Mate Preferences in Intelligence, Economic Success, and Sociosexual Orientation Scores

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Abstract

Previous research regarding mate preferences in heterosexual women has been vast, but has been exceptionally limited in the fact that it has not investigated the interactions between the value placed on specific traits in a partner and the value an individual places on their own traits. Therefore, there is a need for research amongst the interactions between mate preferences and characteristics that make up one's own mate value to further understand why heterosexual individuals select certain mates. Exploring the preferences for mate value traits based on the value placed on one's own trait is crucial to determine driving factors when selecting a mate. Evolved psychological mate preferences among heterosexual women have determined that preferences for intelligence and economic success are adaptive in long-term mate selection. Their preference for intelligence serves to select a mate whose traits will improve their offspring's genetic quality, but if an individual values their own intelligence, how does this interact with their preference for an intelligent mate? Similarly, if one values their own economic stability, do they prefer a mate who is economically successful? Finally, how do these traits interact with one's sociosexual orientation? Can the amount of value an individual places on a certain trait be used to predict their SOI score? In order to determine if these predictions are applicable to heterosexual women, preferences for intelligence and economic success were investigated and compared with SOI scores. The current study consisted of 79 heterosexual female participants from DeLecce et al. Archives of Sexual Behavior, 43, 319–327, 2014. All 79 women completed the Sociosexual Orientation Inventory (SOI). The current study seeks to investigate if the amount of value an individual places on a trait in a potential mate can give indication to their SOI score and in turn their mating strategy. It is expected that females who place higher value on intelligence and economic success in a potential mate will have lower SOI

scores and therefore are more likely to seek long-term partners. The data will also be analyzed to assess their preferences according to the value they place on their own intelligence and economic stability to determine if the value they place on mate preferences seeks to fill a need, such as good genes or resources to aid in their reproductive success.

Keywords Mating strategy · Sociosexual orientation · Mate preference

Introduction

Research on mate preferences for intelligence and economic status has primarily focused on establishing which preferences evolved as an adaptive mechanism, investigating why women may have these preferences in a potential mate, the trade-offs for certain traits they make, and analyzing correlations between these preferred traits. Understanding evolutionary adaptive mechanisms (a subsystem of the brain (or mind) that is a product of natural selection and is generally seen as having evolved as a result of its success in solving a problem related to survival or reproduction during the evolution of a species)[1] for mating (the physiological process of reproduction as well as the behaviors linked to attracting a mate such as courtship, mate selection, and copulation)[3], is essential to understanding heterosexual (sexual attraction to or activity between members of the opposite sex)[2] human relationships.

Like most mammals, humans have a differential investment when it comes to reproduction. It is important to acknowledge that women risk more potential costs from short-term mating than men due to their higher obligatory parental investment, such as birth, gestation and lactation (Trivers, 1972). This differential investment creates pressure on mating-related decisions and behaviors for men and women, and therefore different obstacles to their reproductive success. The biggest obstacle in men's evolutionary past was finding a fertile

mate, while women's was obtaining a partner who would provide support and resources for them and their offspring (Trivers, 1972). This is consistent with sex differences in long-term partner preferences for evolutionary theory. Women report a greater preference for characteristics that signal a man's ability and willingness to provide (Buss, 1989; Buss and Barnes, 1986). However, women make certain decisions or 'trade-offs' when they engage in short-term mating (Waynforth, 2001). They prioritize specific mate value traits in men, from display of resources and a willingness to invest resources immediately to cues to one's genetic quality, such as physical attractiveness, more than they do in long-term mating (Buss & Schmitt, 1993). Therefore, when women engage in sexual relationships with high mate value men, they accommodate the cost of short-term mating by securing immediate access to resources or securing good genes for potential offspring (Gangestad & Simpson, 2000; Waynforth, 2001).

Additionally, current studies have provided further support for women's preferences for financial resources in a long-term partner, while investigating womens' own mate value traits. Current research shows that women's ability to provide for themselves is related to their preferences in a long-term partner (Stanik & Ellsworth, 2010). In fact, the higher the women's intelligence score (and thus economic opportunity), the less they desired traits associated with the ability to provide financially in their future spouse (Stanik & Ellsworth, 2010). Showing that, under circumstances where women have means to control their own resources, their ability to accumulate resources on their own influences their preferences in the context of mating. This presents a need for further investigation into mate preferences based on the traits women possess themselves. Additionally, based on the interactions between their mate preferences and their own mate value traits, and what relationship they have to their mating strategy.

Current research in mate selection (the choice of an appropriate partner for reproduction)[4] for heterosexual women, and their mating-related decisions and behaviors (i.e., "mating strategy") has revealed the connection between men's mate value (the degree to which an individual would promote the reproductive success of another individual by mating with them)[5] and their mate strategy. In a meta-analysis of high mate value men, Arnocky et. al. (2021) provides evidence that men's self-perceived mate value positively predicts their tendency to engage in short-term mating. Because of their desirability as a mate, the cost of short term mating is reduced, and therefore men of high mate value (i.e., a more desirable partner) have less restricted sociosexual orientation (a dimension of personality that describes people's comfort with and preference for sexual activity in the absence of love or commitment. People who are said to have an unrestricted sociosexual orientation report more sexual activity outside of committed intimate relationships)[6]. According to Gangstad & Simpson, their study acknowledges that high mate value men, specifically those who display good genetic quality and access to resources make excellent long-term mates (2000). The problem this presents however, which explains why women potentially accommodate the cost of short-term mating with high mate value men, is that men of high mate value may be more likely to cheat or desert a relationship (Gangestad & Simpson, 2000). Although this is the case for women, extra-pair copulations (EPCs) can be detrimental to male reproductive success because they could lead to cuckoldry (i.e., investing resources in genetically unrelated offspring; Shackelford et al. 2015), and therefore short-term mating can be a great risk to men as well.

The current study presents a new hypothesis to further investigate mating strategies based on mate preferences for intelligence and economic success. Since previous studies have found that women who have the capability to collect their own resources influences their preferences in

a partner (Stanik & Ellsworth, 2010). The current study seeks to investigate if this is applicable to other mate value traits. If women value their own intelligence, and therefore possess good genes to pass on to offspring, does this influence their preference for an intelligent mate? Additionally, to assess women's desire for an economically successful mate compared to the value they place on their own economic stability. Do women who value their economic stability seek out an economically successful mate to ensure they are provided for? Finally, what is the relationship between preferences for intelligence and economic success compared to sociosexual orientation? If women have mate preferences for intelligence and economic success in a long-term partner, how does the value they place on their own intelligence and economic stability influence their SOI? It is hypothesized that the more value women place on their partners intelligence and economic success, the lower their SOI score will be. In turn, the current research would confirm whether these mate preferences can be predictors of SOI score as they are related to long-term mating strategies.

Aims and Objectives

Introduction

Evolved mate preferences for heterosexual females include a preference for the ability to provide resources and invest in potential offspring (Buss, 1989; Buss and Barnes, 1986) and intelligence of equal parameter to maintain a long term mate (Stanik & Ellsworth, 2010). This research will determine if the emphasis participants place on qualities that affect their own mate value, such as intelligence, economic stability, and sociosexual orientation, affect how much they value similar traits in a partner. This research will investigate if an individual's own economic stability influences their preference for economic success in a partner, and if there is evidence to

reinforce the stereotype of one mate solely providing for the other. Similarly, this research will evaluate how participants value intelligence in a partner based on the value they place on their own intelligence. Finally, understanding mate preferences for intelligence and economic success in relation to sociosexual orientation scores may be able to serve as predictors to a woman's mating strategy.

Aims

1. To assess participants' sociosexual orientation.

2. To investigate participants' preference for intelligence and economic success.

3. To investigate the possibility of a positive correlation between the value participants' place on their intelligence and economic stability and the amount they value the economic success and intelligence in a partner.

4. To assess the value women place on a mate value trait in a partner as a predictor of their sociosexual orientation score.

Objectives

1. By assessing participants' sociosexual orientation, it can be compared with participants' individual preferences to assess for a correlation between the value participants place on a trait in a partner and the value they place on a trait in themselves.

2. By determining if participants value economic success because they value the need for economic stability, the current study then determines the extent to which evolved mate

preferences serve to balance a reproductive evolutionary need which would overall serve to better understand mate preferences in heterosexual men and women.

3. To understand participants' overall preferences for economic success and intelligence in a partner in order to determine whether the more value women place on economic success and intelligence are indicators of a low sociosexual orientation score. This is essential to assess if evolved mate preferences for intelligence and economic stability in a partner are related to one's mating strategy, and are specific preferences for women seeking long-term mates.

Methodology

Participants

In order to investigate the relationship between sociosexual orientation scores and mate preferences for intelligence and economic success, the current study examined archival data from DeLecce et al. 2014. Participants included a total of 55 female undergraduate students from the first phase of the original study. The mean age of the participants was 19.2 years (SD = 3.0). Participants were recruited from psychology courses and were awarded extra credit or an opportunity to win a gift certificate for participating. Of these, 51 participants (92.7%) were Caucasian. From the original study, an additional 109 women were included in the sample used for the current study. These are the same participants (and therefore the same data) as in DeLecce et al. 2014. The current study, however, presents new analyses designed to test a new hypothesis from this set of data.

Measures and Procedure

All participants completed the 7-question Sociosexual Orientation Inventory (SOI) (Simpson and Gangestad, 1991). The SOI assesses mating orientation, or mating strategy, which can range from restricted (seeking a long-term relationship) to unrestricted (seeking a short short-term relationship). Lower SOI scores indicate a more restricted, long-term mating orientation, and higher SOI scores indicate a less restricted, short-term mating orientation. The first four items measure sexual behavior (e.g., With how many different partners have you had sexual intercourse on one and only one occasion?, emphasis in original). The next three items measure attitudes towards casual sex on a 10-point Likert-type scale (e.g., Sex without love is OK.). Total SOI scores are based on responses to all questions. The unit-weighting system recommended by Simpson and Gangestad (1991) was implemented for responses to the seven questions. Additionally, female participants self-reported whether they had engaged in infidelity in past or current relationships as a verification of SOI scores (for further detail of methods, see DeLecce et al. 2014). The current study uses overall assessment of participants' SOI scores as well as specific self-reported rankings from the Sociosexual Orientation Inventory (refer to questions below for further details) to test for associations between the variables.

Sociosexual Orientation Inventory
(Part I)

Rate the following traits in a potential partner from most preferred (first - a) to least preferred (last - e): *attractiveness*,*economic success*, *faithfulness*, *intelligence*, and *popularity*.

a.

b.

c.

d.

e.

Rate the following traits as they represent who you are as a partner from most representative (first –a) to least representative (last - e): *attractiveness*, *economic stability*, *faithfulness*, *intelligence*, and *popularity*.

a.

b.

c.

d.

e.

Analysis

The original study averaged womens' self-reported SOI scores and performed independent-groups t-test for the variables Faithful and Unfaithful participant groups (DeLecce et.al. 2014). The current study performed Spearman's rank correlation coefficient to analyze the degree of association between the variables. The correlations were assessed for the value participants place on their own intelligence and economic stability, the value they place on intelligence and economic success in a mate, and each of the variables were tested in relation to their SOI. With lower numbered rankings indicating more importance to participants.

Results

Sociosexual Orientation Inventory

Of the archived data, the mean SOI score for the 55 photographed women was 34.32 (SD = 24.06). Based on participants' responses to a non-SOI question, the 55 photographed women were also divided into two groups: participants who reported being unfaithful in previous or current relationships and participants who reported to have always been faithful in their relationships. An independent-groups t-test indicated that the mean SOI score for the Unfaithful group (M = 51.00, SD = 26.69, n = 15) was significantly higher than the mean SOI score for the

Faithful group (M = 28.07, SD = 19.97, n = 40), t(53) = 3.45, p = .001, therefore verifying the SOI. The same analysis was done with the additional 109 non-photographed women of the original study included in the sample. Once again, the Unfaithful group (M = 43.69, SD = 27.43, n = 39) scored significantly higher on the SOI than the Faithful group (M = 28.20, SD = 18.35, n = 125, t(162) = 4.05, p\.001). See DeLecce et al. 2014 for further detail of SOI scores of different participant groups.

Associations of Women's Ranked Values for their Intelligence and Economic Stability with their Preferences for Intelligence and Economic Success in a Potential Mate

The current study performed Spearman's *p* correlation analysis to determine the relationship between each of the variables in the study. Lower numbered rankings indicated greater importance of a certain trait to women and the more they valued a certain trait in a partner. Women who placed more value on their economic stability showed a significant positive correlation for preferring a potential mate who was economically successful (r(77)= .305, *p*=.006). A similar relationship was found for women who placed high value on a potential mate being intelligent, for those who placed a high value on their own intelligence (r(77)=.287, *p*=.010). Additionally, the relationship between the value participants placed on intelligence and economic success in a partner was also investigated. Associations of womens mate preferences for intelligence and economic success yielded non-significant results, as well as the value women placed on their own economic stability and intelligence. Similarly, the value women placed on their own economic stability and preference for an intelligent partner was non-significant. However, the more women valued their own intelligence, results showed a significant relationship with the preference for an economically successful partner (r(77)=.274, *p*=.014).

Associations of Self-Reported SOI Scores, Rankings of Participants Intelligence and Economic Stability, and Women's Preferences for Intelligence and Economic Success in a Partner

The SOI of all female participants (n=163) was averaged and Spearman's *p* correlations were performed because the results were not expected to be normally distributed. Furthermore, Spearman's rank correlation was used to determine if SOI was related to any of the variables in the study. Note that the correlations of the current study showed a slight negative skew.

First, in opposition to what was hypothesized, the correlation for SOI and the value placed on intelligence in a partner showed a non-significant result. Additionally, SOI and participants ranked value of their own economic stability yielded non-significant results as well. However, the relationship between SOI and valuing economic success in a partner showed a significant negative correlation (r(77)=-.240, *p*=.033). Opposite of what was hypothesized, the more value women placed on economic success in a partner, the higher their SOI score was. Therefore, the more importance women placed on a potential partner being economically successful, the more likely they were to pursue a short-term mating strategy (i.e., casual sex). Finally, there was a significant negative correlation between women's SOI scores and the value that they placed on their own intelligence (r(77)=-.270, *p*=.016). The more value women placed on their own intelligence, the higher their SOI score was. Indicating that the more women valued their own intelligence, the more likely they are to pursue a short-term mating strategy (engage in casual sex). A similar relationship to SOI as the correlation with the ranked value economic success of a partner.

Table 1 Intercorrelations among study variables

Spearman's rho*		Economic Succ.	Intelligence	Economic Stab.1	Intelligence 1	1=low, 2=medium, 3=high
Economic Succ.	Correlation Coefficient	1.000	-.053	.305**	.274*	-.240*
	Sig. (2-tailed)		.645	.006	.014	.033
	N	79	79	79	79	79
Intelligence	Correlation Coefficient	-.053	1.000	.068	.287*	-.155
	Sig. (2-tailed)	.645		.549	.010	.173
	N	79	79	79	79	79
Economic Stab.1	Correlation Coefficient	.305**	.068	1.000	.009	.108
	Sig. (2-tailed)	.006	.549		.937	.342
	N	79	79	79	79	79
Intelligence 1	Correlation Coefficient	.274*	.287*	.009	1.000	-.270*
	Sig. (2-tailed)	.014	.010	.937		.016
	N	79	79	79	79	79
1=low, 2=medium, 3=high	Correlation Coefficient	-.240*	-.155	.108	-.270*	1.000
	Sig. (2-tailed)	.033	.173	.342	.016	
	N	79	79	79	79	163

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Discussion

Mate choice allows an individual to have autonomy over their relationships. By understanding heterosexual women's preferences based on the traits they value most in themselves and their partners, it would provide guidance and understanding during mate selection. Consistent with the hypothesis, women who placed more value on their economic stability showed a significant positive correlation for preferring a potential mate who was economically successful. As evolutionary adaptive mechanisms seek to fill an evolutionary need, a mate preference for an economically successful partner ensures that women will seek a potential partner who will have the resources or the capacity to gather resources to care for her and her potential offspring. However, this gives no insight into why certain women valued economic success in a partner over other traits. Perhaps participants who valued the economic success of a partner the most had low economic stability themselves, and this preference in a mate serves to ensure that their partner can provide resources in circumstances where they cannot. Further investigation is necessary to determine the extent to which mate preferences in a partner serve to balance a need for something as the current study did not analyze this result with the socioeconomic status of participants.

A similar relationship was found for women who placed high value on a potential mate being intelligent, for those who placed a high value on their own intelligence. In opposition of what was hypothesized, women who valued their own intelligence, valued an intelligent partner. Results of the current study for preferring an intelligent partner may be about acquiring good genes for potential offspring, however, it may also be influenced by women's desire for finding a similar mate (Stanik, 2009). Previous research on mate preferences for women state that women

prefer a partner similar to themselves, including their intelligence. It is unlikely for partners to differ drastically in traits, such as intelligence or attractiveness, because the individual is likely aware of the trait that increases their mate value as a partner.

It was interesting how womens' mate preferences for intelligence and economic success yielded non-significant results, as well as the value women place on their own economic stability and intelligence. Since the study examined their preferences in rank order, further research is needed to examine the relationship between other mate value traits from the study. Additionally, the study presents self-reported preferences, and did not present women with a controlled situation to test their preferences. Results may differ from their self-reported preferences as they may make trade-offs for traits like attractiveness, faithfulness, and popularity.

Similarly, the value women placed on their own economic stability and preference for an intelligent partner was non-significant. This result was fascinating, as intelligence is necessary for high salary jobs and acquiring skills to be successful in a highly competitive job market. It was interesting to see that women who placed more emphasis on their own economic stability had a non-significant relationship with preferring intelligent men. Perhaps there are other traits they prefer and believe could lead to economic success rather than intelligence. Further investigation is needed to clarify this result, and investigate what mate preferences are correlated with women who value their economic stability.

However, the result for the more women valued their own intelligence was even more astonishing, as the results showed a significant relationship of the preference for an economically successful partner. Further clarification is needed as to why this relationship yielded significant results, however, future research should seek to investigate womens IQ and their preferences for

high status men. Perhaps investigating the opposite relationship as well, to understand if high status men prefer intelligent women.

As for SOI, the first correlation yielded a non-significant relationship with the value placed on intelligence in a partner. Future research should seek to replicate these interactions to determine the validity of this result, as previous research states women's long-term mate preferences include intelligence. Additionally, SOI and participants ranked value of their own economic stability yielded non-significant results as well. Perhaps in today's society women rely less on a partner for their own economic stability, and therefore it has no relationship to their sociosexual orientation. Future research should replicate this and clarify why this relationship was non-significant.

The most surprising result was the relationship between SOI and valuing economic success in a partner. Opposite of what was hypothesized, the more value women placed on economic success in a partner, the higher their SOI score was. Therefore, the more importance women placed on a potential partner being economically successful, the more likely they were to pursue a short-term mating strategy (i.e., casual sex). Since economic status and success are a long-term mate preference for women, our results showing the opposite interaction was much to our surprise (Stanik, 2009). Women may be seeking to gain immediate access to a short-term partner's resources for themselves and any potential offspring that may result from the casual relationship between them. Future research should also seek to answer why women may have the freedom to seek economically successful while pursuing a short-term mating strategy.

Finally, there was a significant negative correlation between women's SOI scores and the value they placed on their own intelligence. The more value women placed on their own

intelligence, the higher their SOI score was. Indicating that women who value their own intelligence, are more likely to to engage in a short-term mating strategy. Perhaps there is a relationship to their IQ, and therefore the more value women place on their intelligence makes them more desirable as a mate. Future research should investigate this relationship with womens' IQ.

The current study presents new insights into womens evolved mate preferences, however, it is limited by the archived data set. The current study uses data from DeLecce et al. (2014), therefore, and is nearly a decade old. Future research should seek to replicate the SOI to test the reliability of the results. Additionally, of the 163 female participants from the original study, not each participant completed the entire SOI questionnaire. In turn, limiting the sample size of the current study to test 79 of the 163 participants' results. Finally, there may have been participant bias on the rank-order questions of the SOI. It is possible that participants indicated certain traits were more or less important to themselves and in a partner, creating a bias in their responses. Future research should replicate the study to verify the results of the SOI and correlations with rank-ordered traits.

Biographical Note

As a current undergraduate student attending Oakland University, I am majoring in Psychology and Spanish. As a student of the Honors College, I have chosen to do my thesis on mate preferences in psychology. This has been one of the most fascinating areas within the field of psychology during my time here at the university. To understand the underlying evolved psychological mechanisms that drive individual mate preferences was something that piqued my interest within classes, for my thesis, as well as my future career. One day, I hope to work as a sex therapist to aid individuals and couples with intimacy and relationships. Understanding evolved mate preferences is vital to this career, as subconsciously we use these mechanisms to aid in finding potential partners in long and short-term relationships. Although there is a vast amount of research on mate preferences and mate selection within the psychology community already, there are still many more interactions to investigate and replicate to further understand human behavior. A majority of this research has focused on cisgendered heterosexual relationships, and as a queer woman myself, I believe it is extremely important that the psychology field expand its research in mate preferences and mate selection for LGBTQ+ individuals as well. Many people who are interested in psychology are fascinated by learning why they are the way they are, why they behave the way they do, and to understand their relationships to other people. I hope to continue researching and learning about mate preferences, and hope to contribute more work to this field, especially on LGBTQ+ individuals. In turn, preparing myself for my future career so that I may help anyone who seeks my future services, and learn something about myself along the way.

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