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ORIGINAL ARTICLE

Mapping intentions to adopt fertility protective behaviours: the role of couple congruence and the importance of relationship and fertility awareness

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ABSTRACT

Several studies worldwide have shown that reproductive-aged people often have inadequate fertility awareness (FA). Since attitudes and health behaviours are influenced by the partner, there is a need for studies exploring the role of these influences on the individuals' adoption of fertility protective behaviours (FPB). This study explores the role of FA and relationship quality on couples' intention to adopt FPB. One hundred and twelve childless couples answered an online questionnaire about reproductive life plan, FA and intentions to adopt FPB. The results showed that couples were moderately congruent on their reproductive life plan. The female partners who reported higher female relationship quality and higher female willingness to undergo fertility treatments were more willing to adopt FPB. The male partners who had heightened FA also reported higher intention to adopt FPB. The influences of male and female FA, relationship quality and congruence on reproductive life plan were neither associated with couples' congruence on the intention to adopt FPB. Although the cross-sectional design restricts our ability to draw causal conclusions, these findings emphasize that future interventions should be targeted at couples and designed according to their expectations and reproductive desires.

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Couples; fertility awareness; reproductive life plan; health behaviours; relationship quality

Introduction

Infertility is a disease characterized by the inability to achieve pregnancy after 12 months of unprotected sexual intercourse (Zegers-Hochschild et al., 2017). The lifetime prevalence of infertility in Western societies varies between 16 and 26% among couples trying to conceive. There are a number of risk factors associated with infertility, such as previous disease diagnosis (e.g. endometriosis and childhood cancer), health-risk behaviours, including smoking, being overweight and sexually transmitted infections (e.g. chlamydia), as well as environmental factors, seen through endocrine-disrupting substances. Increased female and male ages are also significant risk factors for infertility (Nielsen et al., 2016). Although infertility research and clinical practice have mainly focussed on the improvement of medically-assisted reproduction, a considerable part of infertility might be prevented by avoiding risk factors, such as the postponement of pregnancy to an older age (Homan et al., 2007).

Both infertility and fertility prevention have been recently debated in the scientific community and society, due to the postponement of childbearing to later ages (Schmidt et al., 2012). Government authorities and scientific societies have been developing campaigns and initiatives to increase fertility awareness (FA). Examples include: 'Protect your Fertility' launched by the American Society for Reproductive Medicine (Soules & American Society for Reproductive Medicine, 2003); 'Take care of your fertility' from the Portuguese Society for Reproductive Medicine (Sociedade Portuguesa de Medicina da Reprodução, 2017); 'Your Fertility' from Australia (Hammarberg, Collins, et al., 2017; Hammarberg, Norman, et al., 2017), and the recent poster campaign 'Do you want to have KIDS in the future?' launched by the International Fertility Educational Initiative (iFEI).

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Supplemental data for this article can be accessed here.

Sociodemographic and background variables (e.g. age and educational level), as well as perceptions of personal risk, risk factor awareness and couple variables (relationship length and cohabitation) seem to influence the adoption of fertility-protective behaviours (FPB) in the context of reproductive life plans. In literature, these variables have been mainly associated with fertility, such as sociodemographics (Schmidt et al., 2012) and health behaviours in the field of fertility (e.g. seeking medical help, choosing to change lifestyle behaviours (Fulford et al., 2013)). For example, younger women seem more likely to take action regarding their fertility (Fulford et al., 2013). Furthermore, the intention to change shows lower amongst women who were already trying to conceive and who were smokers (Fulford et al., 2013). Perceived susceptibility and fertility knowledge also seem to play an essential role in the intention to take action to improve the chance of conceiving (Fulford et al., 2013).

However, the role of desired timing of childbearing, behaviour in case of fertility problems, as well as relationship quality has not been explored yet. Having children is a couple's decision in which both members seem to contribute (Bauer & Kneip, 2013; Hutteman et al., 2013; Matias & Fontaine, 2017). However, couples may be more or less congruent in their desires to have children (Schytt, 2014). The interdependence theory emphasizes that each partner influence each other's motivations, preferences, emotions and behaviours (Rusbult & Van Lange, 2003), referring that interpersonal and relational factors may also affect behavioural changes (Lewis et al., 2006). Thus, the relationship quality within both members of the couple may explain the degree of intention to adopt FPB. Relationship quality seems to influence the timing of childbearing (Rijken & Liefbroer, 2009). As an example, Aassve et al. (2016) showed that couples in which both partners reported higher happiness were more likely to have a first child. Higher relationship quality also seems to contribute towards increased willingness to adapt to the partner's needs (Van Lange et al., 1997), better communication, and greater satisfaction, therefore predicted to promote better health practices in both partners (Cornelius et al., 2016; Wickrama et al., 1997; Wilson, 2002). Taking into account both partners' perspectives can inform us on how congruent couples are in their reproductive plans, and to what extent each partner's intentions can influence their own behaviours, as well as that of their partner (Lewis et al., 2006).

This study aims to describe both partners' intentions to adopt FPB in couples who desire to have children in the future, and to explore the determining factors associated with this intention. Specifically, our research questions are: (i) how congruent are members of the couple in their reproductive life plans and attitudes towards infertility?; (ii) what variables are associated with the intention to adopt FPB?; and (iii) are FA and relationship quality associated with couples' congruence on the intention to adopt FPB?

Materials and methods

Participants and procedure

Between October 2016 and October 2018, childless men and women (and couples if they were together during the recruitment) were invited to participate in this study in gynaecology clinics (invited by the researcher in the waiting room; approved by the clinic), and social media (through dissemination via Facebook and University e-mails) in Portugal. The eligibility criteria were as follows: (i) being engaged in a romantic heterosexual relationship for at least one year; (ii) desiring to have children within a three-year window; (iii) not having children in common; (iv) age between 20 and 45 years old (for women); and (v) not having previous knowledge of a fertility problem, nor having actively tried to conceive for more than 12 months (or six months, provided the woman was $\geq$35 years old). For this study, only couples were included in the analyses.

After being informed about the study goals, participants were asked to answer an online questionnaire, on the Limesurvey platform, on tablet computers available for this purpose, or their personal computers at home. After giving their informed consent for participation on the first page of the questionnaire, participants were asked to answer four questions related to the study's inclusion criteria and if they did not meet these criteria, the questionnaire ended. Participants who met the inclusion criteria proceeded to the survey that required, on average, 20–30 min to complete. Members of each couple were paired based on their own, as well as their partner's initials and birth dates. This study was approved by the Faculty of Psychology Ethical Committee, University of Porto, as part of a larger study [details in (Pedro et al., 2020)]. All participants were volunteers, however, all couples were eligible to go in the draw for one prize of €200 in a lottery (this information was only disclosed after the informed consent page, not to raise any issues

that could otherwise interfere in the decision to participate in this study).

Nine hundred and eighty-seven individuals started to complete the questionnaire, from which only 244 couples were possible to pair. After excluding those not meeting the inclusion criteria for this particular study (infertile couples), 127 couples were considered eligible. From those, 12 couples were excluded due to incomplete data (12 women and nine men did not answer the variable outcome). Therefore, a total of 112 couples ($n = 224$ individuals) were considered in this study.

Measures

The online self-report questionnaire included *sociodemographic data* (age, educational level and relationship length), *health-related data* (knowledge of fertility problems, being actively trying to conceive, time trying to conceive) and the following measures:

Reproductive life plan

Participants were asked about the number of children desired, and their desired age for a first and a last child. The questions were developed by Lampic et al. (2006).

Fertility awareness

This measure assesses the knowledge regarding the definition of infertility, infertility risk factors, women's age-related decline in fertility, as well as the chances of spontaneous and treatment pregnancies according to woman's age (e.g. 'At what age is there a marked decrease in women's ability to become pregnant?'). It is composed by items developed by Lampic et al. (2006) and by Ekelin et al. (2012) and it is adapted by Conceição et al. (2017) to be used with Portuguese young adults. The total score (range 0–31 points) was calculated based on correct answers. More details are provided in the Online Supplementary Material.

Intention to adopt fertility protective behaviours (FPB)

Participants were asked to rate the probability of engaging in each of the seven fertility protective behaviours (FPB): healthy weight, not smoking, not drinking alcohol, eating healthily, exercising regularly, having children earlier than planned and seeking medical help in case of fertility problems; these were rated on a scale ranging from 1 (not at all likely) to 5 (extremely likely). This measure was developed by Fulford et al. (2013), based on the instrument *Intentions to optimize fertility*. The total score represented the mean of the seven items. More details are provided in the Online Supplementary Material.

Behavioural intention in case of infertility

Participants were asked to rate the likelihood of undergoing each of the three behaviours, if faced with difficulties in conceiving in the future: undergoing fertility treatment, adopting a child/children, or opting to stay childless. Participants answered on a visual analogue scale (VAS) with extreme values being 0 (very unlikely) and 100 (highly likely). This instrument was initially developed by Lampic et al. (2006) and has been widely used in the field of reproductive intentions (e.g. Abiodun et al., 2018; Peterson et al., 2012).

Relationship Assessment Scale

Developed by Hendrick (1988), this instrument assesses the perception of relationship quality, with seven items rated on a seven-point scale (e.g. 'How well does your partner meet your needs?'). Cronbach's alphas in our sample were good ($\alpha = 0.85$ for women; $\alpha = 0.90$ for men).

Data analyses

The couple was used as the unit of analysis, with each row including data from both partners. Pearson's correlations were carried out to explore the relationship between female and male partners' variables, regarding reproductive life plans, behaviour intention in the case of infertility, relationship quality, FA and the outcome intention to adopt FPB. Discrepancy analyses in these variables were calculated as the absolute value of the difference between female and male partners' variables, for which values close to zero meant high congruence (Chachamovich et al., 2009). Based on participant's desired age to have the first and last child, distance to this age was calculated from their age at the time of study, in order to further calculate congruence between partners.

Participants were trichotomized (binned; two cut-offs) so that approximately 33% of the most willing to adopt FPB were defined as a group of high likelihood to protect fertility, versus a medium and a low group (Schmidt, 2006; Szewczuk-Boguslawska et al., 2013). An ANOVA was used to explore the differences between the three groups in regard to the likelihood of adopting FPB on sociodemographics. Since age, education and relationship length were significantly different across the three groups (high, medium and low intentions to adopt FPB), these variables were

Table 1. Means, standard deviation and correlation among study variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Number of children desired (female)	–																	
2. Number of children desired (male)	**0.471****	–																
3. Age at first child (female)	−0.105	**0.029**																
4. Age at first child (male)	**−0.099**	−0.023	**0.344****	–														
5. Age at last child (female)	0.257**	**0.178**	0.841**	**0.259****	–													
6. Age at last child (male)	**0.055**	0.371**	**0.271****	0.763**	**0.265****	–												
7. Behaviour in case of infertility: fertility treatments (female)	0.229*	**0.146**	0.116	**−0.057**	0.151	**0.014**	–											
8. Behaviour in case of infertility: fertility treatments (male)	**0.040**	0.184	**0.155**	0.290**	**0.127**	0.251**	**0.173**	–										
9. Behaviour in case of infertility: adoption (female)	0.080	**0.107**	−0.092	**−0.018**	−0.104	**0.079**	0.202*	**0.014**	–									
10. Behaviour in case of infertility: adoption (male)	**0.052**	0.325**	**0.020**	0.115	**0.036**	0.172	**0.103**	0.269**	**0.245****	–								
11. Behaviour in case of infertility: staying childless (female)	−0.088	**−0.010**	0.035	**0.200**	−0.074	**0.041**	−0.267**	**0.255****	−0.272**	**−0.116**	–							
12. Behaviour in case of infertility: saying childless (male)	**−0.159**	−0.243**	**0.055**	0.205*	**−0.106**	0.045	**−0.048**	−0.101	**−0.061**	−0.298**	**0.286****	–						
13. Fertility awareness (female)	0.073	**0.159**	0.130	**0.070**	0.140	**0.031**	0.175	**0.208***	0.037	**0.290****	0.080	**0.068**	–					
14. Fertility awareness (male)	**−0.047**	−0.061	**0.220***	0.025	**0.203***	0.014	**0.122**	0.156	**0.012**	−0.035	**0.104**	0.110	**0.266****	–				
15. Relationship quality (female)	0.097	**−0.010**	−0.195*	**−0.162**	−0.143	**−0.229**	0.196*	**0.113**	0.154	**0.163**	0.018	**−0.036**	0.100	**0.015**	–			
16. Relationship quality (male)	**0.190**	0.203	**−0.130**	0.026	**−0.013**	0.065	**0.118**	0.153	**0.181**	0.257**	**0.017**	−0.191	**0.045**	−0.051	**0.436****	–		
17. Intentions to adopt FPB (female)	0.136	**0.083**	−0.017	**0.018**	0.022	**0.065**	0.150	**0.091**	0.061	**0.186**	0.075	**−0.077**	0.253**	**0.117**	0.231*	**0.030**	–	
18. Intentions to adopt FPB (male)	**0.040**	0.012	**0.327**	0.158	**0.355****	0.121	**−0.080**	0.236*	**−0.204***	−0.001	**0.181**	0.039	**0.225***	0.281**	**−0.114**	−0.061	**0.091**	–
Mean	2.29	2.22	30.13	32.18	34.60	36.71	80.22	75.80	63.66	59.02	23.88	24.51	16.60	15.89	4.50	4.51	4.13	3.82
SD	0.61	0.63	4.37	4.02	4.62	4.39	27.09	31.36	29.42	32.97	31.76	28.92	4.63	5.26	0.58	0.58	0.63	0.72

$^{*}p < 0.005$; $^{**}p < 0.001$. Correlations between partners' answers are in bold.

added as covariates in two one-way multivariate analysis of CoVariance (MANCOVA), using female and male intentions to adopt FPB as outcomes. Because we were interested in partner effects, both female and male partners' reports were included in each MANCOVA analysis. Wilks's lambda criterion was used to test the significance of the multivariate effect (Cohen, 1988). When a multivariate effect was detected, pairwise differences were analysed to determine which groups differed from each other, regarding their intentions to adopt FPB. Effect sizes were rated small ($\eta p2 = 0.01$), medium ($\eta p2 = 0.06$) and large ($\eta p2 = 0.14$) (Tabachnick & Fidell, 2013). Furthermore, discrepancy analyses were conducted between female and male partners' intentions to adopt FPB. A multiple linear analysis was conducted to explore whether (and to what extent) the male and female reports on relationship quality, FA, and reproductive life plan variables contributed to the couples' congruence on the intentions to adopt FPB. Analyses were conducted in SPSS version 24 (SPSS Inc., Chicago, IL, USA).

Results

Sample characteristics

Female participants were, on average, 28 years old (27.62 ± 3.99 (mean ± SD)) and male partners were 30 years old (29.71 ± 5.00). The majority of participants had previous university education (female participants 82.8%; male partners 62.1%). Couples had been together for an average of 6 years (5.6 ± 3.06) and 57.1% had been living together for approximately two years (2.06 ± 2.24). Regarding reproductive status, 14 couples had been actively trying to conceive (12.5%).

Congruence on reproductive life plan within couples

Table 1 shows the means, standard deviations, and correlations amongst study variables. On average, female and male partners desired to have two children. Women wished to have their first child at 30 years old and the last at 34, while their male partners preferred to have the first child at the age of 32 and the last at 37 years old.

If faced with infertility, both female and male participants reported a higher likelihood of undergoing fertility treatments (*M female* = 80, *M male* = 76, possible range 0–100) compared to adopting a child (*M female* = 64, *M male* = 59, possible range 0–100), or

Table 2. Sociodemographic and study variables comparing low, to medium, to high intention to adopt fertility-protective behaviours, based on Mancova results.

	Female partner's probability of adopt protective behaviours ($n = 111$)				Male partner's probability of adopt protective behaviours ($n = 101$)			
	Low[a] ($n = 40$)	Medium[b] ($n = 30$)	High[c] ($n = 31$)	Pairwise comparisons	Low[a] ($n = 30$)	Medium[b] ($n = 43$)	High[c] ($n = 28$)	Pairwise comparisons
Fertility awareness, M ± SD								
Actor	14.98 ± 4.13	16.87 ± 4.05	18.58 ± 5.10		13.30 ± 3.99	15.83 ± 4.47	17.82 ± 5.57	a < c*
Partner	15.10 ± 4.54	16.93 ± 5.58	15.06 ± 4.69		15.80 ± 4.40	15.67 ± 4.12	19.04 ± 4.92	b < c*
Relationship quality, M ± SD								
Actor	4.26 ± 0.80	4.61 ± 0.36	4.64 ± 0.36	a < c*	4.70 ± 0.40	4.32 ± 0.68	4.58 ± 0.55	a > b*
Partner	4.38 ± 0.63	4.65 ± 0.38	4.52 ± 0.67		4.58 ± 0.39	4.47 ± 0.54	4.40 ± 0.82	
Reproductive life-plan, M ± SD								
Number of children desired								
Actor	2.28 ± 0.60	2.27 ± 0.59	2.38 ± 0.62		2.30 ± 0.60	2.21 ± 0.56	2.25 ± 0.84	
Partner	2.18 ± 0.60	2.23 ± 0.73	2.35 ± 0.66		2.30 ± 0.65	2.33 ± 0.57	2.29 ± 0.60	
Age at first child								
Actor	30.60 ± 3.15	29.40 ± 3.13	30.32 ± 6.59		32.33 ± 3.97	31.91 ± 3.84	33.39 ± 4.65	
Partner	32.35 ± 4.44	32.97 ± 4.11	32.06 ± 3.79		28.50 ± 6.02	30.49 ± 3.44	31.43 ± 3.44	
Age at last child								
Actor	34.60 ± 3.33	34.67 ± 3.22	34.55 ± 7.18		36.47 ± 4.35	37.12 ± 4.51	37.14 ± 4.86	
Partner	36.63 ± 5.15	37.00 ± 4.54	37.26 ± 3.69		32.90 ± 6.95	34.95 ± 3.38	35.89 ± 3.11	
Behaviour in case of infertility, M ± SD								
Fertility treatments								
Actor	73.50 ± 27.60	79.17 ± 28.59	90.65 ± 20.03	a < c*	70.17 ± 32.55	77.67 ± 29.49	84.11 ± 30.40	
Partner	73.88 ± 32.00	85.50 ± 25.20	73.55 ± 33.55		82.00 ± 29.29	82.21 ± 23.89	76.07 ± 27.93	
Adoption								
Actor	60.75 (24.11)	68.33 (29.61)	66.77 (33.03)		66.17 ± 32.95	58.49 ± 32.16	60.54 ± 30.56	
Partner	52.25 (33.38)	66.50 (26.98)	73.55 (33.55)		74.83 ± 25.88	63.02 ± 28.37	56.96 ± 29.73	
Staying childless								
Actor	24.63 (31.18)	26.00 (33.46)	19.68 (29.97)		20.67 ± 26.61	27.79 ± 29.89	25.54 ± 30.16	
Partner	29.50 (33.06)	22.50 (26.22)	21.77 (25.58)		20.00 ± 29.13	15.93 ± 24.43	38.93 ± 37.94	b < c*

Note. The superscript letter in column heads was used for illustrating significant differences in the *post-hoc* column.
*$p < 0.05$.

remaining childless (*M female* = 24, *M male* = 24, possible range 0–100), respectively.

Correlation analyses between female and male partner reports showed that all variables regarding reproductive life plan were positively and moderately correlated (*range r* for females = 0.245; *range r* for males = 0.471). Variables regarding behavioural intention in the case of infertility were also moderately correlated (*range r* for females = 0.245; *range r* for males = −0.286), except for the intention to undergo fertility treatments ($r = 0.173$, $p = 0.07$).

Discrepancy analyses showed that couples seem moderately congruent regarding the number of desired children (*mean* $\Delta = 0.35$; $SD = 0.53$, *range* 0–2), and their desired time to have the first and last child (first child: *mean* $\Delta = 1.12$; $SD = 1.68$, *range* 0–11; last child: *mean* $\Delta = 2.40$; $SD = 2.37$, *range* 0–17). Regarding the behavioural intention in case of infertility, couples were moderately congruent on the intention to adopt a child (*mean* $\Delta = 29.55$; $SD = 24.86$), the intention to stay childless (*mean* $\Delta = 24.46$; $SD = 26.77$, *range* 0–100) and the intention to undergo fertility treatments (*mean* $\Delta = 25.85$; $SD = 27.71$, *range* 0–100).

Differences between high, medium and low intentions to adopt FPB

Table 2 presents the results comparing low, medium, and high intentions to adopt FPB on study variables, controlling for age and relationship length. There were statistically significant differences between high, medium and low female intentions to adopt FPB, after controlling education, age and relationship length [$F(32, 156) = 1.602$, $p = 0.031$, *Wilks'* $\Lambda = 0.547$, *partial* $\eta 2 = 0.247$]. Univariate tests revealed that female reports on relationship quality, and female intentions to undergo fertility treatments were different across the following groups: women who reported higher levels of relationship quality and willingness to undergo fertility treatments were more likely to intend to adopt FPB (Table 2).

There was also a statistically significant difference between male intention to adopt FPB on the combined dependent variables, after controlling education, age and relationship length [$F(32, 156) = 1.787$, $p = 0.011$, *Wilks'* $\Lambda = 0.535$, *partial* $\eta 2 = 0.268$). Pairwise comparisons revealed differences between intention

Table 3. Regression analyses predicting couples incongruence intention to adopt FPB.

	Step 1			Step 2			Step 3		
	β	SE	p	β	SE	p	β	SE	p
Relationship quality (F)	0.280	0.169	0.011						
Relationship quality (M)	−0.061	0.170	0.574						
Fertility awareness (F)	0.020	0.020	0.843						
Fertility awareness (M)	−0.111	0.019	0.267						
$F(4, 98) = 2.262$, $p = 0.079$, $R^2 = .081$									
Female age	−0.107	0.051	0.593	−0.061	0.050	0.755	0.034	0.059	0.884
Male age	−0.044	0.037	0.825	0.055	0.038	0.788	−0.045	0.041	0.839
Relationship duration	0.155	0.053	0.315	0.111	0.057	0.504	−0.045	0.068	0.820
Relationship quality (F)				0.433	0.343	0.022	0.455	0.381	0.031
Relationship quality (M)				−0.182	0.286	0.293	−0.200	0.316	0.296
Fertility awareness (F)				0.038	0.042	0.841	0.082	0.045	0.688
Fertility awareness (M)				−0.098	0.041	0.590	−0.050	0.044	0.792
Couple' discrepancy in number of children							−0.061	0.286	0.719
Couple' discrepancy in time desired until first child							0.212	0.082	0.205
Couple' discrepancy in time desired until last child							0.160	0.077	0.378
Couple' discrepancy in behaviour in case of infertility: treatments							0.228	0.006	0.200
Couple' discrepancy in behaviour in case of infertility: adoption							−0.068	0.007	0.700
Couple' discrepancy in behaviour in case of infertility: treatments: saying childless							−0.205	0.007	0.272

$F(13, 34) = 1.09$; $p = 0.402$; $R^2 = 0.294$.

groups in men on relationship quality. Those reporting high relationship qualities also reported low intention to adopt FPB, compared to the medium intention group. In addition, we found differences between groups concerning female and male FA, revealing that male participants with higher FA reported high intention to adopt FPB, compared to the low intention group. When female partners reported high FA, male participants also presented a high intention to adopt FPB, in comparison to the low intention group. Lastly, female intention to stay childless was significantly different between high and medium groups; male partners who reported high intention to adopt FPB coincided with their respective female partners and were more willing to stay childless.

Regression analyses are presented in Table 3. The analysis of couple discrepancy on intention to adopt FPB as outcome was not significant [$F(4, 98) = 2.262$, $p = 0.079$, $R^2 = 0.081$). However, the female report of relationship quality was significantly associated with the discrepancy within each couple, on the intention to adopt FPB ($b = 0.28$, $p = 0.011$). When adding the discrepancy variables in regard to the number of children, time desired to have the first and last child, and behavioural intention in case of infertility (controlling for age and relationship length), the model did not prove to be significant [$F(13, 34) = 1.09$, $p = 0.402$, $R^2 = 0.294$]. Nevertheless, the female report of relationship quality remained significantly associated with the couple's discrepancy on the intention to adopt FPB.

Discussion

These results highlight the importance of mutual influence within couples on reproductive choices. To the best of our knowledge, this is the first exploratory study mapping the intentions to adopt FPB in couples desiring to have children, as well as its association with FA variables. Although FA amongst young people has been extensively studied, the associations between FA and reproductive behaviours have hardly been explored, especially when using couples as the unit of analysis.

Results on couple congruence on reproductive life plans showed that partners seem to have similar reproductive goals and desires, also documented in previous studies (Matias & Fontaine, 2017; Rusbult & Van Lange, 2003; Schytt, 2014), particularly regarding the number of children and desired time to have children (Bodin et al., 2015). It is noteworthy that couples already expecting a child reveal strong coherence in pregnancy plans (Bodin et al., 2015). However, in the case of infertility, partners seemed less congruent on behavioural intentions. It is possible that our participants had never been faced with difficulties to conceive and, as a result, these 'options' had not yet been discussed. In addition, it seems there is a lack of knowledge regarding fertility treatments (perhaps due to the fears and myths surrounding them), which might prevent people from seeking medical help when faced with problems in conceiving (Bunting & Boivin, 2007). Stigma and negative stereotypes associated with childlessness (Koropeckyj-Cox et al., 2018) might also be the reason for such discrepancy. Additionally, adoption is less commonly discussed in a medical context (Gerrits, 2008) and might be perceived as a last resort. In the past, studies have shown that only ~6% of people who failed to have a child following fertility treatments opted for adoption (Pinborg et al., 2008). However, a more recent follow-

up study found that 7 in 10 childless couples were congruent on pursuing adoption (Petersen et al., 2015).

When controlling for both male and female age, educational level, and relationship length, the results showed an association between intention to adopt FPB and perception of relationship quality, reproductive behavioural intentions in case of infertility, reproductive intentions and FA. Interestingly, the pattern of results was different for each member of the couple. Men who reported higher intentions to adopt FPB had increased FA; this was in line with their respective partners. This suggests that women's FA is important for their respective male partners' intentions to adopt FPB. The dyadic influence of female FA on their male partners demonstrated the importance of including both members of the couple in preconception care, reproductive life-plans and fertility education.

Unexpectedly, female and male partners' FA were not associated with female intentions to adopt FPB. In contrast, results showed that women who were more willing to adopt FPB also reported a higher probability of undergoing fertility treatments in case of need, which might relate to the role of women in being more focussed or responsible for reproductive health. Female partners tend to seek more information about health in general (Rice, 2006), and fertility issues are still considered 'women's domain' (Grace et al., 2019; Pedro et al., 2014). In fact, there is evidence suggesting that women are more knowledgeable about fertility issues than men (Hammarberg, Collins, et al., 2017; Hammarberg, Norman, et al., 2017; Pedro et al., 2018). Thus, answering their specific needs might be a more effective strategy (Hammarberg, Collins, et al., 2017; Hammarberg, Norman, et al., 2017), by providing accurate and detailed information, dedicated to each gender.

Women who were more willing to adopt FPB were the ones who also reported higher relationship quality. This pattern seems different for men, seen as those reporting higher relationship quality also showed lower intention to adopt FPB, compared to the medium intention group. This result might reflect the role of relationship satisfaction between partners within a couple. That can be seen in infertile couples when men assume the responsibility to support women (Martins et al., 2014; Pedro et al., 2014), and focus more on their female partners' well-being (Sylvest et al., 2016).

Surprisingly, the last analysis exploring couples' discrepancy on the intention to adopt FPB was not significant. However, relationship quality reported by female members was significant when comparing the groups, therefore contributing to the discrepancy in couples' intention to adopt FPB. Although it is important to emphasize that this is a preliminary result and future studies are required for further confirmation, this study indicates that relationship quality could have an essential role in the intentions and decisions to protect fertility, not limited to reproductive decisions in the case of infertility. Given that most FA education programmes have been targeting people individually, this study elucidates the need to target couples and explore their reproductive plans, as well as their desires and their relationship with one another.

This study has some limitations. The small sample size and the high number of couples failing to complete the questionnaire might reflect some lack of interest in this theme, which might be a bias. The cross-sectional design does not allow for causal directions to be drawn. The analyses were exploratory and more research is needed to achieve robust and reliable results. The instrument used to measure the adoption of FPB was not validated. Although it was based and adapted from the 'Intentions to optimise fertility' by Fulford et al. (2013), we chose to address other behaviours. The questionnaire was pilot tested before the start of the study, but psychometric investigations of these variables are needed in further studies. Although the intention was to address the congruence between couples in the adoption of FPB, in hope that this would be a sign of engagement and dedication to a couple's reproductive project, the study might also reflect different health behaviours and lifestyles between partners. Hence, future studies should follow couples longitudinally to better understand the relationship between FA, reproductive intentions, and current reproductive behaviours. Moreover, this study is focussed on heterosexual couples, meaning results could not be generalized to same-sex couples or single women planning to have children. It would be of interest to further explore the intentions to adopt FPB amongst same-sex couples and single women, despite their way to parenthood often requiring medically assisted reproduction, with the aid of donated gametes.

Nevertheless, this exploratory study provides some critical insight into the dyadic influences, namely reproductive life plan and fertility issues. To the best of our knowledge, this is the first study using couples as the unit of analysis, addressing fertility issues and their attitudes and intentions to adopt FPB. This study indicates that dyadic influences exist in reproductive

decisions and willingness to make changes in FPB, which emphasizes that future interventions should target the couple and be designed according to the couples' expectations and reproductive desires. Fertility and preconception care have focussed mainly on women, but men should be targeted as well (Sylvest et al., 2018). Some studies found that men do not usually participate in family planning consultations because they feel they are not supposed to participate (Grace et al., 2019). Targeting the couple in regard to their fertility intentions and, at the same time, their willingness to make changes in their lives might be a starting point in the design of future interventions. Finally, our results brought to our attention that relationship quality should be considered in reproductive intentions and FA.

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