

Does Wording Matter?: “Mate” versus “Partner” and Long-Term Relationship Preferences

Paige P. Freyre, B.A., & T. Joel Wade, Ph.D.

Bucknell University

ABSTRACT

Surveys asking for ratings of the most important characteristics for a long-term “partner” or long-term “mate” were randomly administered to heterosexual and non-heterosexual participants (N = 690). Overall, sex differences were hypothesized such that ratings from those who identified as male and female would differ. The hypothesis regarding whether differences would arise as a result of asking for “mate” versus “partner” preferences was exploratory since no prior research has investigated this to date. The results revealed no significant differences for preferences based on “partner” versus “mate” preference ratings. The hypothesis regarding overall sex differences was supported. Women rated kindness as more important than men did, and men rated physical attractiveness as more important than women did. Additionally, heterosexuals rated physical attractiveness, and health as more important than non-heterosexuals did.

KEYWORDS

Long-Term Relationship Preferences, Partner, Mate, Sex Differences, Attraction

INTRODUCTION

Previous research has pointed out both cultural and biological factors affect rankings of personal preferences when selecting romantic partners (see Buss, 1989, 2006; Buss et al., 2001; Gangestad et al., 2006). This research has used an evolutionary theories perspective informed by Darwin’s (1871) sexual selection theory. Darwin (1871) utilized this evolutionary perspective and sexual selection theory to explain the dynamics within romantic relationships along with the differences in preferred traits between the two sexes. Darwin attributed sex differences among males and females to sexual selection pressures when it comes to the way people behave when selecting partners. The seminal work within the literature on mate preferences is the work on sex differences in human mate preferences by Buss in 1989. Buss (1989) examined how participants from 37 cultures valued earning

AUTHOR NOTE: Correspondence concerning this article should be addressed to T. Joel Wade, Ph.D., Department of Psychology, Bucknell University, 1 Dent Drive, Lewisburg, PA 17837. Contact: jwade@bucknell.edu.

capacity, ambition, industriousness, age, physical attractiveness, and chastity in potential partners. Buss (1989) suggests that there are clear sex differences in preferences for characteristics relating to resource acquisition, age, and reproductive behaviors. Basically, Buss (1989) suggests there is a connection between evolutionary selection pressures and the preferences people report when thinking about qualities selected long-term partners may possess. For long-term partner selection women prefer mates who have resources, and are emotionally accessible and willing to commit while men prefer long-term mates who are able to successfully conceive and bear offspring, and successfully care for said offspring (Buss & Schmitt, 1993). Thus, parental investment also plays a role. Trivers (1972) reports that women desire a higher parental investment from men than men do from women. So, women most often focus on cues indicative of a strong future parental investment for long-term mate selection while men focus on cues indicative of a woman's ability to bear their offspring, and also raise their children successfully (Buss, 1989). Since Buss completed the aforementioned work laying the groundwork for mating psychology, he and others have sought to replicate his (1989) findings (see, for example Boxer et al., 2013; Buss, 2006; Buss et al., 2001; Gangestad et al., 2006; Shackelford et al., 2005; Walter et al., 2020). These replications show that the initial sex differences reported by Buss (1989) persist.

Although sex differences appear to persist when selecting potential long-term romantic partners, one can wonder if this finding still occurs in light of shifting social changes our society is experiencing. For instance, traditional gender roles and attitudes are being blended or diminished altogether more than ever before within professional and domestic settings (see, for example, Lottes, 1993; Perper & Weiss, 1987; Wade et al., 2009). Consequently, biological sex along with gender identification has become less of a determinant of how one is socialized and influenced to live their life. In light of this change/shift, the present research examined whether typical distinctions in findings relating to sex differences would still exist since societal norms regarding sex roles have shifted somewhat. In addition, the work of Buss and many other researchers has been oriented towards studying heterosexual, procreating couples. In the contemporary moment, a broader scope of romantic relationships is accepted in our society which expand past the typical heterosexual samples previous research has typically included.

So, not surprisingly, some researchers have examined the mate preferences of non-heterosexual individuals. Bailey et al. (1994, 1997), Gonzales and Meyers, (1993), and Lawson et al. (2014) examined mate preferences of heterosexual and homosexuals and reported that homosexuals' mate preferences are similar to those of their heterosexual counterparts. However, some research has found that homosexuals' mate preferences differ from their heterosexual counterparts' mate preferences (see Ha et al., 2012; Kenrick et al., 1995; Russock, 2011; Vanderlaan & Vasey, 2008). More recently, Arístegui et al (2018) examined the mate preferences of Argentinian transsexuals and reported support for the biological sex differences initially found and reported by Buss in (1989).

With this increase in examinations of how sexual orientation affects mate preferences in mind, the present research sought to explore whether sex differences in preferences for mates in research conducted from an evolutionary selection pressures and sexual selection theory perspective continue in light of the social fabric

of our changing world with respect to sexual orientation and long-term relationship preferences. Specifically, the present research sought to extend the previous research examining long-term relationship mate preferences by focusing on whether the long-term romantic preferences of heterosexual and non-heterosexual individuals will differ if the questions utilized to examine those preferences use the wording of “mate” versus “partner” when asking about preferences for a long-term significant other. By using the word “partner”, the hope is to be more inclusive in the definition of what constitutes a romantic relationship by incorporating vocabulary that a broader group of participants may identify more closely with. One can argue that the phrase “mate” is geared towards heteronormative, procreating couples. The Oxford Dictionary defines mate as “A partner in marriage; a husband or wife. Later usually: a person regarded as a suitable marital partner. Also (now chiefly North American): a lover” or “either of a mating pair of birds or other animals”. Interestingly, in addition, the inclusion on the act “mating” is used when describing/defining the word mate. This supports the notion that the word “mate” is typically thought of in regards to procreating couples which is inherently exclusionary to the non-heterosexual population. Meanwhile, the Oxford Dictionary defines partner as “a person who is linked by marriage to another, a spouse; a member of a couple who live together or are habitual companions; a lover”. Furthermore, the Oxford Dictionary mentions that the term “partner” is now increasingly being used in legal and contractual contexts as a way to promote equal recognition to marriage, cohabitation, and same sex relationships. Thus, the present research examines whether an attempt to promote inclusivity by updating the language that is typically used in research examining romantic relationship preferences and attraction will lead to differences in how individuals rate the “significant other” traits of kindness, intelligence, health, physical attractiveness, and financial prospects.

Hypothesis

Sex differences were hypothesized such that those who identified as male and female would differ in their relationship preferences. The hypothesis regarding whether differences would arise as a result of the wording of “mate” versus “partner” was exploratory since there has been no prior research investigating whether that wording affects ratings of preferred mate characteristics.

METHOD

Participants

Participants were 690 (age 18 to 63, $M = 21.79$, $SD = 5.38$), sex assignment reported as: male (203), female (388), intersex (1), from a private university in the Northeastern United States and an academic listserv that one of the authors belonged to. Participants reported identifying with the following sexual orientation labels: heterosexual (472: 297 females, 173 males), homosexual (18: 7 females, 11 males), bisexual (64: 58 females, 6 males), queer (12: 11 females, 1 male), pansexual (6: 5 women, 0 men, 1 intersex), asexual (7: 6 females, 1 male). Furthermore, participants

reported their race as: White (517: 385 heterosexual, 14 homosexual, 56 bisexual, 9 queer, 4 pansexual, 5 asexual), Black/African American (31: 17 heterosexual, 2 homosexual, 5 bisexual, 2 queer, 0 pansexual, 2 asexual), American Indian (1 heterosexual), Asian (50: 34 heterosexual, 1 homosexual, 3 bisexual, 0 queer, 1 pansexual, 0 asexual), and Latinx (26: 23 heterosexual, 1 homosexual, 0 bisexual, 1 queer, 0 asexual, 0 pansexual). In terms of relationship status, 503 participants reported having been in a sexual relationship in the past, while 75 participants reported never experiencing a sexual relationship. Similarly, 424 participants reported experiencing a long-term committed partnership in the past while 154 had not. Also, 309 participants identified as single, 256 people reported being in a relationship, and 13 participants were unsure of their current relationship status.

Procedure

Participants were invited to take part in an online survey via email. They responded to a questionnaire that included an informed consent statement, standard demographic questions (age, race, sex assignment, sexual orientation, current relationship status, sexual relationship experience, and long-term relationship experience), and a debriefing statement. Participants were asked to rate how important the following characteristics: kindness, intelligence, health, physical attractiveness, and financial prospects (on 7-point scales, 1 = not very to 7 = very), are for their ideal long-term mate or ideal long-term partner (some participants were asked to rate these items for an ideal long-term mate while others were asked to rate the items for an ideal long-term partner). These items were included as the dependent variables since prior research suggests that, overall, these are the most important characteristics for mates (see Buss, 1989; Botwin et al., 1997; Buss & Schmitt, 2019; Conroy-Beam & Buss, 2021; Shackelford et al., 2012; Zhang et al., 2019).

RESULTS

Only one participant reported their sex assignment as Intersex. This individual was not included in the analyses. Additionally, since the Ns for those who reported a sexual orientation other than heterosexual were small (homosexual (18), bisexual (64), queer (12), pansexual (6), asexual (7)), we collapsed the non-heterosexual reporting participants into an overall sexual orientation category of non-heterosexual and then computed a 2 (Reported Sex Assignment) x 2 (Mate or Partner) x 2 (Reported Sexual Orientation) MANOVA. There was no significant effect for Mate versus Partner scenario, $F(5, 579) = .60, p = .70$. However, the MANOVA revealed a significant effect for Sex Assignment, $F(5, 579) = 2.43, p < .034, \eta^2 = .033$, on kindness, $F(1, 590) = 6.53, p < .011, \eta^2 = .012$. Women rated kindness as more important for a mate or partner than men did ($M = 6.46, SD = .76$ versus $M = 6.22, SD = .91$ for women and men, respectively). Additionally, there was a significant effect for Sex Assignment on physical attractiveness, $F(1, 590) = 6.55, p < .01, \eta^2 = .011$. Men rated physical attractiveness as more important than women did ($M = 5.70, SD = .89$, versus $M = 5.30, SD = .89$, for men and women, respectively). There were no

Sex Assignment effects on financial prospects, $F(1, 590) = 1.22, p = .26$, or intelligence, $F(1, 590) = .06, p = .81$, or health, $F(1, 590) = .06, p = .813$.

In addition, a significant effect for Sexual Orientation occurred, $F(5, 579) = 2.75, p < .018, \eta^2 = .036$, on physical attractiveness, $F(1, 590) = 6.28, p < .012, \eta^2 = .011$, and on health, $F(1, 590) = 15.76, p < .0001, \eta^2 = .026$. Heterosexuals rated physical attractiveness as more important for a mate or partner than Non-Heterosexuals did ($M = 5.50, SD = .90$ versus $M = 5.16, SD = .83$ for Heterosexuals and Non-Heterosexuals, respectively), and health as more important than Non-Heterosexuals did ($M = 5.84, SD = 1.01$ versus $M = 5.37, SD = .99$, for Heterosexuals and Non-heterosexuals, respectively). There were no significant effects for Sexual Orientation on financial prospects, $F(1, 590) = 1.26, p = .26$; intelligence, $F(1, 590) = .51, p = .48$; and kindness, $F(1, 590) = .64, p = .42$. Additional analyses across other demographic variables and scenario did not find any significant effects.

DISCUSSION

The present research sought to determine whether mate preferences would differ from partner preferences. Sex differences were also hypothesized such that men and women's preferences would differ. Mate versus partner preference differences did not occur. But sex differences were obtained. Women rated kindness to be of higher importance for a long-term romantic mate or partner than men did, and men rated physical attractiveness as more important for a long-term romantic mate or partner than women did. One reason for the sex difference in kindness ratings may be that kindness can be perceived as an indicator for emotional investment and parental involvement which women consider paramount for long-term mates (see Wade et al., 2008). Earlier research also supports this explanation. Greer and Buss (1994) found that women have a strong preference for men who signal the ability and willingness to invest time and resources into their relationship and potential offspring. In addition, supporting the aforementioned explanation, Buss and Barnes' (1986) research indicates that the characteristic of "kind-understanding" is perceived to lead to: individuals producing offspring who possess these positive traits, improved marital satisfaction, and possession of these traits is an indication of parental investment. Thus, kindness would be an incredibly alluring trait for a long-term partner since it may indicate emotional investment, parental involvement, and long-term relationship satisfaction.

The sex difference in ratings of physical attractiveness with men giving higher ratings is consistent with prior research (see Buss, 1989, 2006; Buss & Schmitt, 1993). Men rate physical attractiveness as more important than women do because physical attractiveness indexes health and healthy women have higher reproductive potential and higher fertility (see Singh et al., 2010; Singh, 1993; Wade, 2000, 2003). Additionally, women place less emphasis on attractiveness for long-term partners because attractiveness for men is a product of testosterone (Wade, 2000, 2003) and men with higher testosterone are perceived as likely to be bad mates (Johnston et al., 2001), are less invested in relationships (Booth & Dabbs, 1993; van Anders et al., 2007), are less parentally invested (Gray et al., 2007), and are more likely to cheat (Fisher et al., 2009).

Surprisingly, there were no sex differences for ratings of the other mate preference items, intelligence, health, and financial prospects, in this research. This could be an artifact of the way the preferences were measured in that we used a small number of items rather than the full list of items used in prior research. This might also be due to the pandemic. Our data was collected during the height of the pandemic (in the Fall of 2020), and research examining attraction and relationships shows that the pandemic did affect how individuals feel about relationships and partners, and how individuals go about attracting partners. For example, researchers in China and in the US report that increases in divorce filings have occurred since the COVID-19 outbreak (see Praso, 2020). But some researchers also report that divorce as well as marriage rates have declined during the COVID-19 pandemic (Manning & Payne, 2021). Additionally, Lehmillier et al. (2021) report that due to the pandemic some individuals have expanded their sexual repertoire, and are happier with their sex lives as result. Regarding partner attraction methods, Wade et al. (2022) reported that COVID-19 fears lead to sex differences for the flirting style used to attract mates. Specifically, they found that men who are more fearful of contracting COVID-19 endorsed using the Polite Flirting Style more than women did. The Polite Flirting Style involves communicating flirtation in a cautious manner. So, our lack of sex differences for the other mate preference items could be due to the pandemic. Further research is necessary to ascertain the validity of that explanation. Lastly, sex differences may not have occurred for the health item due to health being a major concern for both sexes. Men want women who are healthy as such women are likely to be fertile (Singh et al., 2010). Also, women find men who are dominant appealing (Wade & Renninger, 2021) since dominance influences industrious which plays a role in men's ability to garner resources (Buss, 1989). Healthy men possess good genes (Roberts & Little, 2008; Scheib, et al., 1993) and are more likely to be dominant (see Wade, 2002, 2003). The lack of a sex difference for financial prospects may be due to physical attractiveness being rated as important in the present research since attractiveness is linked to income such that attractive individuals earn higher incomes (see Dion et al., 1972; Judge et al., 2009; Pfeifer, 2012). The same explanation might apply for the nonsignificant effects obtained for ratings of the importance of intelligence since attractiveness is linked to intelligence (Jackson et al., 1995; Kanazawa, 2011). These explanations are provocative. But additional research is necessary to directly verify their applicability in this context.

Physical attractiveness was also found to be more important for the heterosexual versus homosexual population in the present research. This finding complements research by Lippa (2017) who found that heterosexual individuals considered the attractiveness of a short-term mate to be significantly more important than homosexual individuals. Although that research focused on examining short-term relationship preferences, that finding may extend to long-term relationship dynamics as well since women can use short term mating to test for men's long-term mating potential (Buss & Schmitt, 1993). Indeed, Buss and Schmitt (1993) report that while physical attractiveness is a most important characteristic for short term relationship partner preferences, it is also important long-term relationship partner preferences. Lippa (2017) suggests that physical attractiveness may be more important for short term relationship partner preferences for heterosexuals because heterosexual individuals may consider physical reproductive qualities as more

important than homosexual individuals due to an enhanced possibility of potential offspring resulting from short-term sexual relations among heterosexual individuals, consistent with sexual selection theory. Also, in the present research, heterosexual individuals may have rated physical attractiveness as more important than non-heterosexual individuals due to physical attractiveness being a strong indicator of future reproductive success and consequently the health of one's future offspring (see Wade, 2000, 2003 for a review of the literature on that). With this in mind, if heterosexual populations are more motivated to engage in long-term relationships for procreating purposes, they may value physical attractiveness more because they are motivated by this possibility for their potential offspring. This same explanation regarding motivation to engage in long-term relationships for procreating purposes applies to why heterosexuals may have rated health as more important for long-term partners than non-heterosexuals.

Mate versus partner preference rating differences may not have occurred since mate selection involves executing an adaptation designed to find good mates (Buss, 1989, 2006; Conroy-Beam, & Buss, 2021; Walter et al., 2020), and there are benefits to having long-term romantic companions (see Amato, 2014; Conroy-Beam et al., 2015). Therefore, whether one is rating preferences for a long-term mate or for a long-term partner, evolutionary biological adaptations appear to play a role.

CONCLUSION

The findings of this study suggest that heterosexual and non-heterosexual relationship mate and partner preferences are similar, and using the word mate or partner in the question/instructions used to measure partner preferences does not matter. This further suggests that biology plays a very strong role in our relationship mate/partner preferences and that changing social norms have not changed long-term relationship partner preferences. This may be because the characteristics rated in the present research are associated with mate/partner health, and parental investment which are important for everyone's mate/partner.

Limitations and Future Research

A major limitation of the present research is the sample that was used. The sample largely consisted of individuals who identified as heterosexual, and was almost completely comprised of college students. Thus, the findings may only apply to individuals in the college student age range. Also, since the research had to collapse across those who reported specific non-heterosexual orientations one cannot understand how individuals in specific types of non-heterosexual orientations rate long-term partner preferences. The sample was also largely a WEIRD (Western, Educated, Industrialized, Rich, and Democratic) sample and the findings may not apply to individuals in non-WEIRD countries.

Future research with older (beyond college age) individuals, Non-WEIRD individuals, and larger sample of specific types of non-heterosexual orientations is needed. Additionally, in the future, it will be compelling to notice whether typical

relationship partner preferences change as society becomes even more gender and sexuality fluid. In terms of assigned sex, it will be interesting to note whether men and women begin to differ in the relative importance they assign to specific traits. For instance, as women begin to gain more power in the workplace and economic independence – one may question whether women will still tend to value a mate's resources, social-economic status, and financial prospects more highly than men (Feingold 1992). Similarly, non-heteronormative couples have been largely excluded from literature exploring mate preferences. As sexuality becomes more fluid, the field of psychology will hopefully begin to explore the dynamics between a wide array of types of romantic partners. Consequently, the traditional findings of research examining relationship preferences may change in light of shifting gender and sexual identification demographics within society.

REFERENCES

- Amato, P. R. (2014). Marriage, cohabitation and mental health. *Family Matters*, (96), 5-13.
- Aristegui, I., Castro Solano, A., & Buunk, A. P. (2018). Mate preferences in Argentinean transgender people: An evolutionary perspective. *Personal Relationships*, 25(3), 330-350.
- Bailey, J. M., Kim, P. Y., Hills, A., & Linsenmeier, J. A. (1997). Butch, femme, or straight acting? Partner preferences of gay men and lesbians. *Journal of Personality and Social Psychology*, 73(5), 960-973.
- Bailey, J. M., Gaulin, S., Agyei, Y., & Gladue, B. A. (1994). Effects of gender and sexual orientation on evolutionarily relevant aspects of human mating psychology. *Journal of Personality and Social Psychology*, 66(6), 1081–1093. <https://doi.org/10.1037/0022-3514.66.6.1081>
- Booth, A., & Dabbs, J. M. (1993). Testosterone and men's marriages. *Social Forces*, 72, 463-477.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality*, 65(1), 107-136.
- Boxer, C. F., Noonan, M. C., & Whelan, C. B. (2015). Measuring mate preferences: A replication and extension. *Journal of Family Issues*, 36(2), 163-187.
- Buss, D. M. (2006). Strategies of human mating. *Psihologijske teme*, 15(2), 239-260.
- Buss, D. M., Shackelford, T. K., Kirkpatrick, L. A., & Larsen, R. J. (2001). A half century of mate preferences: The cultural evolution of values. *Journal of Marriage and Family*, 63(2), 491-503.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12, 1–14. doi:10.1017/ S0140525X00023992
- Buss, D. M., & Barnes, M. (1986). Preferences in human mate selection. *Journal of Personality and Social Psychology*, 50, 559–570. doi:10.1037/0022-3514.50.3.559

- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: A contextual evolutionary analysis of human mating. *Psychological Review*, *100*, 204–232.
- Buss, D. M., & Schmitt, D. P. (2019). Mate preferences and their behavioral manifestations. *Annual Review of Psychology*, *70*, 77-110.
- Conroy-Beam, D., & Buss, D. M. (2021). Mate preferences. *Encyclopedia of Evolutionary Psychological Science*, 4850-4860.
- Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2015). Why do humans form long-term mateships? An evolutionary game-theoretic model. In *Advances in Experimental Social Psychology* (Vol. 51, pp. 1-39). Academic Press.
- Darwin, C. (1871). *The descent of man and selection in relation to sex*. London: John Murray.
- Discover the story of English. More than 600,000 words, over a thousand years.* Home: Oxford English Dictionary. (n.d.). <https://www.oed.com/>.
- Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, *24*(3), 285-290.
- Eagly, A. H., & Wood, W. (1999). The origins of sex differences in human behavior: Evolved dispositions versus social roles. *American Psychologist*, *54*, 408–423. doi:10.1037/0003-066X.54.6.408
- Feingold, A. (1992). Gender differences in mate selection preferences: A test of the parental investment model. *Psychological Bulletin*, *112*, 125–139.
- Fisher, A. D., Corona, G., Bandini, E., Mannucci, E., Lotti, F., Boddi, V., Forti, G., and Maggi, M. (2009). Psychobiological correlates of extramarital affairs and differences between stable and occasional infidelity among men with sexual dysfunctions. *Journal of Sexual Medicine*, *6*, 866-875.
- Gangestad, S. W., Haselton, M. G., & Buss, D. M. (2006). Evolutionary foundations of cultural variation: Evoked culture and mate preferences. *Psychological Inquiry*, *17*(2), 75-95.
- Gonzales, M. H., & Meyers, S. A. (1993). "Your Mother Would Like Me": Self-presentation in the personals ads of heterosexual and homosexual men and women. *Personality and Social Psychology Bulletin*, *19*(2), 131-142.
- Gray, P. B., Parkin, J. C., & Samms-vaughan, M. E. (2007). Hormonal correlates of human paternal interactions: A hospital-based investigation in urban Jamaica. *Hormones and Behavior*, *52*, 499-507.
- Greer, A. E., & Buss, D. M. (1994). Tactics for promoting sexual encounters. *The Journal of Sex Research*, *31*(3), 185–201. <https://doi.org/10.1080/00224499409551752>
- Ha, T., Van Den Berg, J. E., Engels, R. C., & Lichtwarck-Aschoff, A. (2012). Effects of attractiveness and status in dating desire in homosexual and heterosexual men and women. *Archives of Sexual Behavior*, *41*(3), 673-682.
- Jackson, L. A., Hunter, J. E., & Hodge, C. N. (1995). Physical attractiveness and intellectual competence: A meta-analytic review. *Social Psychology Quarterly*, 108-122.
- Judge, T. A., Hurst, C., & Simon, L. S. (2009). Does it pay to be smart, attractive, or confident (or all three)? Relationships among general mental ability, physical attractiveness, core self-evaluations, and income. *Journal of Applied Psychology*, *94*(3), 742.

- Johnston, V. S., Hagel, R., Franklin, M., Fink, B., & Grammer, K. (2001). Male facial attractiveness: Evidence for hormone-mediated adaptive design. *Evolution and Human Behavior*, 22(4), 251-267.
- Kanazawa, S. (2011). Intelligence and physical attractiveness. *Intelligence*, 39(1), 7-14.
- Kenrick, D. T., Keefe, R. C., Bryan, A., Barr, A., & Brown, S. (1995). Age preferences and mate choice among homosexuals and heterosexuals: A case for modular psychological mechanisms. *Journal of Personality and Social Psychology*, 69(6), 1166.
- Lawson, J. F., James, C., Jansson, A. U. C., Koyama, N. F., & Hill, R. A. (2014). A comparison of heterosexual and homosexual mating preferences in personal advertisements. *Evolution and Human Behavior*, 35(5), 408-414.
- Lehmiller, J. J., Garcia, J. R., Gesselman, A. N., & Mark, K. P. (2021). Less sex, but more sexual diversity: Changes in sexual behavior during the COVID-19 coronavirus pandemic. *Leisure Sciences*, 43(1-2), 295-304.
- Lippa, R. A. (2007). The preferred traits of mates in a cross-national study of heterosexual and homosexual men and women: An examination of biological and cultural influences. *Archives of Sexual Behavior*, 36(2), 193-208. <https://doi.org/10.1007/s10508-006-9151-2>
- Lottes, I. L. (1993). Nontraditional gender roles and the sexual experiences of heterosexual college students. *Sex Roles: A Journal of Research*, 29, 645-670.
- Manning, W. D., & Payne, K. K. (2021). Marriage and divorce decline during the COVID-19 pandemic: A case study of five states. *Socius*, 7, 23780231211006976.
- March, E., Grieve, R., & Marx, E. (2015). Sex, sexual orientation, and the necessity of physical attractiveness and social level in long-term and short-term mates. *Journal of Relationships Research*, 6. <https://doi.org/10.1017/jrr.2014.12>
- Perper, T., & Weiss, D. L. (1987). Preceptive and rejective strategies of US and Canadian college women. *The Journal of Sex Research*, 23, 455-480.
- Pfeifer, C. (2012). Physical attractiveness, employment and earnings. *Applied Economics Letters*, 19(6), 505-510.
- Prasso, S. (2020). China's divorce spike is a warning to rest of locked-down world. *Bloomberg Businessweek*, 31.
- Roberts, S. C., & Little, A. C. (2008). Good genes, complementary genes and human mate preferences. *Genetica*, 134(1), 31-43.
- Russock, H. I. (2011). An evolutionary interpretation of the effect of gender and sexual orientation on human mate selection preferences, as indicated by an analysis of personal advertisements. *Behaviour*, 307-323.
- Scheib, J. E., Gangestad, S. W., & Thornhill, R. (1999). Facial attractiveness, symmetry and cues of good genes. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 266(1431), 1913-1917.
- Shackelford, T. K., Schmitt, D. P., & Buss, D. M. (2005). Universal dimensions of human mate preferences. *Personality and Individual Differences*, 39(2), 447-458.

- Singh, D. (1993). Adaptive significance of female physical attractiveness: Role of waist-to hip ratio. *Journal of Personality and Social Psychology*, 65, 293-307.
- Singh, D., Dixon, B. J., Jessop, T. S., Morgan, B., & Dixon, A. F. (2010). Cross-cultural consensus for waist-hip ratio and women's attractiveness. *Evolution and Human Behavior*, 31, 176-181.
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man: 1871-1971* (pp. 136 - 179), Chicago, IL: Aldine.
- van Anders, S., Hamilton, L., & Watson, N. (2007). Multiple partners are associated with higher testosterone in North American men and women. *Hormones and Behavior*, 51, 454-459.
- VanderLaan, D. P., & Vasey, P. L. (2008). Mate retention behavior of men and women in heterosexual and homosexual relationships. *Archives of Sexual Behavior*, 37(4), 572-585.
- Wade, T. J., Butrie, L. K., & Hoffman, K. M. (2009). Women's direct opening lines are perceived as most effective. *Personality and Individual Differences*, 47(2), 145-149.
- Wade, T. J. (2003). Evolutionary theory and African American self-perception: Sex differences in body esteem predictors of physical and sexual attractiveness, and self-esteem. *Journal of Black Psychology*, 29(2), 123-141.
- Wade, T. J. (2000). Evolutionary theory and self-perception: Sex differences in body-esteem predictors of self-perceived physical and sexual attractiveness and self-esteem. *International Journal of Psychology*, 36-45.
- Wade, T. J., Fisher, M. L., & Salmon, C. (2022). *Hesitate or Jump in?: Fear of COVID-19 and flirting styles*. Paper presented at the Northeastern Evolutionary Psychology Society Conference, Pittsburgh, PA.
- Wade, T. J., Palmer, R., DiMaria, M., Johnson, C., & Multack, M. (2008). Deficits in sexual access versus deficits in emotional access and relationship termination decisions. *Journal of Evolutionary Psychology*, 6(4), 309-319.
- Wade, T.J., & Renninger, L. (2021). Strike a Pose: The perceived flirtatiousness of men's nonverbal behavior. *Human Ethology*, 36 49-61.
- Walter, K. V., Conroy-Beam, D., Buss, D. M., Asao, K., Sorokowska, A., Sorokowski, P., ... & Zupančič, M. (2020). Sex differences in mate preferences across 45 countries: A large-scale replication. *Psychological Science*, 31(4), 408-423.
- Zhang, L., Lee, A. J., DeBruine, L. M., & Jones, B. C. (2019). Are sex differences in preferences for physical attractiveness and good earning capacity in potential mates smaller in countries with greater gender equality? *Evolutionary Psychology*, 17(2). doi:10.1177/1474704919852921