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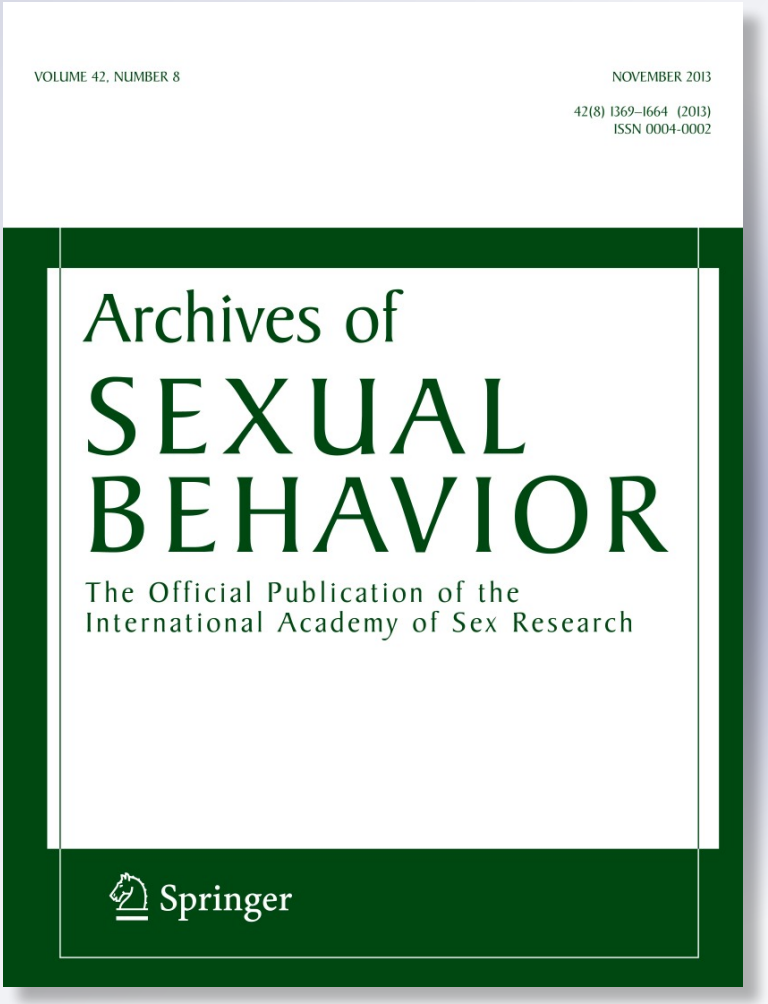


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LETTER TO THE EDITOR

# Moderators, Mates, and Matchmakers: Effects of Oral Contraceptives on Sexual Desire May Also Depend on Partners' Behavior and the Role of Female Choice

**David A. Puts · Lauramarie E. Pope**

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Oral contraceptive (OC) use might influence general sexual desire in many ways (e.g., by blocking the androgen receptor or elevating levels of sex hormone binding globulin and thus lowering the amount of unbound testosterone in the blood) (Burrows, Basha, & Goldstein, 2012). OC use could also influence sexual desire indirectly by reducing fear of unwanted pregnancy, decreasing lubrication and causing vaginal pain with intercourse, or reducing acne and thereby raising self-confidence (Burrows et al., 2012). Roberts, Cobey, Klapilova, and Havlicek (2013) mention some of these potential effects but suggest that focusing only on such factors may provide insufficient resolution and may be responsible for some conflicting results in the literature. Instead, Roberts et al. draw attention to two potential moderators of OC effects on sexual desire: (1) the target of sexual desire and (2) the congruency between OC use (or non-use) when a woman met her current partner and her current use.

Roberts et al. highlight the importance of distinguishing between general sexual desire and desire specifically for one's current sexual partner. We completely agree. Factors influencing sexual arousal, desire, and response relate not only to intrinsic characteristics of women themselves, but also to aspects of their sexual environment, including characteristics of their romantic partners. We made a similar point previously, suggesting that women may differ in their ability to achieve orgasm because of overall sexual responsiveness, as well as such features of their mate as masculinity, symmetry, attractiveness, and genetic compatibility (Puts, 2007; Puts, Dawood, & Welling, 2012). Studies exploring effects of OC on sexual desire should examine not only general sexual desire but also desire specifically for one's mate and, if possible, individual mate characteristics such as those listed above.

Although Roberts et al. focus on changes in women's preferences in relation to OC use, it is worth considering their partners' perspectives as well. Not only might OC use influence a woman's behavior toward her partner, but ovarian hormones, such as those in OC, also appear to influence such salient attributes as attractiveness (Puts et al., 2013) and dress (Haselton, Mortezaie, Pillsworth, Bleske-Rechek, & Frederick, 2007). Thus, a woman's OC use might influence her mate's behavior (see, e.g., Gangestad, Thornhill, & Garver, 2002; Haselton & Gangestad, 2006; Welling, Puts, Roberts, Little, & Burriss, 2012), including her mate's sexual attentiveness. A complete model of the effects of OC use on partnership formation and sexual satisfaction should incorporate the partner's behavior as well.

Roberts et al. additionally propose that OC effects on sexual desire are moderated by the congruency between a woman's previous and current OC use. This is because OC use can affect mate preferences. For example, previous research has shown variation across the menstrual cycle in the mate preferences of normally cycling, but not OC-using, women (e.g., Puts, 2006), and OC users report different mate preferences from non-users (e.g., Little, Burriss, Petrie, Jones, & Roberts, 2013; Wedekind, Seebeck, Bettens, & Paepke, 1995). If women have changed their OC use from when they formed their current partnership, their mate preferences may have changed, lowering their desire for their current partner. Indeed, Roberts et al.'s (2012) previous research supports this prediction.

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We note one caveat here: Concordance between current and previous OC use should relate to a woman's sexual desire for her current partner to the extent that her preferences played a role in forming her current relationship. Roberts et al. make the implicit assumption that women's preferences play an important role, an assumption that is no doubt frequently valid. However, this will less often be the case in societies with arranged marriages or where family members or other extra-pair individuals otherwise exert significant influence on romantic relationship formation. Even in the contemporary U.S., men may limit women's ability to choose their mates in various ways, including by threatening off competitors (Hill et al., 2013). It may, therefore, be relevant to collect data on the conditions under which a woman's current relationship was formed and the extent to which her preferences may have played a role.

Roberts et al. also allude to the utility of adopting an evolutionary perspective and suggest that it is useful to draw on a body of literature exploring associations between OC use and mate preferences—research conducted largely by evolutionary psychologists. By an "evolutionary approach," Roberts et al. may also mean employing adaptive reasoning to explore how OC might influence sexual desire.

We offer the following to clarify how this might be accomplished: First, one should consider how, from a Darwinian fitness-enhancing standpoint, sexual desire or mate preferences might change over the cycle, across pregnancy, or over the lifetime. Evolutionary reasoning has led to numerous insights and novel findings in these domains. Next, one should consider how OC might mimic, disrupt or modify some of these natural changes. For example, investing partners should be more valuable to women with infants than to those without dependent offspring, and thus changing hormone levels throughout pregnancy or nursing may increase desire for investing mates (Puts, 2006). Given that OC use mimics the hormonal conditions of pregnancy, OC may alter mate preferences and other aspects of female sexuality in ways typically associated with pregnancy. In sum, we concur that future research would indeed do well to integrate evolutionary/adaptive and proximate/physiological perspectives.

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