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Research Article

A dyadic approach to the study of perceived subfecundity and contraceptive use

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Abstract

BACKGROUND
There is an increasing literature on women's perception of subfecundity and contraceptive use, with studies showing that women with perceived difficulties conceiving are more likely to have an unintended pregnancy because of a lower reliance on contraception. There is little research investigating the correlates of perceived subfecundity, and quantitative investigation of couple-level perceived subfecundity appears absent from the literature, which is somewhat surprising, as the inability to have a child is a couple-level outcome. Furthermore, most studies that relate to perceived subfecundity and the use of contraception, or lack thereof, are typically limited to young adults.

OBJECTIVE
The aim of this study is to explore the couple-level correlates of perceived subfecundity and to investigate the relationship between perceived subfecundity and contraceptive use among a nationally representative sample of couples.

METHOD
Drawing on data from the Household Income and Labour Dynamics in Australia (HILDA) survey, binary and multinomial logistic regression models are estimated using the couple-dyad as the unit of analysis.

RESULTS
Both biological and life-course interference factors are strong predictors of perceived subfecundity at the couple level, with women's characteristics more influential than their partner's characteristics. Additionally, couples in which at least one partner perceives subfecundity are less likely to use contraception, regardless of their short-term intentions or desire to have a child.

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CONTRIBUTION

Men's and women's characteristics differently influence the likelihood of perceiving subfecundity at the couple level and the perception of subfecundity is a relevant reason why couples do not use contraception.

1. Introduction

There is an increasing literature on women's perception of subfecundity and contraceptive use, with many studies showing that it is related to unintended pregnancy (Gemmill 2018; Frohwirth, Moore, and Maniaci 2013; Polis and Zabin 2012). Little research investigates the correlates of perceived subfecundity (Gemmill and Cowan 2021) and the quantitative investigation of couple-level perceived subfecundity appears absent from the literature, which is somewhat surprising, as the inability to have a child is a couple-level outcome. Some studies investigating the factors associated with perceived inability to conceive have also included the perceptions of partners (Passet-Wittig et al. 2020), but due to data constraints they have not used the couple-dyad as the unit of analysis.

Perceived subfecundity (i.e., the perception of having a biological difficulty in conceiving) is a major reason for unintended pregnancies occurring in the absence of contraception (Gemmill and Cowan 2021). The reason for this is that if individuals believe that they are at low risk of pregnancy, they may consider the use of contraceptives unnecessary. However, this provides a false sense of protection against unintended pregnancy, for two main reasons. First, individual perceptions regarding their own ability to procreate may not be accurate (Greil et al. 2014). Second, it has been shown that even among couples with infertility, a natural conception can still occur after they cease trying to proactively conceive (Righarts et al. 2017). This phenomenon is explained by the fact that infertility can be a temporary condition and is not necessarily a permanent state.

Most studies that relate to perceived subfecundity and use of contraception do not provide a comprehensive examination, as they are conducted with women who have unintended pregnancies and are often limited to young adults or university students (Polis and Zabin 2012; Gemmill 2018; Gemmill, Sedlander, and Bornstein 2021). This paper investigates the correlates of perceived subfecundity and explores the association between perceived subfecundity and contraceptive use among a representative sample of Australian couples. The purpose is to understand perceptions of subfecundity using a dyadic view and their association with contraceptive use, specifically:

(a) Are the factors associated with the perception of subfecundity among couples gendered?
(b) To what extent is the perception of subfecundity associated with contraceptive use?

The data employed to answer these questions are from the Household Income and Labour Dynamics in Australia (HILDA) survey, which provides a unique opportunity to investigate perceived subfecundity and contraceptive use as it contains reports from both members of a couple. This is the first paper to explore factors associated with perceived subfecundity using couple dyads as the unit of analysis rather than individuals, and to investigate the relationship between perceived subfecundity and contraceptive use in a nationally representative sample.

2. Previous research

Infertility is clinically defined as the failure to achieve a pregnancy after twelve months or more of regular and unprotected sexual intercourse (Zegers-Hochschild et al. 2017), whereas perceived subfecundity is a subjective measure that reflects individuals' beliefs regarding their own procreative ability, and is typically captured by social science surveys. Measures of perceived subfecundity and medical infertility are often not in agreement (Loftus 2009; Greil et al. 2010). Indeed, it has been shown that only about 1 in 3 women with infertility identifies as having a fertility problem (White et al. 2006), and that, by contrast, women may identify themselves as being infertile even if they do not meet the medical criteria for infertility (Polis and Zabin 2012).

Discrepancies between actual and perceived infertility are due to the existence of several non-medical factors that may affect people's belief regarding their own fecundity. The ways in which people evaluate their situation may vary as a function of their life-course goals (White et al. 2006). Previous studies drawing on the seminal work of Zola (1973) and Mechanic (1968) suggest that, at the individual level, symptom salience is an important predictor of perceiving a fertility problem (White et al. 2006) and of seeking help (Greil et al. 2013; Slauson-Blevins, McQuillan, and Greil 2013). For women who wish to have a child, a lack of conception after unprotected sex is noticed and it is often interpreted as a sign of subfecundity, while women who have unprotected sex and who do not intend to become pregnant do not perceive subfecundity following the absence of pregnancy (Greil et al. 2010). In other words, infertility may not be perceived as a problem and it may even remain unnoticed, unless it interferes with individual fertility plans.

Relationship status is an important situational factor that can also influence the ability to recognise the symptoms of infertility. Research has found that individuals are more likely to perceive difficulty in conceiving if they are in a union (Passet-Wittig et al. 2020; Polis et al. 2020; Gemmil and Cowan 2021) and that partnership stability and the partner's attitude toward childbearing can also affect people's ability to recognise the symptoms of infertility (Gemmil, Sedlander, and Bornstein 2021; Passet-Wittig et al. 2020). These findings point to the inherently dyadic nature of the experience of infertility and confirm the importance of analysing subfecundity perceptions as a couple-level phenomenon. That the perceived inability to conceive is affected by life-course events is also evidenced by its instability over time (Passet-Wittig et al. 2020; Johnson et al. 2020).

Perceived subfecundity is a useful measure because it reflects the meaning individuals make of their ability to reproduce, which provides a basis for understanding their fertility plans, intentions, and behaviours (Shreffler et al. 2016; Johnson et al. 2020). Furthermore, the growing literature on the relationship between susceptibility to pregnancy and contraceptive use illustrates its importance in the field of reproductive health. Several studies show that contraceptive use is associated with the desire to have children: individuals in committed and long-term relationships manifest a lower desire to avoid pregnancy and higher fertility expectations (Barber et al. 2019; Wilson and Koo 2006; Weitzman et al. 2017), and hence are less likely to use contraception. However, the perception of low susceptibility to pregnancy may be another important mechanism explaining why women who do not intend to become pregnant cease using contraception (Gemmil 2018; Polis and Zabin 2012).

This paper builds on these previous two lines of research by investigating the association of couple's similarity and dissimilarity with respect to biological and life-course interference factors with perceived subfecundity, and, in turn, with contraceptive use.

3. Theoretical framework and hypotheses

Because of the dyadic nature of reproduction, two separate sets of individual-level characteristics and schemas need to be integrated in order to understand how partners' subfecundity perceptions are formed and, in turn, how these may influence contraceptive decisions. The traits–desires–intentions–behaviour model proposed by Miller et al. (2004) provides a useful framework for understanding the fertility decision-making process as the result of an implicit and explicit negotiation between partners. According to this framework, "it is critically important to understand just how the separate fertility motivations of two reproductive partners interact and combine as they impel the couple to conjoint action" (Miller, Severy, and Pasta 2004: 193).

Hence, we can expect contraceptive behaviour to be determined by the two separate motivational structures of the members of the couple. Fertility intentions are formed by considering not only situational constraints, such as the individual's own experience of infertility, but also perceptions associated with the reproductive capacity of his or her partner. Men and women may share more or less explicit inputs with each other and interpret these inputs differently as a consequence of the different meanings that the experience of infertility has for them (Ying, Wu, and Loke 2015).

The literature has highlighted how women are more likely than men to view infertility as a negative experience and to take the lead in seeking fertility treatment (Greil 1997; Greil, Leitko, and Porter 1988; Ying, Wu, and Loke 2015). At the same time, men may be less likely to label themselves as infertile because they perceive it as a constraint to their masculinity, and may be more reluctant to discuss reproductive issues and admit their psychological distress (Barnes 2014; Greil 1997). Moreover, men are generally marginalised in the infertility treatment process and less influential than women in planning the course of treatment (Carmeli and Birenbaum-Carmeli 1994) because the clinical practice largely focuses on women's bodies (Culley, Hudson, and Lohan 2013). Because of their lower involvement, male partners may feel like a "third party" in the treatment of their partner's infertility (Greil, Leitko and Porter 1988). From this literature it emerges that how individuals come to perceive a fertility barrier is connected to gender identity (Johnson et al. 2018). In turn, this points to the importance of considering infertility not only as a medical condition but also as a socially constructed reality influenced by gender and couple dynamics (Greil 1997).

Based on the literature review, the analysis focuses on two types of explanatory variables, biological factors and life-course interference factors, while also adjusting for standard socioeconomic variables and life satisfaction. Each of the two primary groups of factors has an individual- and couple-level dimension, which is captured by measuring the degree of similarity or dissimilarity between partners.

3.1 Biological factors

The investigation of the correlates of perceived subfecundity notably calls for the inclusion of the biological factors that affect fecundity. The ability to reproduce naturally declines with age. For instance, it has been estimated that among women trying to conceive, 75% of those aged 30, 66% of those aged 35, and 44% of those aged 40 will have a conception ending in a birth within one year (Leridon 2004). Age is an important factor affecting the procreative ability of both men and women, although the decline in fecundity with age is slower for men (Liu and Case 2011; Schmidt et al. 2012).

Hypothesis 1: The likelihood that at least one member of a couple perceives subfecundity is positively associated with an increase in both partners' ages, but couples in which the female partner is older than the male are more likely to perceive infertility than couples in which the male partner is older.

Self-reported health status has been identified as being associated with lifestyle risk factors such as smoking and extreme body mass index (BMI), which have a strong association with infertility (Kelly-Weeder and Cox 2006). The medical literature has shown that men and women are equally likely to contribute to a couple's fecundity (Brugh and Lipshultz 2004; Isidori et al. 2006), suggesting that couples in which at least one partner is in poor health are more likely to perceive subfecundity than couples in which both partners are in good health, regardless of whether it is the male or female partner. However, qualitative studies highlight that infertility is often perceived as a woman's issue and that interactions with health professionals tend to further reinforce this view (Barnes 2014; Greil, Leitko, and Porter 1988). Hence, the equal likelihood of being medically infertile may not translate into an equal likelihood of perceiving subfecundity.

Hypothesis 2: The likelihood that at least one member of a couple perceives subfecundity is more strongly associated with the female partner's self-rated health status than with the male partner's self-rated health status.

3.2 Life-course interference factors

Infertility may remain unnoticed or not be perceived as a problem unless it interferes with the couple's plans to form a family. In other words, if couples do not wish to have a child, will they recognise potential infertility and will they label themselves as infertile? While infertility has a negative impact on the life of both men and women wishing to have a child, research has shown that within a couple, women are more likely than men to see infertility as a distressing experience (Greil, Leitko, and Porter 1988; Hjelmstedt et al. 1999). The effect of a dissimilarity in childbearing desires on the perception of infertility has not yet been explored. In Australia, when couples disagree about wanting a child, women tend to be more influential than men in fertility decision-making (Testa and Bolano 2021), which may suggest that women's fertility desires are more important in determining infertility perceptions.

Hypothesis 3: The strength of a couple's desire to have a child is positively associated with the likelihood that at least one partner perceives subfecundity. Additionally, if partners disagree about wanting a child, women's childbearing desires will have more influence on the perception of subfecundity at the couple-level than men's childbearing desires.

Further, research suggests that a couple's reproductive history can be crucial for understanding the salience of infertility (Passet-Wittig and Greil 2021), with the inability to reproduce being a particularly distressing experience for couples with no previous children (McQuillan et al. 2003; McQuillan, Torres Stone, and Greil 2007).

Hypothesis 4: The likelihood that at least one member of a couple perceives subfecundity is lower in couples with one or more children than in a couple with no children.

Infertility may interfere with personal plans more among married couples. Indeed, despite the increase in cohabitation in Australia, most childbearing still happens within marriage (Australian Bureau of Statistics 2017) and marriage is the transition most commonly associated with entry into parenthood (McDonald and Reimondos 2013).

Hypothesis 5: The likelihood that at least one member of a couple perceives subfecundity is higher among married couples than among cohabiting couples.

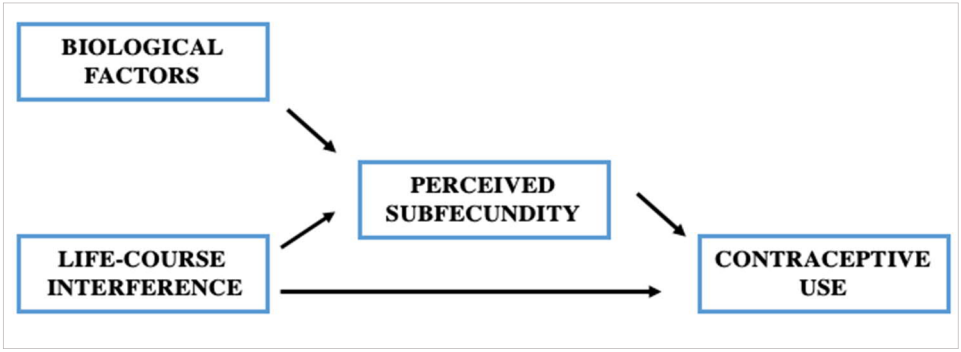
3.3 Contraceptive use

A growing body of literature suggests that low susceptibility to pregnancy is related to lower contraceptive use, and, in turn, to a higher risk of unintended pregnancies (Gemmill 2018; Gemmill, Sedlander, and Bornstein 2021; Frohwirth, Moore, and Maniaci 2013; Polis and Zabin 2012). Over half (57%) of unintended pregnancies in Australia occur among couples that do not use birth control measures (Taft et al. 2018). Although there are several reasons why couples do not use contraception, in a study of Australia (2012–2013), Richters et al. (2016) find that infertility of the woman or her partner is the most common reason for not using contraception among women of reproductive age (16–49) who do not want a child.

Hypothesis 6: The likelihood of using contraception is lower among couples with a perception of subfecundity.

The analysis of infertility perceptions combined with contraceptive-use behaviours aligns with broader calls to integrate studies of fertility and infertility (Almeling 2015; Johnson et al. 2018). Perceptions of infertility may be influenced by contraceptive use, while contraceptive use may be shaped by perceptions of fertility problems, yet most studies to date have tended to focus on one event or the other, so that the literature on infertility remains somewhat distinct from the literature on contraception (Almeling 2015). The following framework (Figure 1) considers the factors associated with perceived subfecundity and contraceptive use.

Figure 1: Factors associated with the perception of subfecundity and contraceptive use among couples



4. Data and methods

4.1 Data

This study uses wave 19 of the HILDA panel study (https://melbourneinstitute.unimelb.edu.au/hilda), collected in 2019 (see Watson and Wooden (2012) for information on the scope of the HILDA survey). Wave 19 is the most recent wave to include a special fertility module with questions on contraceptive use, desires and intentions to have children, perceptions of a difficulty to have children, and sterility, which can be used to understand fertility plans and perceptions taking account of reports from both members of a couple. The analytical sample consists of heterosexual couples where both partners

are of reproductive age (women between 15 and 44 and men between 15 and 54) and in which the female partner was not pregnant at the time of the interview. Those who mentioned having had an operation that made it impossible to have a child were also excluded (n = 413). The final analytical sample totals 1,654 couples who were legally married or in a cohabiting relationship.

4.1.1 Dependent variables

The first dependent variable is constructed based on the following question on perceived subfecundity: *Based on medical advice, do you know of any physical or health reason that would make it difficult for you (and/or your partner) to have [children / more children]?* This question was not asked of people that gave a positive answer to the following question on sterility: *Have you ever had any operation that makes it impossible for you (and/or your partner) to have [a child / more] children?* These questions distinguish between couples with a perception of a difficulty in conceiving and permanently infertile couples. Perceived subfecundity is constructed as a dichotomous variable, coded as 1 if at least one member of a couple perceived subfecundity (16.4%).

As in previous literature, in this study the measurement of perceived inability to procreate is based on self-reports. As such, it is to some extent distinct from medically defined infertility and likely to reflect a subjective perception. We note that the prevalence of individuals perceiving a fertility problem may be underestimated because the question asks whether the perception of the respondent is based on medical advice, so it may have excluded individuals who perceived that they were infertile but who did not consult a physician. Moreover, because the question is rooted in medical diagnosis of difficulties conceiving, results may be less comparable to previous studies on perceived subfecundity based on survey questions that did not condition on medical advice (Gemmill 2018; Polis et al. 2020; Polis and Zabin 2012; Passet-Wittig et al. 2020; White et al. 2006; Johnson et al. 2020).

At the same time, the measure used in this study does not reflect the clinical definition of infertility, as it is based on the respondents' interpretation of their interaction with health professionals, and it is likely influenced by their situational factors (Barnes 2014; Passet-Wittig et al. 2020; White et al. 2006). While medical advice is likely to guide the perception of infertility, it does not determine in and of itself how couples manage the information they received. For instance, couples may question the physician's advice and may interpret it differently depending on their specific social context. In other words, the self-identification as infertile in the HILDA survey, despite being medically mediated, remains shaped by social realities and is hence unlikely to be limited to clinical measures of infertility.

The second dependent variable is derived from the following question on contraceptive use: *Do you (and your partner) use birth control measures? (That is, are you using some form of contraception, including natural methods such as the rhythm method?).* Contraceptive use is also a dichotomous variable, coded as 1 if at least one member of a couple used contraception (76.4%).

4.1.2 Independent variables

The explanatory variables include three biological factors (age, age difference between partners, and self-rated health status) and three life-course interference factors (desire for children, parity, and type of relationship).

Age. This variable is based on the age group of the female partner. In a couple, the ages of the male and female partners are highly correlated. Hence, including both variables in the model would lead to unreliable regression coefficients. As a sensitivity check, the regressions were repeated using the male partner's age and no significant differences were found in the results (not shown).

Age difference between partners. This variable captures potential gender differences in the relationship between age and perceived subfecundity. Three categories are considered: the partners of the couple are three or less years of age apart, the female partner is three or more years older than the male partner, or the male partner is three or more years older than the female partner.

Self-rated health status. The variable on self-rated health status is derived by combining both partners' perceptions of their overall health. The variable is based on a question asking respondents to rate their health status as excellent, very good, good, fair, or poor. Respondents answering that their health status was excellent, very good, or good are classified as being in good health, while respondents answering any of the other two options are classified as being in poor health. Four categories are considered: both partners are in good health, the female partner only is in good health, the male partner only is in good health, or neither of the partners is in good health.

Parity. This variable is based on the number of children ever born and considers the fertility history of both partners. Couples are counted as childless, of first parity, or of parity two or above if both partners stated that they had no children, one child, or two or more children, respectively. Moreover, we created two additional categories providing information on whether only one partner was already a mother/father while the other was not. The residual category 'other' indicates couples where both partners had children, but in different numbers.

Desire for children. A couple's desire to have a child is computed by combining both partners' desire to have children. The variable is derived from a question asking

respondents to express their desire for one (more) child by choosing a number between 0 and 10, where a higher number indicates a stronger desire to have a child. In this study a value above 4 is considered a sign of a strong desire to have a child. Different cut-off points may also be used; however, they do not significantly affect the results as fertility desires tend to be polarized between those who definitely do not want a child and those who definitely want to have one (Wagner, Huinink, and Liefbroer 2019). Such polarization can also be observed in the HILDA sample. Four categories are considered: neither partner wishes to have a child, the female partner only wishes to have a child, the male partner only wishes to have a child, or both partners wish to have a child.

Type of relationship. The last predictor of interest is type of relationship, which indicates whether the couple is legally married or in a cohabitating union. This is a dichotomous variable, taking the value of 1 for married couples.

In addition to the biological and life-course interference factors, our analyses also include control variables which are not of primary interest but that have been suggested by theory and research as influencing the perception of subfecundity or the use of contraception. These are described below.

Short-term childbearing intentions.[3] To account for differences in pregnancy intentions in the next twelve months, a measure of short-term childbearing intentions is added. This measure is grouped into four categories: neither partner has a short-term intention to have a child, the female partner only has a short-term intention to have a child, the male partner only has a short-term intention to have a child, or both partners have a short-term intention to have a child.

Life satisfaction. Studies have shown that infertility is associated with lower levels of life satisfaction both at the individual- and couple-level (Klemetti et al. 2010; Luk and Loke 2015; McQuillan, Torres Stone, and Greil 2007; McQuillan et al. 2022; Peterson, Newton, and Rosen 2003). Additionally, life satisfaction may be an important confounding variable to control for, as it is largely driven by personality traits (Schimmack et al. 2004). The variable is derived from a question asking respondents to express their satisfaction with life by choosing a number between 0 and 10, where 0 indicates that the respondent is totally dissatisfied and 10 indicates that the respondent is totally satisfied. Since the variable is symmetrically distributed, it is dichotomised at the mean (Cohen 1983): coded as low if neither partner gave a score higher than 7.

Highest level of education. Since previous research highlights that educational attainment is associated with contraceptive use (Frost, Singh, and Finer 2007; Gemmill 2018) and with fertility knowledge and beliefs (Bunting, Tsibulsky, and Boivin 2013;

[3] Tests were performed to identify the strength of correlation between childbearing desires and short-term intentions to have children. Results showed that these two variables were not strongly associated with each other.

Gemmill and Cowan 2021), a two-category variable specifies whether both partners have a tertiary degree obtained through university.

Country of birth. A large body of research, mainly from the United States, has shown that race is strongly associated with contraceptive use and fertility knowledge (Gemmill, Sedlander, and Bornstein 2021; Yano, Lundsberg, and Pal 2014). In order to capture differences in infertility experiences and contraceptive-use behaviours by race/ethnicity, a four-category variable was constructed specifying whether both partners, the female partner only, the male partner only, or neither partner were born in Australia or in another English-speaking country. As a result of the demographic distribution of Australia (Wilson and Raymer 2017), by incorporating Australian-born respondents with respondents born in other English-speaking countries it is possible to combine ethnically and culturally similar populations in the same group, as opposed to other ethnic and cultural minorities.

Table 1 shows the descriptive statistics for the measures used.

Table 1: Descriptive statistics

Name	Mean (%)	Description
Perceive subfecundity	16.4	Measured with the question: *Based on medical advice, do you know of any physical or health reason that would make it difficult for you (and/or your partner) to have [children / more children]?* Coded as 0 if both partners did not perceive infertility, 1 if at least one partner perceived infertility.
Use contraception	76.4	Measured with the question: *Do you (and your partner) use birth control measures?* Coded as 0 if both partners did not use contraception, 1 if at least one partner used contraception.
Age		Coded as 0 if the female partner was between 18 and 24 years of age.
18–24	13.6	
25–29	24.8	
30–34	26.1	
35–39	19.2	
40–44	16.2	
Self-rated health status		Measured with the question*: In general, would you say your health is: [1] excellent, [2] very good, [3] good, [4] fair, [5] poor.* Coded as 0 if both partners believe to have excellent, very good, or good health.
Both good	82.3	
Woman good, man poor	7.5	
Man good, woman poor	8.2	
Both poor	2.0	

Table 1: (Continued)

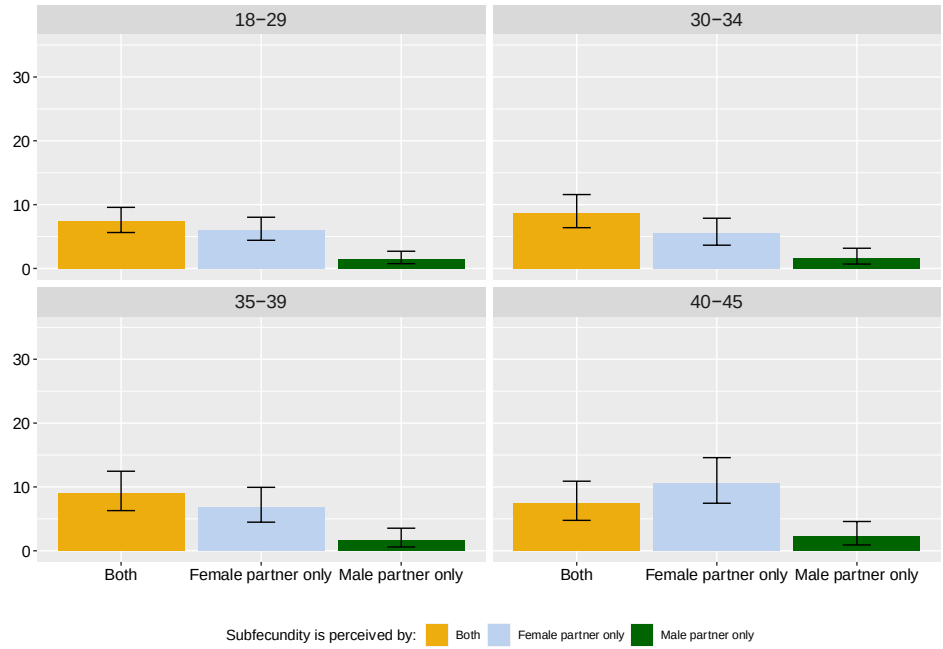
Name	Mean (%)	Description
Parity		Derived from the total number of children ever born. Coded as 0 if both partners have two or more children.
Zero	4.5	
One	15.1	
Two or more	40.9	
Only woman childless	1.8	
Only man childless	2.5	
Other	5.2	
Desire for children		Measured with the question: *I now want you to pick a number between 0 and 10 to show how you feel about having (more) children /a child in the future. [The more definite you are that you would like to have (more) children /a child, the higher the number you should pick]*. Coded as 0 if neither partner gave a score higher than 4.
Both low	31.4	
Woman high, man low	7.9	
Man high, woman low	8.3	
Both high	52.4	
Type of relationship		Coded as 0 if the members of the couple are in a cohabiting relationship or as 1 if the members of the couple are legally married.
Cohabitation	43.6	
Marriage	56.4	
Short-term childbearing intentions		Measured with the questions: *How many more children do you intend to have (including zero)? In which year do you intend to have a / your next child?* Coded as 0 if neither partner intends to have a child/ their next child within the next 12 months.
Neither	81.8	
Woman only	3.7	
Man only	4.3	
Both	10.2	
Life satisfaction		Measured with the question: *All things considered, how satisfied are you with your life? Pick a number between 0 and 10 to indicate how satisfied you are.* Coded as 0 if neither partner gave a score higher than 7.
Low	18.2	
High	81.8	
Highest level of education		Coded as 0 if the highest educational attainment of at least one member of the couple is below tertiary.
Less than university	75.9	
University	24.1	
Country of birth		Coded as 0 if both partners are born either in Australia or in another English-speaking country.
Both Australians	82.6	
Woman only Australian	5.1	
Man only Australian	3.9	
Both born overseas	8.3	

4.2 Methods

The analytical strategy employed to examine factors associated with both the perception of subfecundity and contraceptive use among couples is binomial logistic regression, as both the dependent variables take the form of a discrete variable with two options. Next, to investigate how the perceived subfecundity and contraceptive use decisions of couples are influenced by life-course interference and biological factors, a multinomial logistic regression model is fitted. As such, a categorical variable is created from couples' answers to the perceived subfecundity and contraceptive-use questions, with four values for couples that: (1) do not perceive subfecundity and use contraception, (2) do not perceive subfecundity and do not use contraception, (3) perceive subfecundity and use contraception, and (4) perceive subfecundity and do not use contraception. Since the response variable has no natural order, the subgroup of couples that do not perceive subfecundity and that use contraception is chosen as the reference category, as it is the largest (1,103). The fitted multinomial logistic model compares the reference category to the remaining three subgroups and investigates how the different life-course interference and biological factors affect couples' perceived subfecundity and contraceptive use simultaneously.

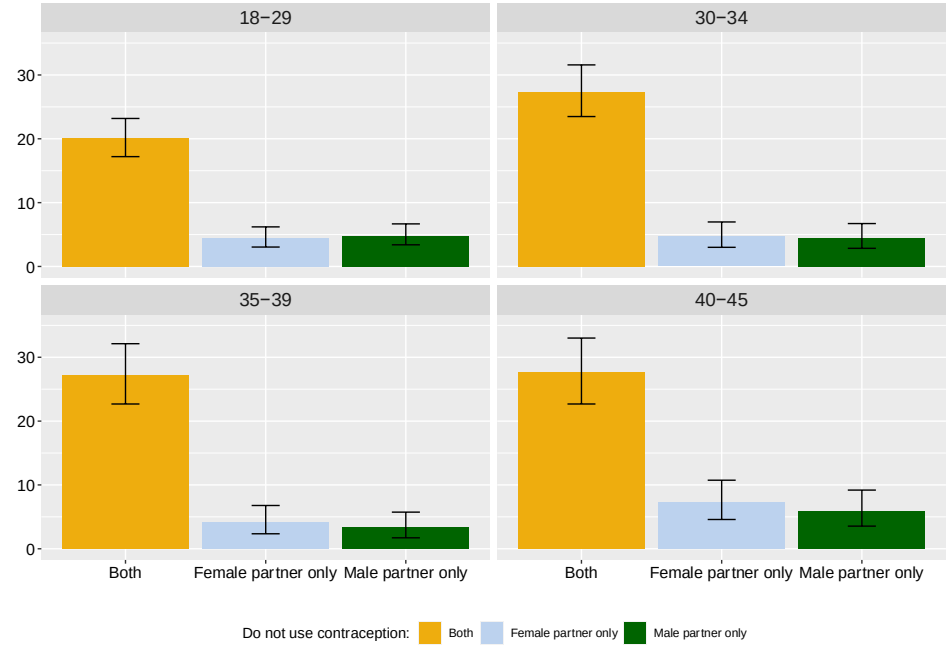
Partners were mostly concordant in their answers regarding the existence of a fertility problem and the non-utilisation of contraception, with total disagreement rates of 8.5% and 9.5%, respectively. A sensitivity analysis sample was created, from which all cases of disagreement were excluded. Despite the p-values being smaller due to the reduced sample size, coefficients maintained the same direction and remained statistically significant (not shown). Our decision to aggregate all couples in which at least one partner perceived subfecundity into one single category was influenced by the small number of couples with discordant responses. While we recognise that from a research perspective it would be preferable to analyse the dynamics of couples with discordant responses separately from couples in which both partners agree on the existence of a fertility problem, there are not enough cases in these data.

Figure 2: Congruence between partners' responses on perceived subfecundity, Australia, 2019



Source: Authors' calculations using data from the HILDA survey, wave 19, release 19.

Figure 3: Congruence between partners' responses on contraceptive use, Australia, 2019



Source: Authors' calculations using data from the HILDA survey, wave 19, release.

5. Results

Figures 2 and 3 show age trends in the congruence between partners' responses to the questions on perceived subfecundity and contraceptive non-use, respectively. At all ages, women are more likely than men to perceive subfecundity, while the cases of disagreement are more symmetrically distributed across genders in the case of contraceptive non-use. For example, for women the prevalence of perceived subfecundity clearly increases with age, reaching a peak of 18.1% in the 40–45 age group. By contrast, for men the perception of subfecundity slightly increases in their early 30s to approximately 10% and then stabilizes. Thus, the cases of disagreement increase with age, mostly because of the increasing proportion of female partners recognising the existence of a fertility problem that the male partner does not perceive. Considering that the question asked in the HILDA survey specifically refers to the couple's ability to have

further children, and not to the reproductive capacity of the individual respondent, these differences confirm how the experience of infertility is linked to gender identity. Tables A-1 and A-2 in the Appendix provide a description of couples' responses to the perceived subfecundity and contraceptive use questions for the total sample and by couples' characteristics.

5.1 Correlates of perceived subfecundity

The results of the binomial regression analysis are presented in Table 2. A clear gradient with age is found, with higher odds of perceiving subfecundity for couples in which the female partner is aged 40–44 (2.97). Couples in which there is an age gap of more than three years between partners are more likely to perceive subfecundity, although the magnitude of the association is larger when the female partner is older (1.79).

Couples in which both partners or only the female partner report good health are less likely to perceive subfecundity. By contrast, couples in which the female partner only or both partners report poor health have higher odds of perceiving subfecundity (2.31 and 4.45 respectively).

Couples in which the female partner only or both partners have a strong desire for children are more likely to perceive subfecundity (1.74 and 1.50 respectively), while if the male partner only has a strong desire for children, the effect on perceived subfecundity is not pronounced. Compared to couples with two or more children, couples with one or no children are more likely to perceive subfecundity, although the magnitude of the association is larger for couples with only one child (2.71). Couples in which only one partner is childless are associated with the greatest probability of perceiving subfecundity, regardless of whether it is the male or female partner who is childless. Cohabiting couples are less likely to perceive subfecundity than married couples (0.65).

Couples in which at least one partner is tertiary-educated have lower odds of perceiving subfecundity (0.65) compared to couples in which both partners have lower levels of education. The inclusion of educational attainment accentuated the effect of age on perceived subfecundity compared to a model with no covariate for educational attainment. This is explained by the fact that the so-called 'biological clock' is more important to highly educated men and women due to their higher tendency to delay childbearing (Lazzari 2021). However, due to the existence of a marked negative educational gradient with perceived subfecundity (Gemmill, Sedlander, and Bornstein 2021), these two effects partly compensate for each other before controlling for educational attainment, leading to a weaker effect of age on perceived subfecundity.

Couples in which the female partner or both partners are born overseas have lower odds of perceiving infertility (0.23 and 0.30 respectively) compared to the reference

category. High life satisfaction is associated with a lower likelihood of perceiving subfecundity (0.49).

Table 2: Odds ratios and 95% confidence intervals assessing associations between selected characteristics and perceived subfecundity

	Perceived subfecundity (N = 1,654)
Biological factors	
Age*	
18–24 (ref)	1.00
25–29	1.48 (0.90, 2.43)
30–34	1.44 (0.85, 2.46)
35–39	2.25 (1.26, 4.03)
40–44	2.97 (1.58, 5.57)
Age difference	
No difference (ref)	
W more than 3 years older	1.79 (1.01, 3.15)
M more than 3 years older	1.16 (0.85, 1.59)
Self-rated health status	
Both good (ref)	1.00
W good, M poor	0.88 (0.51, 1.50)
W poor, M good	2.31 (1.51, 3.55)
Both poor	4.45 (2.08, 9.53)
Life-course interference factors	
Desire for children	
Both low (ref)	1.00
W high, M low	1.74 (1.01, 2.98)
M high, W low	1.26 (0.72, 2.22)
Both high	1.50 (1.01, 2.26)
Parity	
Zero	1.84 (1.19, 2.83)
One	2.71 (1.76, 4.19)
Two or more (ref)	1.00
Only W childless	2.79 (1.11, 7.03)
Only M childless	2.97 (1.34, 6.59)
Other	1.23 (0.63, 2.40)
Type of relationship	
De facto	0.65 (0.47, 0.91)
Married (ref)	1.00
Controls	
Highest level of education	
Less than university (ref)	1.00
University	0.63 (0.44,0.92)
Country of birth	
Both Australians (ref)	1.00
Only M born overseas	0.69 (0.32,1.46)
Only W born overseas	0.23 (0.09,0.58)
Both born overseas	0.30 (0.15,0.59)
Life satisfaction	
Low or normal (ref)	1.00
High	0.49 (0.35,0.69)
AIC	1384
BIC	1514
Mc Fadden's R-square	0.095
Mc Fadden's R-square Adj	0.062

Notes: * Based on female partner.
Source: Authors' calculations using data from the HILDA survey, wave 19, release 19.

5.2 Correlates of contraceptive use

The perception of subfecundity is positively correlated with not using contraception at the couple level. Using a predicted probability approach, it is estimated that the perception of subfecundity increases the probability of not using contraception from 19% to over 35% (not shown). In the fully adjusted model (Table 3) the association between perceived subfecundity and contraceptive use observed at the bivariate level persists. As expected, there is also a strong association between childbearing desires and contraceptive use, with women's childbearing desires more influential in the decision to use contraception than men's childbearing desires (0.44 and 0.69 respectively).

Table 3: Odds ratios and 95% confidence intervals assessing associations between selected characteristics and contraceptive use

	Contraceptive use (N = 1,654) Odds ratios & 95% CI
Perceived subfecundity	
Yes	0.44 (0.32, 0.59)
No (ref)	1.00
Age*	
18–24 (ref)	1.00
25–29	0.90 (0.56, 1.44)
30–34	0.59 (0.37, 0.96)
35–39	0.51 (0.30, 0.86)
40–44	0.34 (0.19, 0.60)
Desire for children	
Both low (ref)	1.00
W high, M low	0.44 (0.27, 0.70)
M high, W low	0.69 (0.41, 1.17)
Both high	0.44 (0.30, 0.66)
Short-term intention to have children**	
Neither (ref)	1.00
W only	0.40 (0.23, 0.71)
M only	0.45 (0.26, 0.77)
Both	0.19 (0.13, 0.29)
Parity	
Zero	1.20 (0.82, 1.77)
One	1.28 (0.85, 1.91)
Two or more (ref)	1.00
Only W childless	0.63 (0.26, 1.52)
Only M childless	0.53 (0.25, 1.10)
Other	1.03 (0.57, 1.87)
Type of relationship	
De facto	1.33 (0.99, 1.79)
Married (ref)	1.00

Table 3: (Continued)

	Contraceptive use (N = 1,654) Odds ratios & 95% CI
Highest level of education	
Less than university (ref)	1.00
University	1.42 (1.04, 1.93)
AIC	1622
BIC	1724
Mc Fadden's R-square	0.124
Mc Fadden's R-square Adjusted	0.103

Notes: * Based on female partner. ** Intention to have a child in the next 12 months. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.

5.3 Perceived subfecundity and contraceptive-use sub-groups

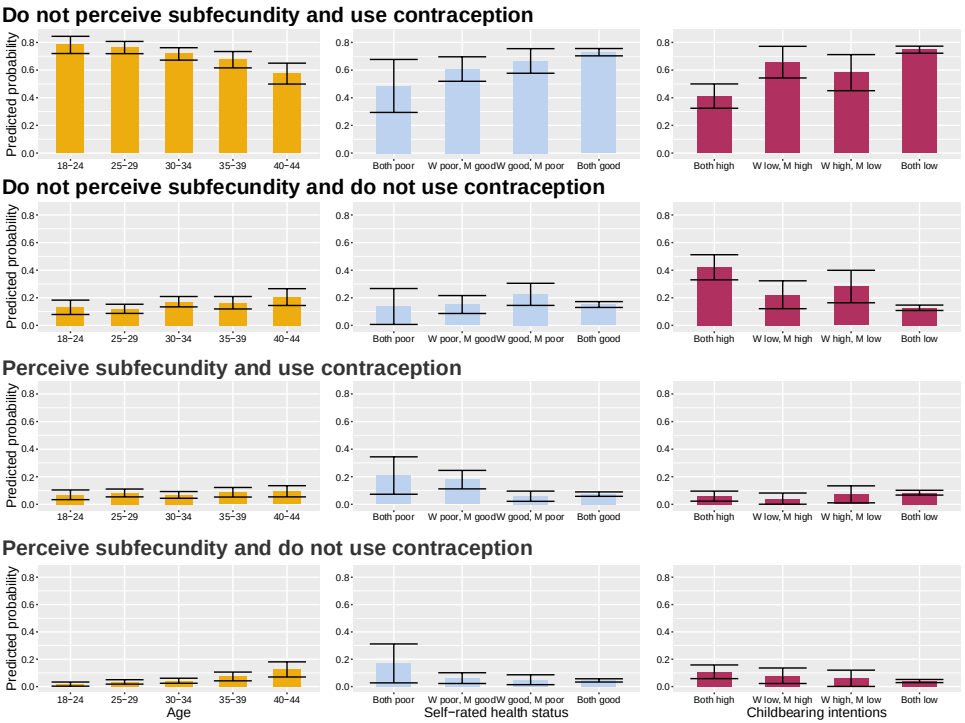
From the intersection of the two dependent variables of perceived subfecundity and contraceptive use, four groups of couples are identified, with different characteristics regarding their age profiles, self-rated health status, and short-term fertility intentions (for more information see Table A-3 in the Appendix). Broadly, 66.7% (1,103 couples) of the analytic sample report not perceiving subfecundity and using contraception. This is the most common subgroup (and the reference category). The other groups consist of 16.9% (280) of couples that do not perceive subfecundity and do not use contraception, and 9.7% (161) that perceive subfecundity and use contraception, with the remaining 6.7% (110) of the sample reporting that they perceive subfecundity and do not use contraception.

For ease of interpretation, Figure 4 shows predicted probabilities for a selected group of variables obtained from the multinomial regression model comparing perceived subfecundity and contraceptive-use subgroups, holding all the other variables at their mean. The full tables of coefficients and predicted probabilities are in the Appendix (Table A-4 and A-5, respectively). With age, the predicted probability of perceiving subfecundity and not using contraception increases sharply. Even among couples that do not perceive subfecundity, the use of contraception declines with age, although the decline is not as pronounced.

Self-rated health status is another key driver of the perception of subfecundity and contraceptive use. Indeed, the predicted probability of belonging to the most common group of couples that do not perceive subfecundity and use contraception declines markedly if the female partner only or both partners report poor health. By comparison, the probability of belonging to the two groups of couples with positive subfecundity perceptions increases.

As expected, a stronger intention to have children is associated with increases in both the predicted probability of not using contraception and the predicted probability of perceiving subfecundity and not using contraception. This indicates that the desire for children affects contraceptive use in two different ways: directly and indirectly through the perception of an inability to conceive a pregnancy.

Figure 4: Predicted probability and 95% confidence intervals of selected explanatory variables, Australia, 2019



Source: Authors' calculations using data from the HILDA survey, wave 19, release 19.

6. Discussion

While prior studies are hampered by the use of non-representative samples and by paying only limited attention to the male partner, this study has advanced the research literature by being the first to comprehensively analyse the correlates of perceived subfecundity

among a nationally representative sample of couples and to demonstrate that the perception of subfecundity is strongly associated with not using contraception among couples that do not wish to have a child. Although consistent with previous research at the individual level showing that the recognition of a fertility problem depends on the degree to which it disrupts personal plans (White et al. 2006), by adding the dyadic dimension the present study has also unveiled new insights into how self-perceptions regarding subfecundity are formed within the couple and how they are associated with contraceptive use.

We found that women are more likely than men to perceive a fertility problem and that gender differences increase with age. The dyadic analysis reveals that the proportion of couples with discordant opinions regarding their ability to procreate also increases with age, mostly because women perceive subfecundity more often than their partner. These patterns are in line with the preceding discussions on theory and gender-role expectations, which suggest that men tend to be marginalised in the infertility-seeking process and to be less likely to identify as infertile (Barnes 2014; Greil 1997; Carmeli and Birenbaum-Carmeli 1994; Culley, Hudson, and Lohan 2013). The incongruences in the perception of subfecundity among members of a couple indicate how gender plays a key role in shaping people's perceptions regarding their reproductive ability. Moreover, while for the members of a couple reproduction and infertility are clearly shared outcomes, opinions about their reproductive ability may not be shared.

Overall, the characteristics of the female partner appear to be more influential than those of the male partner in determining a perception of subfecundity at the couple-level. More specifically, consistent with Hypothesis 1, age is an important factor affecting the perception of subfecundity, and couples in which the female partner is older than the male partner are almost twice as likely to perceive subfecundity compared to couples where there is no age gap between partners. This indicates that the perception of subfecundity is more affected by a woman's age, which is consistent with the fact that reproductive potential declines faster and from a younger age among women (Liu and Case 2011; Schmidt et al. 2012).

Support is also found for Hypothesis 2. When both partners are in poor health status, the predicted probability of perceiving subfecundity is higher. However, when only one partner is in poor health, there is a strong positive effect on the perception of subfecundity only if it is the female partner. This suggests that infertility may be wrongly thought of as mainly a woman's condition and highlights how the medical focus on women's body may lead to a marginalisation of men (Carmeli and Birenbaum-Carmeli 1994). Furthermore, while perceived subfecundity can be an important marker of overall health among women because of its strong association with self-rated health status, this might not be the case among men.

In line with Hypothesis 3, couples in which both partners or the female partner only have a strong desire for children are predicted to be more likely to perceive subfecundity compared to couples with a low childbearing desire. These results support the findings from an earlier study that shows that women who identify as infertile express a greater desire to have a child (Shreffler et al. 2016) and add to the existing literature by showing that if partners disagree about wanting a child, women's childbearing desires are more influential.

Partial support is found for Hypothesis 4. Childless couples and couples with only one child are predicted to be more likely to perceive subfecundity than couples with two or more children, which is in line with the predominance of the two-child family norm in Australia (Kippen, Evans, and Gray 2007). The relationship between parity and perceived subfecundity is not linear: Couples with only one child are more likely to perceive a fertility problem than childless couples.

Hypothesis 5 receives support, as cohabiting couples are less likely to perceive subfecundity than married couples, suggesting that infertility interferes more with life-course plans if the couple is married. This can be explained by the fact that despite an increasing detachment of childbearing from formal marriage in Australia (Carmichael and McDonald 2003), childbearing still mostly happens within marriage (Australian Bureau of Statistics 2017).

In line with Hypothesis 6, the perception of subfecundity is associated with a higher predicted probability of not using contraception. This positive association remains even after controlling for the fundamental differences in the couples' childbearing desires and short-term intentions to have a child. Since even among couples that experience infertility the probability of conception is not null (Rigaharts et al. 2017), this finding supports previous research suggesting a link between perceived inability to conceive and unwanted pregnancies (Polis and Zabin 2012, Gemmill 2018).

Using pre-existing data has its shortcomings. First, the measurement of perceived subfecundity in the HILDA data may underestimate the number of couples that perceive they have a fertility problem because it is a medically mediated measure. The infertility question specifically asks whether the perception of the respondent is rooted in medical advice, so it might exclude individuals that perceive a difficulty conceiving but who did not consult a physician. Second, although a positive association is found between perceived subfecundity and childbearing desires, the cross-national nature of this analysis does not allow assessment of the causal direction of this relationship. While the desire for children may have increased couples' awareness about their infertility status, it is also possible that couples experience a heightened desire for children if conception does not occur (Johnsons et al. 2018). Third, while subfecundity perceptions were modelled as a couple-level outcome, the responses of couples were different in 8.5% of dyads. Although these discordant dyads also represent potentially interesting cases for analysis from both

gender and dyadic perspectives, their small number did not allow us to make this finer distinction in our empirical models.

As couples keep postponing childbearing until later in life, a growing proportion of them will likely experience infertility. Hence, the understanding of how subfecundity perceptions are formed and of their association with biological and life-course factors will become ever more essential in fertility and family research. To date the literature on infertility has primarily focused on women, as traditionally they have been considered to be more concerned about reproduction and family planning (Almeling 2015). Yet the shared nature of reproduction clearly calls for an investigation of the characteristics of both partners. This study has made a first step in addressing this by accounting for the interplay between partners' characteristics in the determination of subfecundity perceptions and by showing how such perceptions are key predictors of contraceptive use.

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Appendix

Table A-1: Percentage of couples in the sample by selected characteristics, according to perceived subfecundity

	Perceived subfecundity (N = 1,654)	
	Yes (N = 271)	No (N = 1,383)
Biological factors		
Age*		
18–24	11.1	13.7
25–29	24.7	25.5
30–34	24.0	26.5
35–39	20.3	18.9
40–44	19.9	15.3
Age difference		
No difference	63.5	67.8
W more than 3 years older	27.7	28.0
M more than 3 years older	8.9	4.2
Self-rated health status		
Both good	70.8	84.5
W good, M poor	7.4	7.6
W poor, M good	15.9	6.6
Both poor	5.9	1.2
Life-course interference factors		
Desire for children		
Both low	25.5	32.6
W high, M low	8.1	8.2
M high, W low	9.6	7.6
Both high	56.8	51.5
Parity		
Zero	32.1	35.0
One	22.1	13.7
Two or more	32.8	42.4
Only W childless	4.4	2.1
Only M childless	3.3	1.5
Other	5.2	5.2
Type of relationship		
De facto	59.0	55.9
Married	41.0	44.1
Controls		
Highest level of education		
Less than university	83.4	74.4
University	16.6	25.6
Country of birth		
Both Australians	90.8	81.1
Only M born overseas	3.3	4.0
Only W born overseas	1.8	5.8
Both born overseas	4.1	9.2
Life satisfaction		
Low or normal	29.1	16.0
High	70.8	83.9

Notes: * Based on female partner. Percentages may not add to 100.0% because of rounding. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.

Table A-2: Percentage of couples in the sample by selective characteristics, according to contraceptive use

	Contraceptive use (N = 1,654)	
	Yes (N = 1,264)	No (N = 390)
Perceived subfecundity		
Yes	12.7	28.2
No	87.3	71.8
Age*		
18–24	14.6	9.0
25–29	26.6	21.5
30–34	25.2	29.0
35–39	18.3	22.0
40–44	15.3	18.5
Desire for children		
Both low	34.7	20.8
W high, M low	8.8	6.4
M high, W low	7.4	9.7
Both high	49.1	63.1
Short-term intention to have children**		
Neither	88.0	61.8
W only	2.8	6.4
M only	3.6	6.7
Both	5.6	25.1
Parity		
Zero	35.6	31.0
One	14.1	18.5
Two or more	41.8	37.9
Only W childless	1.9	4.4
Only M childless	1.3	3.3
Other	5.3	4.9
Type of relationship		
De facto	54.1	63.8
Married	45.9	36.1
Highest level of education		
Less than university	74.7	79.7
University	25.3	20.3

Notes: * Based on female partner. ** Intention to have a child in the next 12 months. Percentages may not add to 100.0% because of rounding. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.

Table A-3: Descriptive statistics for perceived subfecundity and contraceptive use sub-groups

	Do not perceive subfecundity and use contraception (N = 1,103)	Do not perceive subfecundity and do not use contraception (N = 280)	Perceive subfecundity and use contraception (N = 161)	Perceive subfecundity and do not use contraception (N = 110)
Age*				
18–24	14.7	10.0	14.3	6.4
25–29	26.6	21.1	26.1	22.7
30–34	25.5	30.4	23.0	25.4
35–39	18.3	21.4	18.0	23.6
40–44	14.9	17.1	18.6	21.8
Age difference				
No difference	69.1	62.9	65.8	60.0
W more than 3 years older	3.73	6.1	7.5	10.9
M more than 3 years older	27.2	31.1	26.7	29.1
Self-rated health status				
Both good	85.3	81.4	67.7	75.5
W good, M poor	7.0	10.0	6.8	8.2
W poor, M good	6.5	7.1	19.2	10.9
Both poor	1.2	1.4	6.2	5.5
Desire for children				
Both low	35.2	22.5	31.7	16.4
W high, M low	7.0	10.0	9.9	9.1
M high, W low	8.6	6.8	9.9	5.5
Both high	39.2	60.7	48.5	69.0
Short-term intention to have children**				
Neither	88.2	63.6	86.3	57.3
W only	2.7	6.8	3.7	5.5
M only	3.7	6.1	2.5	8.2
Both	5.4	23.6	7.5	29.1
Parity				
Zero	36.4	29.6	30.4	34.6
One	13.2	16.1	20.5	24.6
Two or more	42.3	42.9	37.9	25.5
Only W childless	1.3	2.5	1.9	5.5
Only M childless	1.5	4.3	4.3	4.6
Other	5.4	4.6	5.0	5.5
Type of relationship				
De facto	45.8	37.5	46.6	67.3
Married	54.2	62.5	53.4	32.7
Highest level of education				
Less than university	73.2	78.9	84.5	81.8
University	26.8	21.1	15.5	18.2
Country of birth				
Both Australians	83.1	73.2	95.0	84.6
Only M born overseas	4.0	3.9	1.9	5.5
Only W born overseas	4.9	9.3	0.6	3.6
Both born overseas	8.1	13.6	2.5	6.4
Life satisfaction				
Low or normal	16.1	15.7	32.9	23.6
High	83.9	84.3	67.1	76.4

Notes: * Based on female partner. **Intention to have a child in the next 12 months. Percentages may not add to 100.0% because of rounding. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.

Table A-4: Multinomial logistic regression results comparing perceived subfecundity and contraceptive use subgroups

	Do not perceive infertility and do not use contraception (N=280) Odds ratios & 95% CI	Perceive infertility and use contraception (N=161) Odds ratios & 95% CI	Perceive infertility and do not use contraception (N=110) Odds ratios & 95% CI
Age*			
18–24 (ref)	1.00	1.00	1.00
25–29	0.94 (0.56, 1.59)	1.23 (0.69, 2.20)	1.93 (0.78, 4.76)
30–34	1.43 (0.83, 2.45)	1.09 (0.57, 2.08)	2.59 (1.03, 6.53)
35–39	1.45 (0.79, 2.66)	1.46 (0.71, 3.01)	4.73 (1.78, 12.59)
40–45	2.13 (1.11, 4.12)	1.86 (0.86, 4.02)	9.47 (3.33, 26.90)
Age difference			
No difference (ref)	1.00	1.00	1.00
W more than 3 years older	1.22 (0.89, 1.67)	1.81 (0.86, 3.80)	1.74 (0.77, 3.92)
M more than 3 years older	1.15 (0.59, 2.23)	1.09 (0.73, 1.63)	1.43 (0.89, 2.30)
Self-rated health status			
Both good (ref)	1.00	1.00	1.00
W good, M poor	1.63 (0.99, 2.69)	0.87 (0.43, 1.74)	1.22 (0.55, 2.69)
W poor, M good	1.20 (0.69, 2.09)	2.90 (1.76, 4.77)	1.64 (0.79, 3.37)
Both poor	1.36 (0.41, 4.48)	4.23 (1.71, 10.48)	5.66 (1.83, 17.50)
Desire for children			
Both low (ref)	1.00	1.00	1.00
W high, M low	2.30 (1.34, 3.96)	1.56 (0.80, 3.01)	3.35 (1.41, 7.95)
M high, W low	1.46 (0.81, 2.64)	1.22 (0.63, 2.37)	1.59 (0.59, 4.30)
Both high	2.24 (1.42, 3.54)	1.11 (0.66, 1.89)	3.13 (1.50, 6.54)
Short-term intention to have children**			
Neither (ref)	1.00	1.00	1.00
W only	2.83 (1.50, 5.34)	1.10 (0.42, 2.89)	2.04 (0.76, 5.47)
M only	1.98 (1.06, 3.71)	0.55 (0.18, 1.64)	2.23 (0.96, 5.13)
Both	5.98 (3.80, 9.39)	1.28 (0.63, 2.60)	4.82 (2.66, 8.75)
Parity			
Zero	0.62 (0.40, 0.97)	1.22 (0.70, 2.10)	2.27 (1.17, 4.42)
One	0.65 (0.40,1.04)	2.34 (1.36, 4.07)	2.50 (1.27, 4.90)
Two or more (ref)	1.00	1.00	1.00
Only W childless	1.23 (0.43, 3.50)	1.35 (0.33, 5.48)	6.21 (1.78, 21.62)
Only M childless	1.85 (0.77, 4.43)	2.73 (0.98, 7.58)	5.41 (1.65, 17.76)
Other	0.74 (0.37, 1.47)	0.82 (0.35, 1.91)	1.80 (0.67, 4.85)
Type of relationship			
De facto	0.92 (0.65, 1.29)	0.84 (0.56, 1.28)	0.46 (0.28, 0.78)
Married (ref)	1.00	1.00	1.00
Highest level of education			
Less than university (ref)	1.00	1.00	1.00
University	0.60 (0.42, 0.86)	0.45 (0.30, 0.67)	0.54 (0.31, 0.94)
Country of birth			
Both Australians (ref)	1.00	1.00	1.00
Only M born overseas	1.32 (0.65, 2.70)	0.41 (0.12, 1.37)	1.34 (0.51, 3.52)
Only W born overseas	2.16 (1.25, 3.74)	0.10 (0.01, 0.76)	0.55 (0.18, 1.66)
Both born overseas	2.35 (1.46, 3.77)	0.22 (0.08, 0.64)	0.62 (0.25, 1.49)
Life satisfaction			
Low or normal (ref)	1.00	1.00	1.00
High	1.21 (0.81, 1.80)	0.45 (0.30, 0.67)	0.65 (0.37, 1.11)

Notes: The base category is "Do not perceive infertility and use contraception". * Based on female partner. **Intention to have a child in the next 12 months. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.

Table A-5: Predicted probabilities (95% CI) of perceived subfecundity and contraceptive use subgroups

	Do not perceive subfecundity and use contraception (N = 1,103)	Do not perceive subfecundity and do not use contraception (N = 280)	Perceive subfecundity and use contraception (N = 161)	Perceive subfecundity and do not use contraception (N = 110)
Age*				
18–24	78.2 (72.0,84.4)	13.1 (7.9,18.3)	6.9 (3.4,10.4)	1.8 (0.1,3.3)
25–29	76.3 (71.9,80.7)	12.0 (8.7,15.3)	8.3 (5.4,11.1)	3.4 (1.8,5.0)
30–34	71.7 (67.2,76.2)	17.1 (13.4,20.9)	6.9 (4.4,9.3)	4.3 (2.4,6.1)
35–39	67.5 (61.6,73.4)	16.4 (11.9,20.9)	8.7 (5.3,12.2)	7.4 (4.2,10.6)
40–44	57.5 (49.9,65.0)	20.5 (14.4,26.6)	9.4 (5.4,13.5)	12.5 (7.0,18.1)
Age difference				
No difference	72.8 (69.9,75.7)	15.0 (12.7,17.3)	7.8 (6.0,9.6)	4.3 (3.0, 5.6)
M more than 3 years older	68.8 (64.3,73.4)	17.3 (13.6,21.0)	8.0 (5.4,10.7)	5.8 (3.6, 8.1)
F more than 3 years older	65.2 (53.9,76.4)	15.5 (7.4,23.5)	12.6 (4.9,20.3)	6.7 (1.9, 11.6)
Self-rated health status				
Both good	73.0 (70.3,75.6)	15.1 (13.0,17.2)	7.4 (5.8,9.0)	4.5 (3.3,5.7)
W good, M poor	66.6 (57.7,75.5)	22.5 (14.4,30.5)	5.9 (2.2,9.6)	5.0 (1.4,8.6)
W poor, M good	60.8 (51.9,69.6)	15.1 (8.6,21.6)	17.9 (11.2,24.6)	6.1 (2.2,10.7)
Both poor	48.5 (29.4,67.6)	13.7 (0.7,26.7)	20.9 (7.3,34.4)	17.0 (2.7,31.2)
Desire for children				
Both low	79.1 (74.8,83.3)	10.3 (7.2,13.4)	8.0 (5.1,10.9)	2.6 (1.1,4.0)
W high, M low	63.8 (55.0,72.6)	19.1 (12.0,26.2)	10.1 (4.8,15.4)	6.9 (2.4,11.5)
M high, W low	73.2 (65.5,80.8)	13.9 (7.8,20.1)	9.1 (4.4,13.8)	3.8 (0.7,6.9)
Both high	66.3 (62.2,70.5)	19.4 (15.9,22.9)	7.5 (5.3,9.6)	6.7 (4.5,9.0)
Parity*				
Zero	72.9 (68.3,75.5)	12.5 (9.2,15.7)	8.1 (5.3,10.8)	6.6 (4.1,9.1)
One	67.0 (60.6,73.5)	11.9 (7.9,15.9)	14.3 (9.3,19.4)	6.7 (3.6,9.7)
Two or more	71.1 (66.8,75.5)	19.6 (15.6,23.5)	6.5 (4.3,8.6)	2.8 (1.5,4.1)
Only W childless	58.6 (38.7,78.4)	19.7 (49.0,34.6)	7.2 (0.0,15.9)	14.5 (1.3,27.7)
Only M childless	50.7 (33.7,67.7)	25.8 (11.3,40.3)	12.6 (2.6,22.6)	10.9 (1.1,20.8)
Other	74.0 (64.3,83.8)	15.1 (7.0,23.3)	5.5 (1.3,9.7)	5.3 (0.1,9.9)
Type of relationship				
De facto	73.8 (69.9,77.6)	15.4 (12.3,18.6)	7.6 (5.3,10.0)	3.2 (1.9,4.6)
Married	69.3 (65.7,72.8)	15.8 (13.0,18.5)	8.4 (6.3,10.6)	6.5 (4.7,8.4)
Short-term intention to have				
Neither	74.8 (72.2,77.3)	12.8 (10.8,14.7)	8.4 (6.7,10.2)	4.0 (2.9,5.2)
W only	58.2 (45.1,71.2)	28.2 (16.4,39.9)	7.2 (1.1,13.4)	6.4 (0.9,12.0)
M only	65.8 (54.3,77.2)	22.2 (12.1,32.3)	4.1 (0.0,8.2)	7.9 (2.2,13.6)
Both	41.2 (32.4,50.0)	42.1 (33.0,51.2)	5.9 (2.3,9.6)	10.8 (5.8,15.8)
Life satisfaction				
Low or normal	66.5 (60.6,72.5)	12.5 (8.6,16.5)	14.5 (10.1,18.9)	6.4 (3.5,9.3)
High	72.1 (69.4,74.8)	16.4 (14.2,18.5)	7.0 (5.5,8.6)	4.5 (3.2,5.7)
Highest level of education				
Less than university	68.8 (65.9,71.7)	17.1 (14.7,19.4)	8.7 (6.8,10.6)	5.4 (3.9,6.8)
University	78.7 (74.4,83.1)	11.8 (8.4,15.1)	6.2 (3.6,8.7)	3.3 (1.6,4.9)
Country of birth				
Both Australians	70.7 (68.0,73.3)	13.7 (11.7,15.7)	10.5 (8.7,12.3)	5.1 (3.7,6.4)
Only M born overseas	70.7 (58.8,82.6)	18.2 (8.1,28.3)	4.3 (0.0,9.2)	6.8 (0.1,12.7)
Only W born overseas	67.8 (57.0,78.6)	28.5 (18.1,38.9)	1.0 (0.0,3.1)	2.7 (0.0,5.5)
Both born overseas	65.2 (56.1,74.3)	29.8 (20.9,38.7)	2.1 (0,43.4)	2.9 (0.0,5.3)

Notes: *Based on female partner. ** Intention to have a child in the next 12 months. *Source:* Authors' calculations using data from the HILDA survey, wave 19, release 19.