





Perceived Mate Scarcity Leads to Increased Willingness to Mate Poach

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ABSTRACT

Mate poaching, where an individual attempts to attract a pair-bonded individual, is a risky mating tactic. Yet, it is surprisingly common. Although many studies have investigated individual differences in mate poaching, few have examined potentially relevant ecological factors, such as mate availability. In this study, 254 unmated North American adults were primed with either perceived mate scarcity or abundance, and subsequently completed measures of fear of being single, intrasexual competitiveness, and attitudes toward mate poaching. Results from a sequential mediation model revealed that men and women primed with mate scarcity held a more positive attitude toward mate poaching relative to those primed with mate abundance, and that this link was mediated by an induced fear of being single and intrasexual competitiveness. Our results suggest that mate poaching is a facultative adaptation of human mating psychology driven by intrasexual competitiveness that is activated in response to environments of low mate availability. It highlights the need for researchers to consider ecological cues when studying individual variation in mate poaching behavior.

Introduction

Mate poaching involves attempting to have romantic and/or sexual relations with someone who is known to be in an exclusive relationship with another person (Davies et al., 2007; Davies et al., 2019; see also: Schmitt & Buss, 2001).¹ Schmitt et al. (2004) identified that 62% of North American men and 40% of women have attempted to poach for a short-term relationship. Comparatively, 63% of North American men and 52% of women have attempted poaching to form a long-term relationship (Schmitt et al., 2004). Of all North American mate poachers, over 75% reported some success in their short- and long-term attempts. Some researchers have highlighted the potential fitness benefits of mate poaching, including increased access to more sex partners (e.g., Arnocky et al., 2014) and development of a desired long-term relationship (Schmitt & Buss, 2001). Men are more likely than women to poach in order to gain a physically attractive partner and more partner variety, whereas women reported resource acquisition (particularly in short-term mating) as more of a poaching motivator than did men (Schmitt & Buss, 2001).

However, mate poaching also has several disadvantages. Mate poaching comes with risk of retaliatory violence from the target's current partner (Mogilski & Wade, 2013), sexual diseases, undesired pregnancy, a depletion of resources, and a depreciation of mate value and reputation as likely costs (Buss, 1990; Schmitt & Buss, 2001). Relationships formed from mate poaching present more infidelity and jealousy, and less commitment and satisfaction compared to relationships

not formed by poaching (Belu & O'Sullivan, 2018). As with benefits of poaching, there are also potential sex differences in the perceived costs. Reputational damage and the prospect of raising offspring on one's own were reported as stronger deterrents to poaching by women than men (Davies et al., 2010). Given the costs of mate poaching, it should not be invoked indiscriminately (Davies et al., 2010).

Accordingly, considerable research has focused on understanding the occurrence of mate poaching, with most studies focusing disproportionately on individual differences, such as the dark triad (Jonason et al., 2010; Kardum et al., 2015), the Big Five personality dimensions (Kardum et al., 2015), intrasexual competitiveness (Arnocky, 2020), attractiveness and hormones (Sunderani et al., 2013), mate value (Arnocky, 2020), antagonism and disinhibition (Mitchell et al., 2019). However, potentially relevant environmental factors, such as the availability of mates in the local mating environment, have not been thoroughly considered as predictors of mate poaching intent. The goal of this study was to examine whether experimentally induced group differences in perceived mate availability influences unpaired individuals' willingness to mate poach.

Mate Scarcity

Populations vary naturally in their relative abundance or scarcity of available mates (Emlen & Oring, 1977). In a biased sex ratio environment, the scarcer sex can be more selective in their mate choice and may better express their preferred

mating strategy (see Arnocky et al., 2016). For example, recent findings from 45 countries showed that preferences for attractiveness and resources were more demanding when the opposite sex was abundant (Walter et al., 2021). Sex ratios that are biased toward women (i.e., relatively more women than men) are often characterized by unstable marriages and lower parental investment (Kruger & Schlemmer, 2009; Pedersen, 1991) – features that benefit the reproductive potential of men (see also: Barber, 2011). Men's sociosexual orientation has been found to be less restricted when mates are more readily available in studies examining both Adult Sex Ratios (ASR; Schacht & Borgerhoff Mulder, 2015) and experiments manipulating perceived mate availability (Arnocky et al., 2016). Conversely, women primed to believe men are plentiful increase their expectation for cues to men's commitment and resource provisioning (Locke et al., 2020).

Mate availability also influences competition for mates amongst the more abundant sex (Aronsen et al., 2013). Across diverse non-human species, a meta-analysis confirmed that some indices of direct competition (e.g., contests) and indirect competition (e.g., copulation and mate-guarding) increased as the sex ratio became more biased (Weir et al., 2011). Another meta-analysis showed that courtship propensity, or the likelihood that an organism will court a prospective mate, also increased when mates were relatively scarcer than competitors (de Jong et al., 2012). In humans, Moss and Maner (2016) primed students with an article that depicted either an abundant or scarce mating market. Intrasexual aggression increased when the participants were a part of the more abundant sex. Furthermore, Arnocky et al. (2014) found that those primed with mate scarcity were both more jealous and more willing to engage in aggression against a competitor who was flirting with their mate, relative to those primed with perceived mate abundance. Similarly, Kim (2013) found that men and women primed with mate scarcity demonstrated more mate guarding behavior in response to threats of infidelity. Men's intimate partner violence, rape, and weapon use have also been linked to a male-biased sex ratio (D'Alessio & Stolzenberg, 2010; Diamond-Smith et al., 2018). These findings coalesce to suggest that some types of intrasexual competition intensify for the more populous sex, ostensibly because there are fewer mating opportunities (Aronsen et al., 2013; Schacht & Borgerhoff Mulder, 2015). Nevertheless, other research has found that in regions with a sex ratio biased toward females, rates of violent crime, such as homicide and aggravated assault were higher, perhaps because of greater male intrasexual competition for short-term mating opportunities (Barber, 2009; Schacht et al., 2016). However, these correlational links preclude directional interpretations; it is also possible that violent crime could contribute to a female-biased sex ratio, highlighting the need for more experimental research on mate availability and different types of mating competition.

To our knowledge, only one study has examined the relationship between sex ratios and mate poaching. Schmitt et al. (2004) found that both women's long-term and short-term mate poaching were more likely to occur in cultures with a sex ratio biased toward women. In contrast, male mate poaching was not more frequent when the sex ratio was biased toward men – but rather, they exhibited less mate poaching.

However, there were a few notable limitations which we aimed to address in the current study. The sex ratio statistic derived from United Nations data considered all adults, rather than those who were reproductively viable (i.e., elderly non-reproductive individuals were included). Further, the reported analyses were collapsed across ten world regions, yet sex ratios can vary substantially within such large regions. In line with this, it is unclear to what degree the individual respondents perceived or experienced the reported sex ratios directly. Accordingly, the perceptual drivers of poaching behavior that are hypothesized to be associated with a scarcity of mating opportunity should be more directly examined using an experimental priming task. In doing so, researchers can ensure that a mating psychology characterized by a belief that mates are scarce or abundant is activated in individual participants, and subsequently determine whether intrasexually competitive attitude and intended mate poaching behavior increase.

Intrasexual Competitiveness

Intrasexual competitiveness refers to rivalry between members of the same sex for mates or reproductively relevant resources (Buss, 1988; Moss & Maner, 2016). It is a driving force behind sexual selection (Arnocky & Carré, 2016; Buss, 1988; Buunk & Fisher, 2009). Importantly, individuals may vary in their intrasexual competitiveness, which is defined as an attitude encompassing the degree to which they view confrontation with same-sex individuals in competitive terms (Buunk & Fisher, 2009). Specifically, an intrasexually competitive attitude involves a desire to beat, and view oneself as better than, same-sex others, alongside negative feelings toward those better off, and taking pleasure in the failings of desirable same sex others within a mating domain (Buunk & Fisher, 2009). Intrasexually competitive attitude is most often measured using the Intrasexual Competition Scale (ICS; Buunk & Fisher, 2009).

Individual differences in intrasexual competitiveness are not static, but rather are sensitive to environmental cues (Maner & Ackerman, 2020). Griskevicius et al. (2012) identified that priming men with male-biased sex ratios increased their intrasexual competitiveness. Similarly, Arnocky et al. (2014) found that priming men and women with perceived mate scarcity increased their scores on the ICS relative to those primed with mate abundance. Individual differences in intrasexual competitiveness have also recently been shown to predict mate poaching effort. In a sample of young adults, Arnocky (2020) found that ICS scores correlated with mate poaching attempts. This suggests that intrasexual competitiveness might mediate links between perceived mate availability and willingness to mate poach.

Present Research

One important limitation in the mate poaching literature is that it has almost entirely focused on individual differences in, and as predictors of, mate poaching, to the exclusion of environmental factors (e.g., Jonason et al., 2010; Kardum et al., 2015; Mogilski & Wade, 2013). This focus may erroneously suggest that mate poaching is a stable individual difference that is insensitive to environmental input. Moreover, the only study to date to

examine mate availability in relation to poaching (Schmitt et al., 2004) was limited in (1) its cross-sectional design that precluded causal inference about the role of mate scarcity, and (2) the lack of examination of potential psychological mechanisms that might motivate poaching behavior when faced with cues to mate scarcity. The current study addressed these gaps in the literature by examining whether a mate availability priming manipulation influences single (i.e., unmated) adults' willingness to mate poach. The use of a priming task allows for the controlled examination of the influence of contextual cues to mate availability on mating psychology, rather than solely examining baseline individual differences in perceived mate availability. We hypothesized that perceived mate scarcity would predict a more positive attitude toward mate poaching.

Based upon the evolutionary understanding that human psychology, including many attitudes and emotions, are adapted to coordinate behavior in response to environmental inputs (Tooby & Cosmides, 2008), we examined two psychological mechanisms that might sequentially mediate this relationship. Specifically, we first anticipated that being exposed to cues of mate scarcity (versus abundance) would influence individual differences in perceived mate scarcity, using the Fear of Being Single Scale (Spielmann et al., 2013). This served as both a manipulation check, and as a variable that could capture existing individual differences in the efficacy of the priming manipulation within groups as well as in baseline (i.e., preexisting) perceived mate scarcity. This is important given recent research highlighting that unmanipulated individual differences in perceived mate availability are also important predictors of mating psychology (e.g., Crosby et al., 2021). In turn, perceived mate scarcity should predict a greater intrasexually competitive attitude, consistent with prior research linking manipulations of perceived mate scarcity to intrasexual competitiveness (e.g., Arnocky et al., 2014). Finally, based upon literature characterizing mate poaching as an intrasexually competitive behavior (Buss, 1988) and research linking intrasexual competitiveness to mate poaching (Arnocky, 2020), it was anticipated that intrasexual competitiveness would predict self-reported willingness to mate poach (see Figure 1). We had no a-priori reason to anticipate differences in the influence of perceived mate scarcity upon mate poaching intent across diverse sexual orientations, and thus we did not limit our sample to solely heterosexual participants.

Method

Participants

This research was approved by the Nipissing University research ethics board (protocol # 101,871–32,078). Data were collected in the Fall of 2020. Based on Schoemann et al. (2017), we employed a Monte Carlo power analysis for indirect effects in a two-serial mediator model. We estimated standard deviations and small-medium effect sizes individually for relationships based upon effect sizes from previous research linking perceived mate scarcity to intrasexual competitiveness (Arnocky et al., 2014) and linking intrasexual competitiveness to mate poaching (Arnocky, 2020), and determined that a sample size of 190 would provide 80% power (95% CI). Participants were recruited from two sources: Amazon's Mechanical Turk (MTurk), which we limited to Canada and the United States, and the institutional SONA undergraduate research participation system (Nipissing University, North Bay, Ontario, Canada). Given the increasing number of MTurk participants who fail response validity indicators (Chmielewski & Kucker, 2020), we oversampled by approximately 25% on MTurk. Single (i.e., unmated) participants (MTurk $n = 255$, SONA $n = 40$) were recruited from Canada and the United States. The eligibility criteria (HIT approval rate >95% and 50 approved HITS, location) were hidden, as was the requirement of being single, such that those responding to the demographics questionnaire at the beginning of the study were diverted to a different survey if they did not meet the criteria. Of the total participants, 41 were removed for having either duplicate IP addresses, failing to complete over 50% of the survey, or failing an attention check item in either the priming task ("What was the title of the article?"; "Generally, what was the main conclusion of the research reported in the article?") or embedded within the survey ("If you are paying attention to this survey, please select number '2' for this item"). The final sample thus consisted of 254 participants (111 males, 143 females, $M_{age} = 28.85$, $SD = 5.76$, range: 18–53). Seventy-two percent identified as Caucasian, 10% identified as Black, 6% identified as Latin-American, 5% identified as Asian, 3% identified as South Asian, 1% identified as Southeast Asian, 1% identified as Aboriginal/Indigenous, and 2% identified as "other." Most participants identified as heterosexual (80%), with 7% of participants identifying as lesbian/gay, 12% identifying as bisexual, and 1% identifying

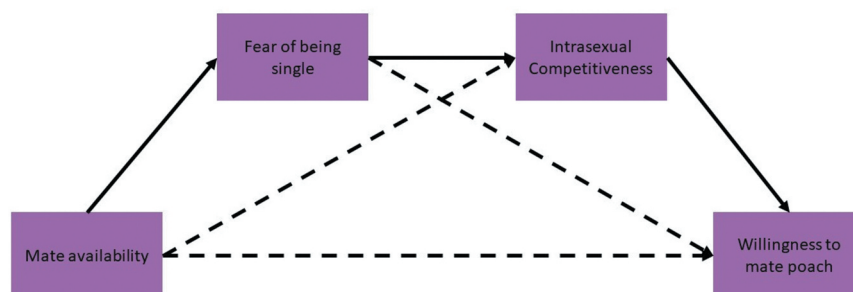


Figure 1. Proposed sequential mediation model in which mate availability priming (scarcity versus abundance) is hypothesized to predict greater willingness to mate poach, with this relationship being mediated sequentially by a fear of being single and increased intrasexual competitiveness among the scarcity group. Sex and data source (not depicted) are entered as control variables.

as “other.” We did not anticipate differences in our proposed model across sexual orientations, and both the priming manipulation, self-perceived mate scarcity (fear of being single), and mate poaching measures were not specific to heterosexual mating relations. Therefore, we included all respondents in the analysis.² Participants were directed to a Qualtrics link containing the priming manipulation and subsequent survey, with the nature of the study being disguised as one involving short-term memory for magazine article content and social behavior.

Mate Availability Manipulation

Following previous research (e.g., Arnocky et al., 2014; Locke et al., 2020), self-perceived mate availability was manipulated using bogus magazine articles developed and modified from Spielmann et al. (2009). Participants were randomly assigned to one of the two conditions. In the mate scarcity condition, the article proposed that higher quality mates are hard to come by because they are often already in relationships, and that it would be challenging to find another mate following relationship dissolution. Conversely, in the mate abundance condition, the article emphasized that high-quality mates are easy to come by, and that following a relationship dissolution, one would not have difficulty finding another desirable mate. After reading the article, participants completed attention checks. They were asked to first select the title of the article they read and then provide their own interpretation of the main conclusion of the article. Respondents assigned to the scarcity condition were coded as a ‘1’ and those assigned to the abundance condition were coded as a ‘2’.

Manipulation Check and Individual Differences in Perceived Mate Availability

If the mate availability manipulation is effective, it should induce a greater perception among unmated individuals that mates are difficult to find and a corresponding concern about remaining single amongst those in the scarcity versus abundance condition. The participants also completed the Fear of Being Single Scale (Spielmann et al., 2013). This was used to examine the participant’s concerns about not being with a mate and remaining single, with items highlighting a perceived difficulty in finding a suitable partner. The scale is comprised of 6 items, measured on a 5-point Likert scale ranging from 1 = *not at all true* to 5 = *very true*. Example items include, “I feel it is close to being too late for me to find the love of my life,” “I feel anxious when I think about being single forever,” and “As I get older, it will get harder and harder to find someone” (Spielmann et al., 2013). This measure has previously been used as a manipulation check for examining the efficacy of the article-based mate scarcity priming task (Locke et al., 2020). The measure showed good internal consistency ($\alpha = .89$).

Intrasexual Competitiveness

Intrasexual competitiveness was measured using the 12-item intrasexual competition scale (ICS), developed by Buunk and Fisher (2009). This scale uses mating contexts to assess competitiveness in situations with others who are of the same sex (Buunk et al., 2017). Each item is measured on a 7-point Likert scale from 1 = *not at all applicable* to 7 = *completely applicable*. Example items include, “I can’t stand it when I meet another (wo)man who is more attractive than I am,” “I like to be funnier and more quick-witted than other (wo)men” and, “I tend to look for negative characteristics in (wo)men who are very successful” (Buunk & Fisher, 2009). The measure showed good internal consistency ($\alpha = .93$).

Mate Poaching

To assess willingness to mate poach, a measure created by Jaeger (2018) was used. This measure is comprised of 10 items, rated on a 7-point Likert scale from 1 = *strongly disagree* to 7 = *strongly agree*. Example items include, “If I am attracted to someone who is already in a relationship, it won’t stop me from trying to pursue them” and, “I would not mind dating someone who was already in a committed relationship.” The measure showed good internal consistency ($\alpha = .85$).

Results

The PROCESS macro for SPSS was used to test the sequential mediation model (Model 6; Hayes, 2013). Although we did not anticipate sex differences in the model, we controlled for sex given previous reported sex differences in frequency (e.g., Schmitt et al., 2004) and correlates of mate poaching (Sunderani et al., 2013). Controlling for sex (male or female) and data source (MTurk or SONA), priming condition (scarcity versus abundance) was entered as the independent variable, with fear of being single entered as the first mediator, intrasexual competitiveness as the second mediator, and attitude toward mate poaching as the dependent variable.³ No variable was missing more than 3% of cases; therefore, those with missing data were excluded listwise, leaving a total of 236 valid cases.⁴ First, results showed that the prime induced a perception that mates are scarce through a fear of being single ($B = -0.37$, $SE = .15$, $t(232) = 2.53$, $p = .01$), such that those primed with mate scarcity scored significantly higher on the fear of being single scale than those primed with mate abundance. Neither data source ($B = 0.19$, $SE = .22$, $t(232) = 0.91$, $p = .36$) nor sex ($B = 0.09$, $SE = .16$, $t(232) = 0.62$, $p = .54$) were related to fear of being single. Second, fear of being single, in turn, predicted increased intrasexual competitiveness ($B = .69$, $SE = .06$, $t(231) = 10.85$, $p < .001$). The priming manipulation also directly predicted intrasexual competitiveness ($B = -0.42$, $SE = .14$, $t(231) = -2.90$, $p = .004$), such that those in the mate scarcity condition reported a more intrasexually competitive attitude.

³Exclusion of the control variables did not meaningfully change the results reported herein.

⁴Using a mean replacement allowing for analysis of all 254 cases did not meaningfully change the results reported herein.

²Limiting the analysis to only heterosexual respondents did not meaningfully change the results reported herein.

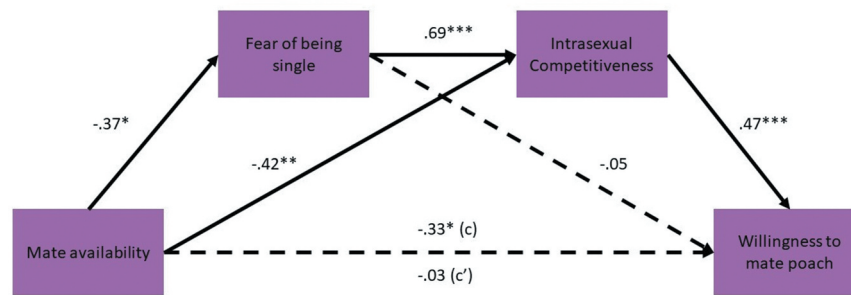


Figure 2. Results of a sequential mediation model whereby mate availability priming (scarcity = 1, abundance = 2) initially showed a statistically significant direct effect (c) predicting greater willingness to mate poach. Upon inclusion of the sequential mediators in the model, this relationship showed a non-significant indirect effect (c'). Fear of being single and intrasexual competitiveness sequentially mediated the relationship between mate availability and willingness to mate poach. There was also a direct mediating effect for intrasexual competitiveness. Control variables sex and data source (not depicted) did not meaningfully predict willingness to mate poach. Reported regression coefficients are unstandardized. * $p < .05$, ** $p < .01$, *** $p < .001$

Data source ($B = -0.18$, $SE = .21$, $t(231) = -0.85$, $p = .39$) and sex ($B = -0.19$, $SE = .15$, $t(231) = -1.22$, $p = .22$) were unrelated to intrasexual competitiveness.

Prior to inclusion of the sequential mediators, there was a statistically significant total effect of mate availability priming on willingness to poach ($B = -0.33$, $SE = .13$, $t(232) = -2.52$, $p = .01$), such that participants were more willing to poach when mates were perceived as scarce relative to abundant. Conversely, neither data source ($B = -0.33$, $SE = .19$, $t(232) = 1.71$, $p = .09$) nor sex ($B = -0.24$, $SE = .14$, $t(232) = 1.69$, $p = .09$) related to poaching intent. With the mediators included in the model, results demonstrated that intrasexual competitiveness predicted willingness to mate poach ($B = 0.47$, $SE = .05$, $t(230) = 9.50$, $p < .001$); Model statistics: ($F(5,230) = 29.75$, $p < .001$, $R^2 = .40$; see Figure 2). Conversely, with intrasexual competitiveness in the model, neither fear of being single ($B = -0.05$, $SE = .06$, $t(230) = -0.78$, $p = .43$), data source ($B = -0.30$, $SE = .16$, $t(230) = -1.92$, $p = .06$), nor sex ($B = -0.18$, $SE = .11$, $t(230) = -1.55$, $p = .12$) predicted willingness to mate poach. The direct effect of priming condition was reduced to statistical non-significance ($B = -0.03$, $SE = .11$, $t(230) = -0.30$, $p = .77$). We next examined the three indirect effects. First, the individual mediation pathway for condition \rightarrow fear of being single \rightarrow attitude toward mate poaching was not statistically significant ($B = -0.02$, $SE = .02$, 95% CI = $[-0.03, 0.07]$). Second, the mediation pathway for condition \rightarrow intrasexual competitiveness \rightarrow attitude toward mate poaching was statistically significant; Intrasexual competitiveness directly mediated the link between priming condition and attitude toward mate poaching ($B = -0.19$, $SE = .07$, 95% CI = $[-.33, -0.07]$). Moreover, the sequential mediation pathway (i.e., condition \rightarrow fear of being single \rightarrow intrasexual competitiveness \rightarrow mate poaching intent) showed a significant mediation effect ($B = -0.12$, $SE = .05$, 95% CI = $[-.22, -0.03]$), suggesting that cues to mate scarcity, relative to abundance, induce a fear of being single, which increases one's intrasexually competitive attitude, and, in turn, motivates mate poaching.

Discussion

Mate poaching has been associated with diverse individual difference variables covering personality (Foster et al., 2014; Kardum et al., 2015; Mitchell et al., 2019; Schmitt et al., 2004),

mate value and intrasexually competitive attitudes (Arnocky, 2020), phenotypic characteristics such as attractiveness (Davies & Shackelford, 2017), and hormones (Sunderani et al., 2013). However, little research has considered ecological factors, such as the relative availability of mates, which may be complicit in one's decision to mate poach. To our knowledge, the present study is the first to experimentally examine whether the psychological perception of mate scarcity influences willingness to mate poach.

This study supported the hypothesized predictions that (1) men and women primed with perceived mate scarcity (versus abundance) are more willing to mate poach, and (2) that this relationship is mediated by two sequential psychological processes; the first being a negative perceptual-emotional response centered around fear of being unmated, and the second being a corresponding increase in intrasexual competitiveness, which in turn motivates willingness to mate poach. These findings align with the only other study that we are aware of to examine the ecological influence of sex ratios upon mate poaching, whereby Schmitt and colleagues Schmitt et al., (2004) found that mate poaching frequency may be linked to operational sex ratios across ten broad global regions. However, these findings diverge in that our results suggest that both men and women who perceive mating opportunities to be scarce increase their intrasexual competitiveness and willingness to mate poach. Comparatively, Schmitt et al. (2004) found increased poaching amongst only women when mates were scarce. In contrast to our findings, Schmitt et al. (2004) identified that when the sex ratio became biased toward men, men engaged in less poaching behavior. Future research will have to reconcile these discordant findings, perhaps by examining operational sex ratios (instead of adult sex ratios) in more localized regions. It is also possible that, given the vast number of individuals that we are exposed to in our modern environments (both in-person and virtually through the media), perhaps the perception of scarcity may matter more than objective demographic measures of sex ratio in determining behavior in the modern context. Indeed, previous research on the value heuristic demonstrates that human perception is fallible in

estimating the frequency of valued objects. Arnocky et al. (2014) argued that mates can constitute such valued objects under the value heuristic, which could in turn lead some individuals to perceive a scarcity of mates even in an environment where potential mates are, in principle, readily available.

This research also demonstrates that individuals higher in intrasexual competitiveness are more willing to face the potential negative consequences (e.g., poorer quality subsequent relationships; Belu & O'Sullivan, 2020) of mate poaching in the context of a scarcity of potential mates. This aligns with previous research which postulates that when the sex ratio becomes biased (and available mates are scarce), competition in the abundant sex should increase (de Jong et al., 2012; Emlen & Oring, 1977). The finding that intrasexual competitiveness mediated the link between mate availability and attitude toward poaching also further supports recent research linking intrasexual competitiveness to overt poaching behavior (e.g., number of overt unsuccessful and successful mate poaching attempts; Arnocky, 2020). Finally, we did not observe any direct effect of sex on fear of being single, intrasexual competitiveness, or mate poaching intent. Recent reformulations of sexual selection theory have highlighted the important yet relatively neglected role of female intrasexual competition (e.g., Arnocky & Vaillancourt, 2017; Rosvall, 2011). The measure of intrasexual competitiveness used in this research was designed with this in mind, demonstrating no sex differences in mean responses in the study from which it was constructed (Buunk & Fisher, 2009). Similarly, the Fear of Being Single Scale was also constructed with gender equality across responses in mind by selecting items that loaded strongly across both men and women (Spielmann et al., 2013). This finding also aligns with research suggesting that although there are sometimes observed differences in mate poaching effort across short- and long-term motives (e.g., Schmitt et al., 2004), both sexes can benefit from mate poaching and appear to exhibit psychological adaptations to facilitate this behavior.

Limitations and Future Directions

Data were collected during the COVID-19 pandemic. We employed random assignment and a between groups design which should control for any undue influence of the pandemic upon our findings. Nevertheless, it will be of value to replicate and extend this research in the future. It is also unclear whether our combined sample of MTurk and undergraduate participants is representative of the broader population. Although there is evidence that MTurk respondents are relatively representative on variables such as political ideology (Clifford et al., 2015), these samples have also been shown to differ from the general population on variables like health, exercise, and education (e.g., Walters et al., 2018). It is unclear whether MTurk samples diverge from the general population on mating and sexual variables, so future work should aim to replicate this model using other modes of collecting community samples. Moreover, given cross-cultural variability in frequency of mate poaching (Schmitt et al., 2004), it would be valuable to examine whether this model holds in non-western cultures.

This research was limited in the use of a self-report attitudinal measure of mate poaching. This could be addressed using a longitudinal approach examining trait perceived mate scarcity across time in relation to subsequent self-reports of actual mate poaching attempts, for instance, in a sample of undergraduates spanning their four years of post-secondary education. This design would rely upon measuring individual differences in perceived mate availability rather than using a prime to activate such perceptions; given historical methodological issues surrounding replicability of psychological priming research in general (Yong, 2012), this design could be a valuable extension to this line of inquiry. Alternatively, the same priming design, which has shown to induce perceived mate scarcity in this and other studies (e.g., Locke et al., 2020), could be implemented and followed by pairing the participant with an attractive confederate who is said to be in an exclusive relationship with someone else, and subsequently measure participants' willingness to date the target.

This research also did not clarify the type of relationship that those who are more willing to poach would seek. More specifically, this research did not examine if those who are more willing to mate poach do so for a subsequent long-term or a short-term relationship formation under conditions of perceived mate availability versus mate abundance. Mate poaching has been used to acquire both short-term and long-term relationships (Schmitt et al., 2004), and future research should consider this. Perhaps men primed with mate scarcity would increase their long-term poaching effort, in line with behavioral shifts toward long-term mating observed in men when mates are scarce (Kruger & Schlemmer, 2009; Pedersen, 1991; Schmitt et al., 2004), or perceived to be scarce (Arnocky et al., 2016). Distinguishing between short- and long-term poaching intent might also address findings which, at first glance, may seem contradictory to those reported herein. Sex ratios, broadly, influence several human processes such as marriage and divorce (Stone, 2019). Some research (e.g., Barber, 2000, 2009) has identified that when men are scarce, such as in a female-biased sex ratio, rates of violent crime increase from an increase in short-term mating competition. To the extent that poaching is also a risky mating tactic, it is possible that men primed with mate abundance might be more inclined toward short-term poaching, even if they are simultaneously less willing to poach overall. Future research could consider this by modifying the experiment reported here to create two response groups: one reporting attitude toward poaching with a short-term mating focus, and the other reporting on the same items with a long-term focus.

Individual difference variables, such as Sociosexual Orientation (SOI), might also influence the reported relationships. Some research suggests that SOI maps on to relationship status (e.g., Diaz-Loving & García Rodríguez, 2008). A less restricted SOI has also been linked to mate poaching (Belu & O'Sullivan, 2019), intrasexual competitiveness (e.g., Buunk & Fisher, 2009), and to induced perceptions of mate scarcity (in men) (Arnocky et al., 2016). Future research might consider whether SOI moderates the mediation model reported herein. Perhaps the mediating role of intrasexual competitiveness to the relationship between mate scarcity and poaching intent would be strongest among those who are unrestricted in their SOI.

Another future direction for subsequent research could be to examine if specific mate acquisition tactics vary depending on the presence of a biased operational sex ratio. Commonly, tactics for obtaining a mate differ between the sexes, with men being more apt to use physical, and direct, tactics, such as aggression (Ainsworth & Maner, 2012) to compete with other men for mating access. Comparatively, women have been identified to use more indirect and non-confrontational tactics with other women (Arnocky & Vaillancourt, 2017; Stockley & Campbell, 2013). For the tactics used to mate poach, specifically, there are also sex differences. For example, Schmitt and Buss (2001) identified that men are more effective when they oppress their rival and appear more willing to invest. In contrast, women are more effective at mate poaching if they appear more attractive and provide easier sexual access (Schmitt & Buss, 2001). More research could examine other tactics to identify if both sexes are also influenced by mate availability and if the relationship is, comparatively, mediated by intrasexual competition. This would provide more insight into mate acquisition tactics.

Finally, other ecological factors, such as resource availability, are also worthy of further experimental investigation. For example, Schmitt et al. (2004) found that cross culturally, men and women with more resources (i.e., a higher socioeconomic status) were more prone to short-term mate poaching. This could be examined using a resource availability prime and examination of subsequent attitudes toward mate poaching.

Conclusion

Mate poaching is a risky mating tactic that can negatively impact those involved. It is therefore important to better understand the factors that motivate mate poaching. This research expanded upon Schmitt et al. (2004)'s examination of mate availability and mate poaching by experimentally demonstrating a link between perceived mate scarcity and increased positive attitudes toward mate poaching in men and women. This study also identified two psychological mechanisms (fear of being single and intrasexual competitiveness) that sequentially mediate this relationship. Here, mate scarcity produced a fear of being single, which predicted greater intrasexual competitiveness, which in turn predicted a more positive attitude toward mate poaching. Whereas most extant work on mate poaching has focused on individual difference predictors, such as personality dimensions, our findings suggest that humans dynamically adjust to ecological conditions to maximize their reproductive success, such that when mates are perceived as being scarce, they are more willing to adopt poaching as a mating tactic.

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