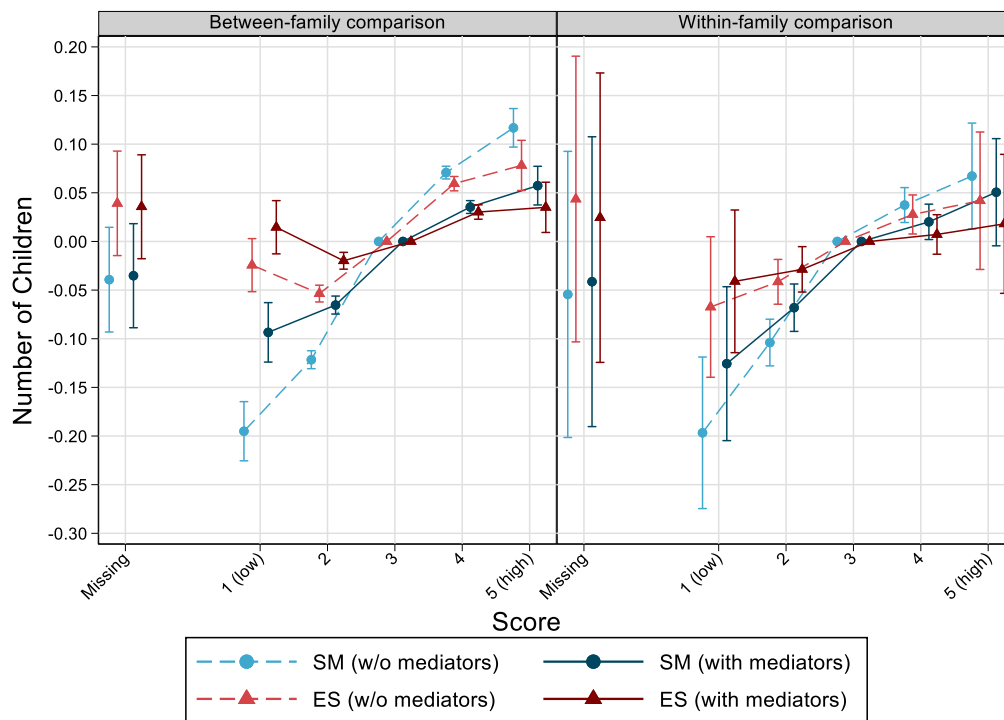
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and parental status additionally.

Figure A26: The relationship between personality factors measured at ages 17-20 and the probability to get married by age 50 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



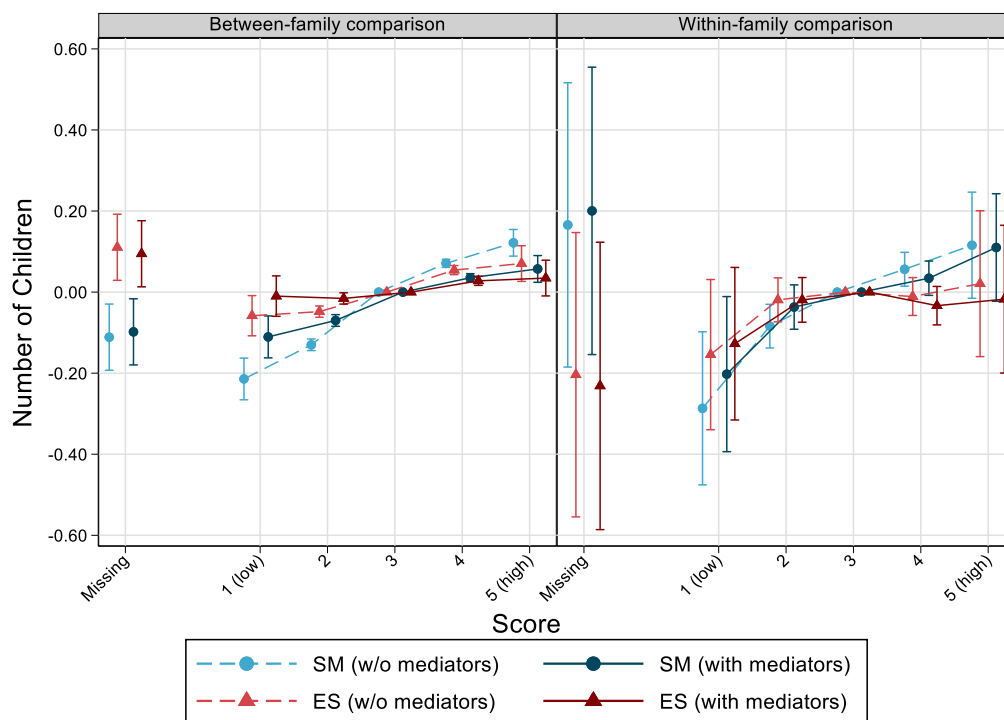
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and parental status additionally.

Figure A27: The relationship between personality factors measured at ages 17-20 and number of children by age 45 amongst Swedish men born 1963-1979. Poisson regression models, error bars are 95% confidence intervals.



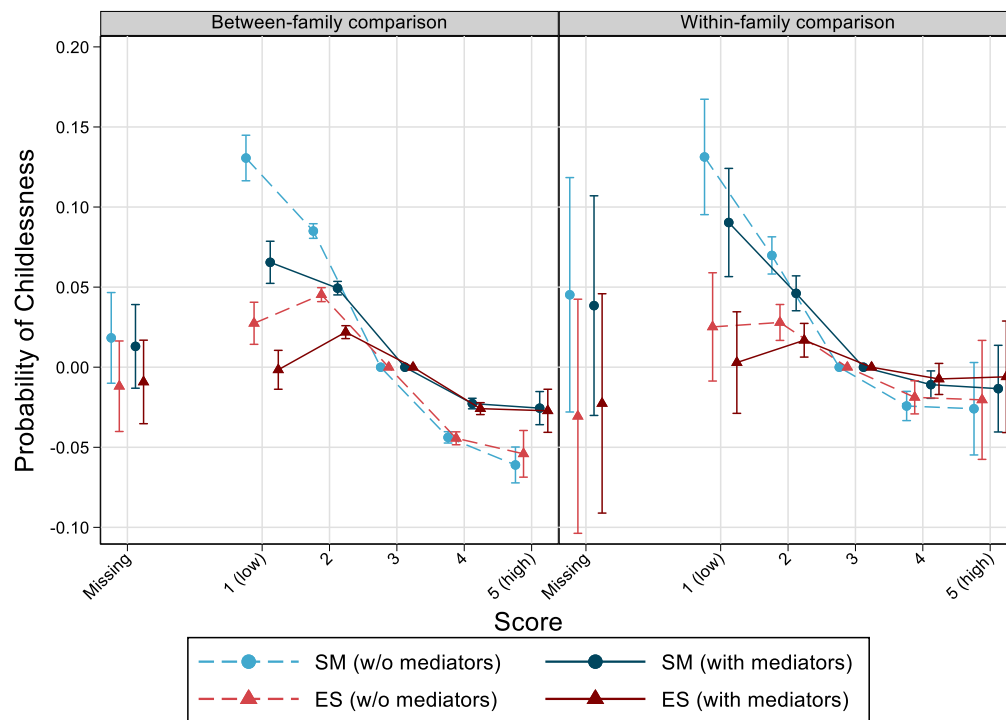
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and marital status additionally.

Figure A28: The relationship between personality factors measured at ages 17-20 and number of children by age 50 amongst Swedish men born 1963-1979. Poisson regression models, error bars are 95% confidence intervals.



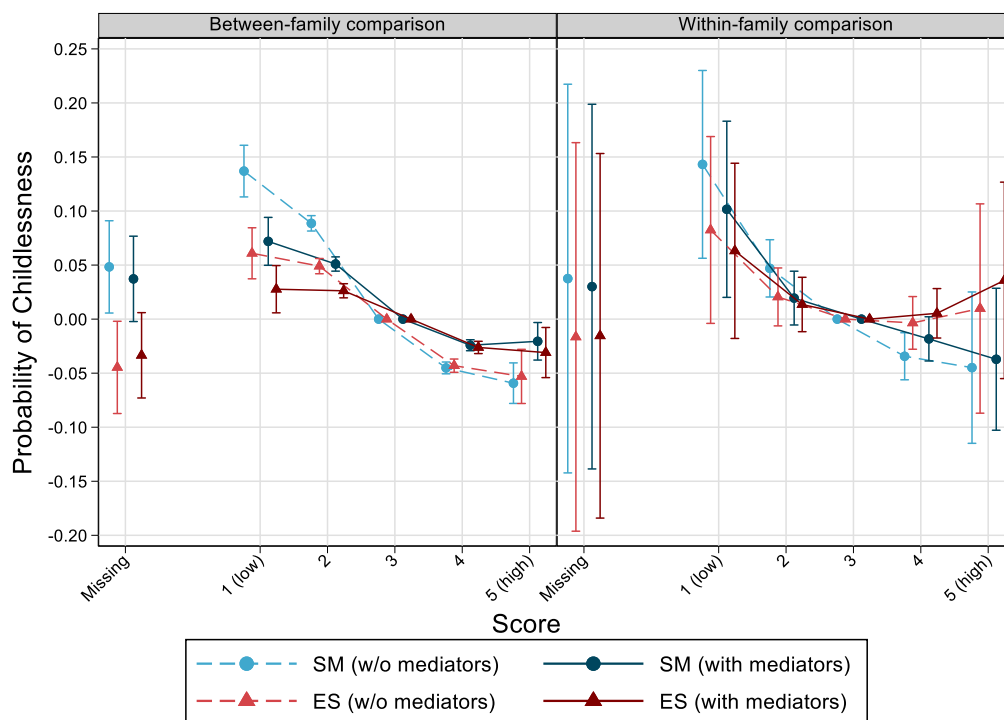
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and marital status additionally.

Figure A29: The relationship between personality factors measured at ages 17-20 and childlessness by age 45 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



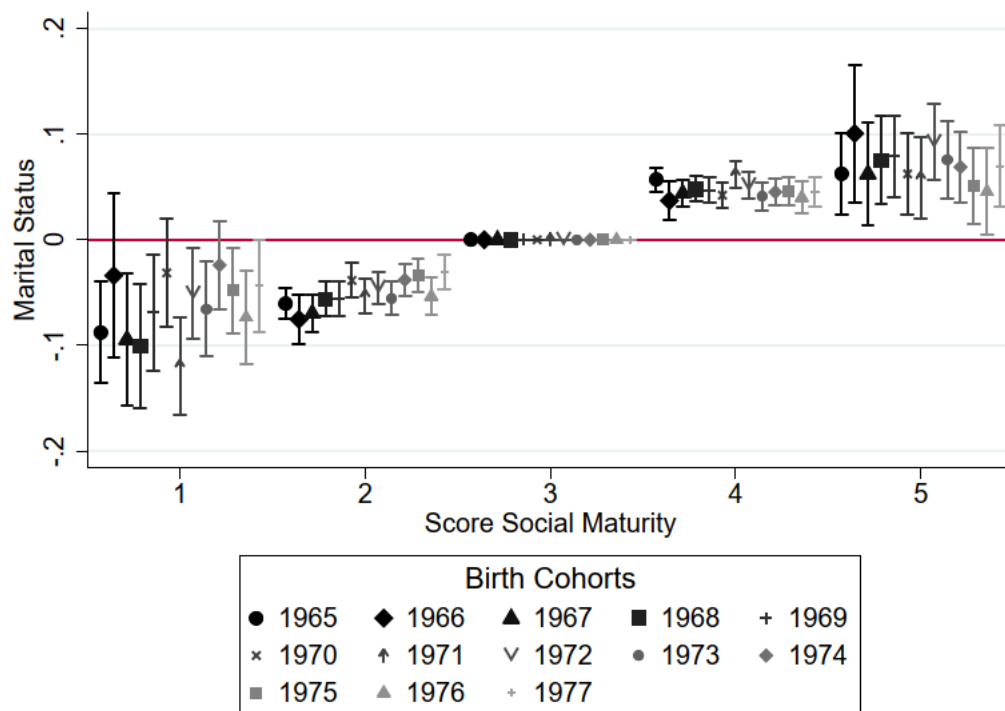
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and marital status additionally.

Figure A30: The relationship between personality factors measured at ages 17-20 and childlessness by age 50 amongst Swedish men born 1963-1979. Linear probability models, error bars are 95% confidence intervals.



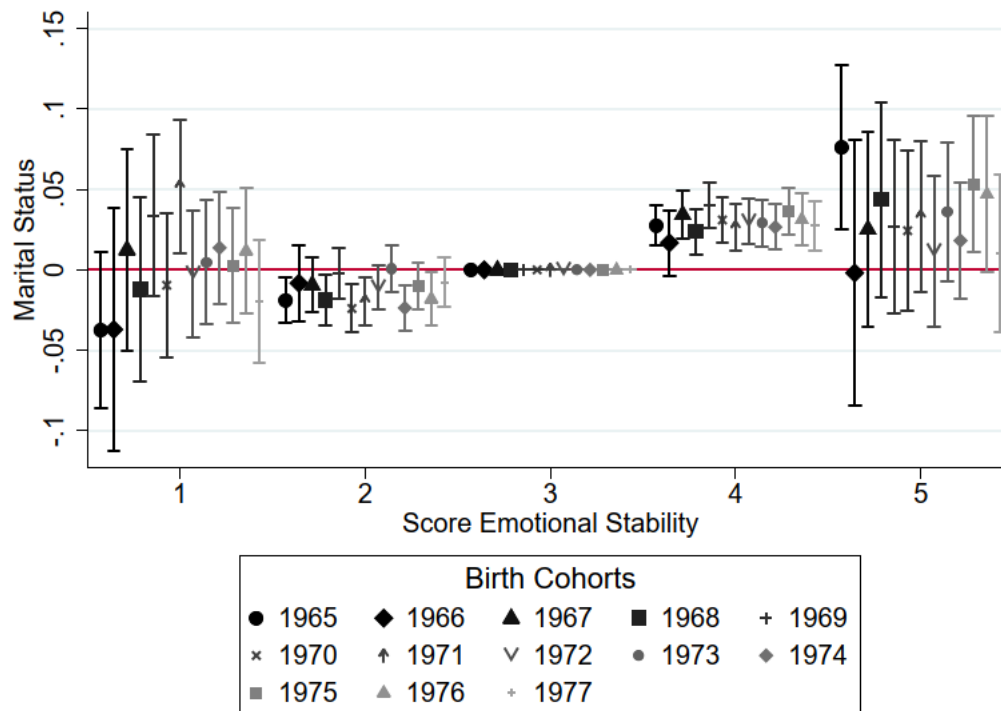
Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and marital status additionally.

Figure A31: Coefficients of social maturity scores measured at ages 17-20 on marital status by age 39 amongst Swedish men born 1965-1977 across birth cohorts. Linear probability models, error bars are 95% confidence intervals.



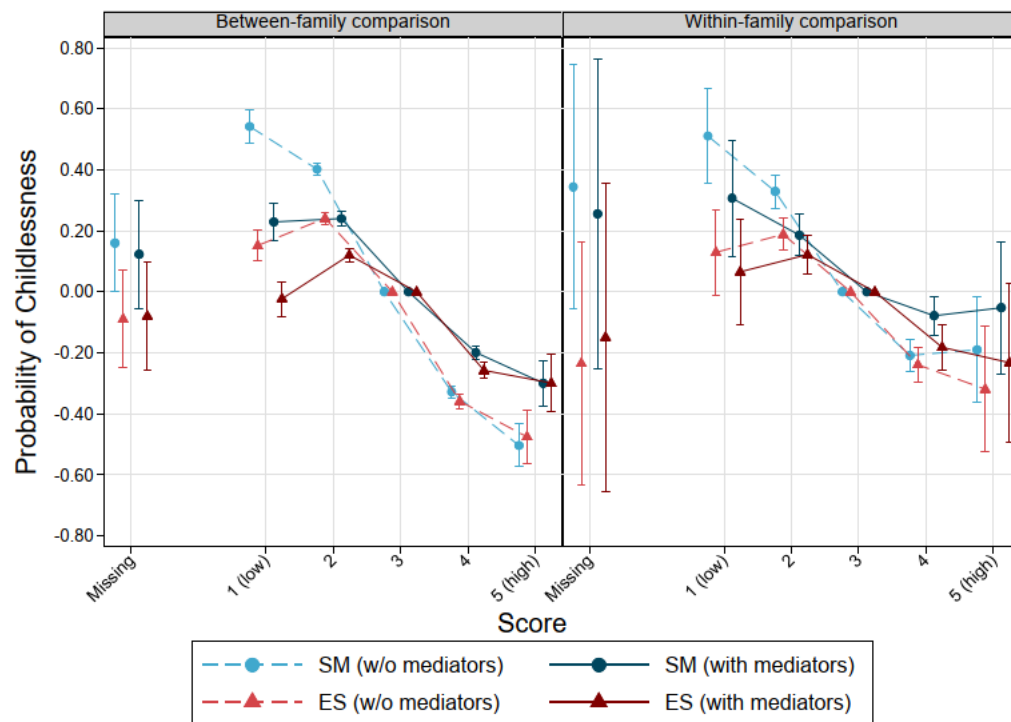
Note: Models control for emotional stability, cognitive abilities, birth order, sibling group size, income and education. Birth cohorts 1963, 1964, 1978, and 1979 are not shown due to high statistical uncertainty (too few cases and too large confidence intervals). Coefficients from the category of missing values are not shown for the same reason.

Figure A32: Coefficients of emotional stability scores measured at ages 17-20 on marital status by age 39 amongst Swedish men born 1965-1977 across birth cohorts. Linear probability models, error bars are 95% confidence intervals.



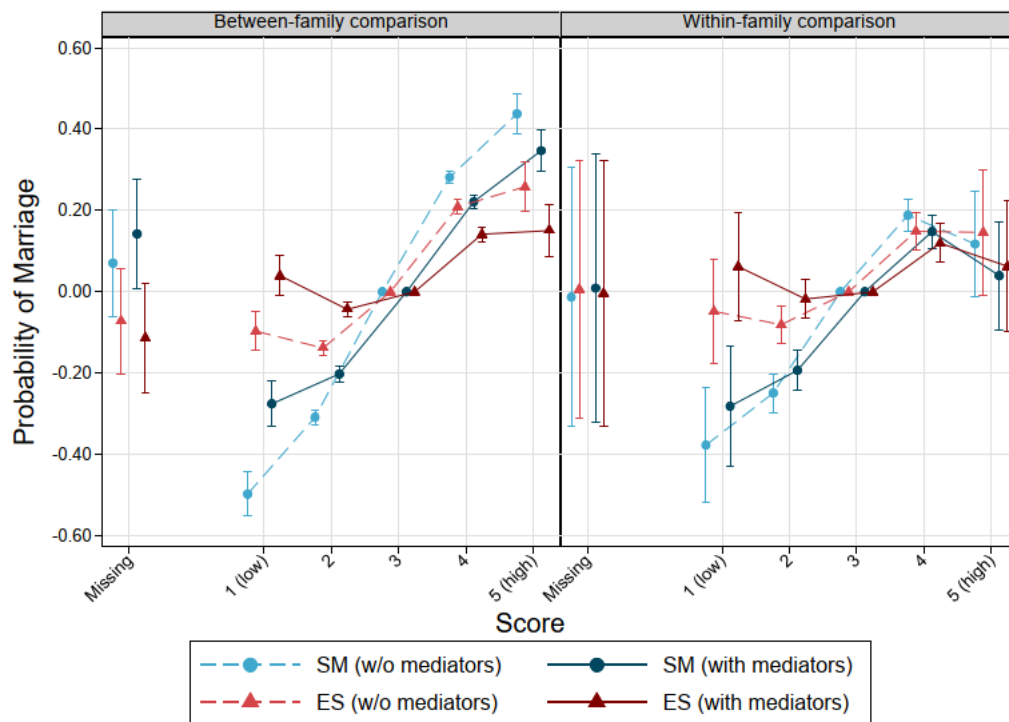
Note: Models control for social maturity, cognitive abilities, birth order, sibling group size, income and education. Birth cohorts 1963, 1964, 1978, and 1979 are not shown due to high statistical uncertainty (too few cases and too large confidence intervals). Coefficients from the category of missing values are not shown for the same reason.

Figure A33: The relationship between personality factors measured at ages 17-20 and childlessness by age 39 amongst Swedish men born 1963-1979. Logistic regression models, error bars are 95% confidence intervals.



Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and marital status additionally.

Figure 34: The relationship between personality factors measured at ages 17-20 and the probability to get married by age 39 amongst Swedish men born 1963-1979. Logistic regression models, error bars are 95% confidence intervals.



Note: Models without mediators control for cognitive abilities, birth year, birth order, and in case of between-family considerations for sibling group size. Models with mediators include income, education, and parental status additionally.