Relationship satisfaction and outcome in women who meet their partner while using oral contraception

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Summary

Hormonal variation over the menstrual cycle alters women’s preferences for phenotypic indicators of men’s genetic or parental quality. Hormonal contraceptives suppress these shifts, inducing different mate preference patterns amongst users and non-users. This raises the possibility that women using oral contraception choose different partners than they would do otherwise but, to date, we know neither whether these laboratory-measured effects are sufficient to exert real-world consequences, nor what these consequences would be. Here we test for differences in relationship quality and survival between women who were using or not using oral contraception when they chose the partner who fathered their first child. Women who used oral contraception scored lower on measures of sexual satisfaction and partner attraction, experienced increasing sexual dissatisfaction during the relationship, and were more likely to be the one to initiate an eventual separation if it occurred. However, the same women were more satisfied with their partner’s paternal support, and thus had longer relationships and were less likely to separate. These effects are congruent with evolutionary predictions based on cyclical preference shifts. Our results demonstrate that widespread use of hormonal contraception may contribute to relationship outcome, with implications for human reproductive behaviour, family cohesion, and quality of life.

Keywords: mate choice; contraceptive pill; oral contraception; attractiveness; mate preference; relationship satisfaction, divorce
1. INTRODUCTION

Women express an increased periovulatory preference for traits that signal genetic quality or compatibility [1-4]. Hormonal contraceptives suppress these shifts, leading to different mate preference patterns amongst users and non-users [5-8] and changes in women’s preferences before and after initiating use [9]. To date, this evidence comes from laboratory studies, but it suggests that hormonal contraceptive users might make different actual partner choices than they otherwise would [9-12].

Because oral contraceptives are widely used (e.g. 82% of women in the United States have used them at some time [13] and 40-54% of women aged 16-34 currently use them in the UK [14]), such effects could be substantial and widespread.

Research on mate preferences for genetic complementarity at the major histocompatibility complex (MHC) has provided the clearest evidence for these effects. If preferences are typically for MHC-dissimilar partners [8,10], and use of oral contraceptives shifts preferences towards MHC-similarity [9], then couples who meet while the woman is using hormonal contraception may be more likely to be relatively MHC-similar. This could have a negative impact on relationship quality, because, once a partnership has formed, subsequent cessation of contraceptive use could lead to realignment of a woman’s preferences and reduction in attraction to her partner. Indeed, women who are relatively MHC-similar to their partner report reduced in-pair sexual satisfaction and increased interest in extra-pair relationships [15]. Even if these effects are subtle, they could have measurable downstream consequences for relationship quality and likelihood of separation or divorce [9-12].

However, other research suggests the potential for positive relationship outcomes. Under conditions characterized by high progesterone levels and low fertility (e.g. in the luteal phase or early pregnancy), women express stronger
preferences for social cues associated with direct benefits of mate choice. Because some synthetic progestins have similar effects on brain activity and reproductive behaviour as natural progesterone [16], oral contraceptive users would maintain a higher level of preference for traits such as wealth and intelligence [17]. Similarly, weaker preferences for facial masculinity in oral contraceptive users [4-6] could make for more stable relationships, since men with less masculine features (indicative of low testosterone levels) are perceived to be [18], and may actually be [19], less likely to be unfaithful. Thus, this body of research would predict that use of hormonal contraception during partner choice would be positively associated with women’s satisfaction with their partner’s support and relationship commitment.

It is not known whether these laboratory-measured effects on women’s preferences are sufficiently powerful to influence actual choices that women make in the real world. Furthermore, it is not known how these two kinds of effects interact in determining the outcome of the relationship. Because this question is not amenable to experiment in societies in which women exercise free choice, we here address these issues using a quasi-experimental design in which we record relationship satisfaction and survival in a large sample of women who met their partner while they were either using or not using oral contraception. We collected data from 2519 parous women about their relationship with their first child’s biological father (hereafter, partner). We selected women with at least one child to standardize (as far as possible) levels of relationship commitment and experiences associated with pregnancy and childcare, and to ensure that women had experienced changes to their hormonal profiles associated with oral contraceptive use cessation and/or pregnancy during their relationship. For each woman, we used established scales and items to construct
composite measures of both sexual and general (nonsexual) satisfaction in the
relationship with her partner.

2. MATERIALS AND METHODS

(a) Participants

At the time of partnership formation, 1514 women used no form of hormonal
contraception and 1005 used combined oral contraception. Users of other forms of
hormonal contraception (e.g. progestogen-only pill, implants, injection; \( n = 278 \)) were
excluded from analyses because these represented a small proportion of the sample
and because these methods differ in hormonal formulation from oral contraceptives
(e.g. they usually employ only progestogens rather than an estrogen/progestogen
combination). Of the 2519 retained participants, 1761 were still in a partnership with
the biological father of their first child. Of the 758 women not still together with the
father, 734 had separated from him or formally divorced (we term both as separation);
the remaining 24 had been bereaved and were excluded from analyses concerning
relationship satisfaction and survival. Average age was 37.7 years (s.d. = 8.6). The
majority of the sample was drawn from the United States (1220) and the Czech
Republic/Slovakia (999); other participants were from the United Kingdom (159),
Canada (98), and other countries (43). Additional analyses (Electronic supplementary
material) confirmed that reported effects were not an artefact of regional variation in
behaviour.

Participants were recruited via personal contact, by advertisement on
pregnancy and parenthood forum websites, and through social networking websites.
Surveys were completed online. The only criteria for selection were that participants
should be women with at least one biological child. Most participants from the United States were drawn from a participant research panel administered by Qualtrics.com. Czech/Slovak participants were administered the questionnaire in the Czech language. Participants were told that the study was about their experiences of pregnancy, children, and their relationship satisfaction, but not the specific hypotheses under test. The study was approved by the Ethics Committee of the University of Stirling’s Department of Psychology and conducted according to the principles expressed in the Declaration of Helsinki.

(b) Measures

(i) Sexual satisfaction.

Measures of sexual satisfaction were based on those previously used to test effects of MHC-allele sharing on relationship quality by Garver-Apgar et al. [15]. To construct a composite measure of sexual satisfaction within their relationship, we recorded women’s scores on (a) sexual arousal with their partner, (b) partner’s sexual adventurousness, (c) the frequency with which they experienced orgasm with their partner during intercourse, (d) sexual attraction to their partner, and (e) sexual responsiveness to their partner (the sexual proceptivity scale of Ellis’s Partner-Specific Investment Inventory [20]. Scores were given on anchored 9-point rating scales (e.g. for sexual arousal, 1 = ‘does not satisfy me at all’, 9 = ‘completely satisfied’).

Correlation analysis show high concordance amongst these five measures (Spearman rho = 0.42-0.85, see ESM Table 1). Scores on each of these measures were then normalized and summed.

(ii) General satisfaction.
Composite scores of general relationship satisfaction, stressing nonsexual aspects of the women’s relationship with their partner, were calculated in the same way. We recorded women’s scores (using 9-point rating scales, as above) to four questions used by Garver-Apgar et al. [15], measuring the extent to which women were satisfied with (a) their partner’s provision of financial resources, (b) faithfulness and loyalty, (c) intelligence, and (d) ambition. In addition, we recorded scores on (e) Brown’s measure of partner support behaviour [21]. Correlation analysis demonstrated high concordance amongst these five measures (rho = 0.40-0.57, see ESM Table 2). Scores for each woman were normalized and summed.

(iii) Sexual rejection and compliant sex.

We recorded women’s scores on these measures, also following Garver-Apgar et al. [15]. The sexual rejection score was comprised of three items (e.g. “I rejected my partner’s attempts to initiate sex”) and the compliant sex score was comprised of two items (e.g. “had sexual intercourse with my partner even though I didn’t want to because I felt pressured by his continual arguments”). All items were scored on a 5-point scale, from 1 = ‘never’ to 5 = ‘very often’. Although these measures are to some degree similar to those included in the sexual satisfaction composite measure, we analysed them separately because they capture negative aspects of relationship dynamics and include an element of partner’s coerciveness.

(iv) Attractiveness of partner.

We also calculated a composite score of women’s assessment of their partner’s attractiveness. We recorded scores (7-point rating scales, from 1 = ‘much less than average’ to 7 = ‘much more than average’) on two measures of attractiveness used by
DeBruine et al. [22] (“compared to other men, how attractive do you consider your partner’s [face/body] to be”, Spearman rho = 0.62), and Garver-Apgar et al.’s [15] question “how satisfied are you with your partner’s physical attractiveness” (rho = 0.50 and 0.57, respectively).

(v) Ratings of ex-partners.

For those couples who had separated, we altered the wording of questions to reflect this; for example, in place of obtaining levels of agreement with the statement “I feel strong sexual attraction toward my partner” from Garver-Apgar et al.’s [15] attraction to partner scale, we used the wording “Thinking back about my ex-partner, I felt strong sexual attraction towards him”.

(vi) Experience and attitudes towards extra-pair sex.

To control for individual differences in the participant’s attitudes towards, desire for, and engagement in extra-pair sex, we used a standard tool, the Sociosexual Orientation Inventory – Revised (SOI-R) [23]. This comprises three subscales dealing with past behavioural experiences (e.g. “With how many different partners have you had sex within the past 12 months?”), attitude toward uncommitted sex (participants indicate level of agreement with statements such as “I can imagine myself being comfortable and enjoying “casual” sex with different partners”), and sociosexual desire (e.g. “How often do you have fantasies about having sex with someone with whom you do not have a committed romantic relationship?”). Each subscale contains three items which are summed to yield an overall score.

(c) Data Analysis
(i) Relationship satisfaction

Differences in individual measures were first assessed using Mann-Whitney tests. In order to control for possible confounding differences between groups of women (those who were using oral contraceptives when they met their partner and those who were not), we used ANOVA, with dependent variables being measures of relationship satisfaction. Between-group factors were use of oral contraception/no hormonal contraception (when couples met) and relationship duration (split by the median relationship length because of skew in this variable). In addition, sociosexuality (SOI-R score) was included in the model as a covariate. Sample sizes vary because some women did not respond to all items.

(ii) Relationship outcome

We first used chi-square tests to test for associations between outcome measures (women’s responsibility for initiation of separation, absolute rates of separation) and women’s use of oral contraception when couples met. Subsequently, we used logistic regression to check that associations were robust to key potential confounds (see below).

3. RESULTS

(a) Relationship satisfaction

Amongst women whose relationship was ongoing \( n = 1761 \), initial analysis revealed several statistically significant differences between women who were using or not using oral contraception when they met their partner (Table 1). Women who used oral contraception during partner choice (compared with non-users) scored lower on sexual
arousal with their partner, on satisfaction with his sexual adventurousness, and on sexual proceptivity and attraction towards him. They also rated their partner’s body lower in attractiveness compared to non-users. In contrast, these women appeared more satisfied with general (non-sexual) aspects of their partner: they were significantly more satisfied with his financial provision compared with women who were not using oral contraception during partner choice, and they appeared to be more satisfied with his intelligence and support (although these did not achieve statistical significance, \( p = 0.051 \) and 0.058, respectively).

Although the results of this initial analysis are consistent with predictions generated by a body of laboratory studies (reviewed above) that suggest that oral contraceptive use might alter mate preferences, it is possible that some or all of these effects could alternatively arise as a result of between-group differences that are unrelated to mate choice and any disruptive effects of oral contraception. For example, lower sexual satisfaction associated with oral contraceptive use could instead be due to differences in attitudes towards, or willingness to engage in, uncommitted, short-term relationships (sociosexuality). Time since partnership formation is also likely to influence relationship satisfaction [24]. Responses to satisfaction measures might also be influenced by hormonal condition. We therefore carried out additional confirmatory analyses using ANOVA to control for these variables. We included SOI-R scores as a covariate, relationship duration as a factor, and we accounted for the possibility that current hormonal condition contributes to women’s perception of their partner by excluding women who were pregnant or using hormonal contraception during data collection (the corresponding analysis, including only current oral contraceptive users, retained too few individuals to generate sufficient statistical power). In the analysis of sexual satisfaction and partner attractiveness, we also included general relationship
satisfaction as a covariate since this could influence within-couple sexual satisfaction and capture further unspecified aspects of partnership satisfaction that might vary between groups (sexual and general satisfaction were positively correlated, $r = 0.600$, $P < 0.0001$). In this analysis (Fig.1a), we again found significantly lower sexual satisfaction in women who were using oral contraception when they met their partner ($F_{1,1200} = 7.57$, $P = 0.006$), despite scoring higher in terms of general satisfaction ($F_{1,12006} = 10.07$, $P = 0.002$). Women also scored their partner as less attractive ($F_{1,1203} = 13.98$, $P < 0.001$) if they met while using oral contraception.

Other measures of sexual satisfaction [15] include the frequency of a woman’s acquiescence to sex under pressure from her partner (compliant sex) or with which she rejects her partner’s sexual advances. After controlling for sociosexuality, general relationship satisfaction and current hormonal condition, we found significant interactions between oral contraceptive use during partner choice and relationship length (Fig.2): women who used oral contraceptives rejected sex ($F_{1,1204} = 8.08$, $P = 0.005$) and engaged in compliant sex ($F_{1,1204} = 6.12$, $P = 0.014$) less frequently than non-users if the relationship was relatively new, but did so more frequently in longer relationships. This interaction appears to explain why neither of these measures approach statistical significance in the raw dataset (Table 1).

(b) Ex-partners and initiation of separation

Women no longer with their partner retrospectively assessed the same relationship attributes (Fig.1b). Amongst these women, there was no relationship between oral contraceptive use during partner choice and recalled general relationship satisfaction ($P = 0.41$), or frequencies of compliant sex ($P = 0.16$) and sexual rejection ($P = 0.18$). However, women who used oral contraceptives during partner choice recalled being
less sexually satisfied (again, controlling for general satisfaction; $F_{1,724} = 5.52, P = 0.019$) and rated their ex-partner as less attractive ($F_{1,727} = 5.02, P = 0.025$), compared with non-users, consistent with the women whose relationship was ongoing.

(c) Relationship outcome

Finally, we examined whether oral contraceptive use during partner choice was associated with relationship outcome. Women who used oral contraceptives during partner choice were disproportionately likely to have initiated the separation if it occurred (84.8%: 196/231 of separations were initiated by the woman rather than the male partner, excluding 6 where the woman reported equal responsibility between partners) compared with non-users (73.6%: 349/474, excluding 23 women who reported equal responsibility) (Chi-square = 11.14, $d.f. = 1, P = 0.001$). This effect remained significant (logistic regression: $\exp B = 0.495, P = 0.001$) after controlling for women’s age ($\exp B = 1.0, P = 0.71$) and sociosexuality ($\exp B = 1.10, P = 0.46$).

However, despite this, we found that separation rate was lower if the woman was using oral contraception during partner choice (Fig.3a): 237 of 1004 such couples (23.6%) had separated, compared with 497 of 1491 couples (33.3%) in which women were not using hormonal contraception (Chi-square = 27.34, $d.f. = 1, P < 0.0001$). A logistic regression analysis, controlling for age and sociosexuality, confirmed that couples were less likely to have separated if the woman used oral contraception during partner choice ($\exp B = 0.62, P < 0.0001$), and that this was independent of the effects of sociosexuality ($\exp B = 2.06, P < 0.0001$) and age ($\exp B = 1.06, P < 0.0001$).

Furthermore, amongst relationships that ended in separation, partnership duration was longer when the woman used oral contraception during partner choice (Fig.3b; $z = 3.39, P = 0.001$), by two years on average (median relationship length: 60 and 84
months for non-users and users, respectively). This difference was robust to exclusion of outliers and extreme values (defined as scores of between 1.5 and 3 times the inter-quartile range, or more than 3 times the inter-quartile range), with median relationship duration then being 60 and 81 months for non-users and oral contraceptive users, respectively ($z = 3.50, P < 0.001$). Confirmatory analyses (Electronic supplementary material) showed that these effects are unlikely to be due to a higher rate of unplanned pregnancy amongst non-users.

4. DISCUSSION

Our results indicate that a woman’s use of oral contraception at the time when she meets her partner has measurable downstream consequences for partnership outcome. The lower satisfaction with sexual aspects of the relationship and reduced attraction to the primary partner that we report amongst women who met their partner while using oral contraception are consistent with previous laboratory studies that indicate that oral contraception might interfere with adaptive preferences, such as preference for MHC-dissimilar men. Compared with normally cycling women, oral contraceptive users prefer body odours of relatively MHC-similar men [8] and initiation of oral contraceptive use shifts these preferences towards MHC-similarity [9]. Furthermore, in couples who are relatively MHC-similar, women express lower sexual satisfaction with their partner and higher interest in extra-pair sex [15]. Although the possibility that disruption of preferences by oral contraception influences relationship outcome has been the subject of considerable conjecture [9-12, 25, 26], our results provide the first evidence for this outside of the laboratory, in actual long-term partnerships.
However, as predicted, the results also reveal that women who used oral contraceptives during partner choice were more satisfied with nonsexual aspects of their relationship, including the partner’s financial provision, faithfulness, and support. Based on previous studies, we think it likely that this could arise through the suppression by oral contraceptive use of periovulatory increases in preference for putative markers of good genes, such as masculinity or dominance, that are evident in women with normal menstrual cycles [1-4, 27,28], thus leading to a maintained preference (during a woman’s actual partner choice) for markers of high-quality paternal investment that characterizes low fertility phases of the menstrual cycle [17-19, 29].

In combination, these effects mean that there may be both negative and positive associations between oral contraceptive use during partner choice and subsequent relationship satisfaction. Interpreting the interplay between them, we suggest that, on average, higher general (nonsexual) relationship satisfaction in women who meet their partner while using oral contraception might ameliorate or outweigh the concomitant effects of reduced sexual satisfaction. Additionally, a maintained preference for traits indicating high paternal investment may mean that, on average, the men chosen by women using oral contraception are less disposed to seek separation. Together, this could explain our finding of longer relationships in couples who met while the woman used oral contraception.

However, as relationships progress there may potentially come a tipping point at which a woman’s sexual dissatisfaction outweighs nonsexual satisfaction. Evidence for this includes the finding that, among women using oral contraception during partner choice, sexual dissatisfaction (compliant sex, sexual rejection) intensifies in relatively long relationships, while there was no change in non-users. Furthermore,
there was a relatively small difference in recalled general satisfaction between former
users and non-users who had separated compared with the large difference in those
still together, indicating that sustained levels of general satisfaction may be important
for relationship survival. If changes in the balance between sexual and general
satisfaction contribute to the incidence of separation, women who used oral
contraception during partner choice may be more likely than non-users to be
responsible for initiating eventual separation. Our results support this conjecture.
While it is well-established that women (rather than their male partners) generally
initiate separation [30-31], we found that women who used oral contraception during
partner choice were even more likely to initiate the separation (if it occurred) than
women who had not.

We have hypothesised that the reported effects are due to effects of oral
contraception on women’s partner choice, but it is also possible that oral contraceptive
use during relationships may also contribute to relationship satisfaction and outcome.
For example, differences in contraceptive use at the point of partner choice might also
reflect patterns of use after relationships are established. If so, it is possible that
suppression of cyclical preference shifts by oral contraceptives could lead to
stabilisation of relationship satisfaction in both male and female partners during the
relationship, in addition to the proposed effects on initial mate choice. Thus, women
who use oral contraceptives during the relationship would not experience mid-cycle
shifts in desire for attributes that might not be possessed by her partner, and men may
not experience changes in concern with partner fidelity or attractiveness (for a review
of such issues, see [2]). In this way, the association between oral contraceptive use and
initiation of relationship dissolution by women might alternatively be interpreted in
terms of higher initiation by men whose partner is a non-user. The distinction between
these ideas remains a point for further research.

Furthermore, although our results are consistent with the idea that oral
contraception may alter adaptive mate choice, with downstream consequences on
relationship satisfaction and outcome, it remains possible that any of the reported
effects may alternatively arise from other, as yet undetermined, associations between
oral contraceptive use and relationship satisfaction. However, we controlled for
several likely candidates. First, there may be differences between users and non-users
in attitudes towards sex and behaviour in sexual relationships, which we controlled for
using the sociosexual orientation index. It is also noteworthy that the interactions
between contraceptive use and relationship duration (Fig.2, showing that women using
oral contraception during partner choice were initially less likely to reject sex or
acquiesce to sex under pressure from their partner, but became increasingly likely to
do so, relative to non-users, as relationships progressed) demonstrate that relative
sexual satisfaction cannot be simply explained by previous use or non-use of oral
contraception. Second, assessment of current relationship satisfaction may be
influenced by current hormonal state, but we controlled for this in the relevant
analyses by excluding women using oral contraception and those who were pregnant
at the time of the survey. Third, in analyses probing sexual satisfaction, we controlled
for the effects of non-sexual aspects of relationship quality, including financial
provision and partner support. Fourth, we controlled for the duration of the
relationship. Finally, we checked that the reported effects held in two different
populations (the US and the Czech/Slovak populations) and that they were not
explained by between-group differences in commitment to the relationship potentially
induced by a higher frequency of unplanned pregnancy amongst the non-users (see ESM).

In summary, after controlling for these possible confounds, we found that women who met their partner while using oral contraception were more satisfied in the nonsexual aspects of their relationship with their partner. This is consistent with studies showing that women express stronger preferences for social cues associated with direct benefits of mate choice at times of high progesterone levels and low fertility. However, these benefits appear to be offset by costs in terms of lower satisfaction in sexual aspects of the relationship. Women who used oral contraception when they met their partner tended to find him less attractive, engaged in compliant sex and rejected sexual advances more frequently as the relationship progressed, and were more likely to initiate separation if it occurred. Although we do not know the relative degree of genetic similarity between couples in this study, these effects are also consistent with studies investigating mate preference for genetically complementary partners. For each kind of effect, our results suggest that these previously-described mate preferences are not restricted to the laboratory but are also expressed in actual partner choices. More importantly, our data also provide evidence that suppression of cyclical preference shifts by oral contraceptive use may disrupt the expression of these adaptive preferences. We stress that the nature of this research question precludes a true experimental approach and that we therefore remain cautious about the causational link behind the associations we describe. We also recognise that the reasons for any relationship’s survival or dissolution are complex and not limited to contraceptive choice at its inception. Nonetheless, our data provide important evidence in support of the proposal that the use of oral contraception during partner
choice (and possibly beyond) has the potential to profoundly influence the outcome of long-term relationships.

Acknowledgments

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References


Figure 1. Measures of relationship satisfaction in women who met their partner while either using or not using oral contraceptives. Data show estimated marginal means of standardized scores (± s.e.m), adjusted for SOI-R score, relationship duration, and current hormonal condition. Estimates of sexual satisfaction and partner attractiveness also control for general (nonsexual) relationship satisfaction. (a) Women still in a current relationship with the biological father of their first child (749 were non-users and 462 were oral contraceptive (OC) users at time of meeting). (b) Retrospective scores of women no longer in a relationship with the father of their first child (492 were non-users and 236 were OC users at time when couples met). Significant differences are indicated by * (P < 0.05) and ** (P < 0.01).

Figure 2. Relative frequency with which women rejected sex with their partner, or undertook compliant sex with him, in still-partnered women who met their partner while either using oral contraception (OC) (n=461) or not (n=749). Data are estimated marginal means (± s.e.m), adjusted for SOI-R score, general relationship satisfaction and current hormonal condition. Both interactions are statistically significant (sexual rejection: P = 0.005; compliant sex: P = 0.014). Short and Long refer to current relationship duration, split by the median relationship length of 142 months.

Figure 3. Effects of oral contraceptive use at the time of partner choice on relationship outcome. (a) Frequency of separation is lower amongst women using oral contraception (OC) when they met the biological father of their first child, compared to those who were not (P < 0.0001). (b) Relationship duration is longer (P = 0.001)
amongst women who were using oral contraceptives when couples met (analysis includes only separated couples). Horizontal lines are median number of months, boxes indicate inter-quartile range. Circles and triangles represent outliers and extreme values, respectively. Both analyses control for women’s age and SOI-R score. The difference in (b) was robust to exclusion of outliers (O) and extreme values (Δ) (P < 0.001).
Table 1. Differences in partner ratings according to oral contraceptive use during partner choice.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Non-users(^1)</th>
<th>OC users(^1)</th>
<th>Sample size(^1)</th>
<th>Z(^3)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-users</td>
<td>OC users</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>users</td>
<td>users</td>
<td></td>
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<tr>
<td>Sexual satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual arousal</td>
<td>6.07 ± 0.062</td>
<td>5.91 ± 0.068</td>
<td>991</td>
<td>766</td>
<td>2.34</td>
</tr>
<tr>
<td>Sexual adventurousness</td>
<td>5.82 ± 0.064</td>
<td>5.62 ± 0.071</td>
<td>990</td>
<td>765</td>
<td>2.52</td>
</tr>
<tr>
<td>Sexual proceptivity</td>
<td>3.80 ± 0.026</td>
<td>3.72 ± 0.028</td>
<td>993</td>
<td>766</td>
<td>2.84</td>
</tr>
<tr>
<td>Sexual attraction</td>
<td>3.35 ± 0.034</td>
<td>3.20 ± 0.037</td>
<td>990</td>
<td>765</td>
<td>3.20</td>
</tr>
<tr>
<td>Orgasm with partner</td>
<td>3.82 ± 0.040</td>
<td>3.79 ± 0.044</td>
<td>991</td>
<td>762</td>
<td>0.99</td>
</tr>
<tr>
<td>General satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial provision</td>
<td>5.74 ± 0.064</td>
<td>6.02 ± 0.067</td>
<td>991</td>
<td>766</td>
<td>2.60</td>
</tr>
<tr>
<td>Faithfulness/loyalty</td>
<td>6.79 ± 0.051</td>
<td>6.84 ± 0.058</td>
<td>992</td>
<td>765</td>
<td>0.46</td>
</tr>
<tr>
<td>Intelligence</td>
<td>6.80 ± 0.046</td>
<td>6.96 ± 0.047</td>
<td>992</td>
<td>766</td>
<td>1.95</td>
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<tr>
<td>Ambition</td>
<td>5.89 ± 0.059</td>
<td>5.87 ± 0.064</td>
<td>991</td>
<td>764</td>
<td>0.80</td>
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<tr>
<td>Support</td>
<td>4.51 ± 0.035</td>
<td>4.45 ± 0.037</td>
<td>993</td>
<td>766</td>
<td>1.89</td>
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<tr>
<td>Other measures</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner rejection</td>
<td>2.03 ± 0.030</td>
<td>2.02 ± 0.032</td>
<td>992</td>
<td>765</td>
<td>0.53</td>
</tr>
<tr>
<td>Compliant sex</td>
<td>1.46 ± 0.026</td>
<td>1.40 ± 0.027</td>
<td>993</td>
<td>765</td>
<td>0.92</td>
</tr>
<tr>
<td>Facial attractiveness</td>
<td>5.01 ± 0.038</td>
<td>4.98 ± 0.038</td>
<td>992</td>
<td>767</td>
<td>0.41</td>
</tr>
<tr>
<td>Body attractiveness</td>
<td>4.69 ± 0.043</td>
<td>4.53 ± 0.047</td>
<td>991</td>
<td>765</td>
<td>2.46</td>
</tr>
</tbody>
</table>

\(^1\)In this table, oral contraceptive (OC) use is at time of meeting partner, irrespective of current usage (in-text additional analyses control for current usage)

\(^2\)Note that sample sizes vary slightly across measures as a small number of women refrained from answering certain questions

\(^3\)Statistical analyses used non-parametric Mann-Whitney tests; mean rating scores (± standard error) are shown for ease of interpretation. Statistically significant comparisons are highlighted in bold