

# **HOW OUR RELATIONSHIPS WITH OURSELVES IMPACT OUR RELATIONSHIPS WITH OTHERS**

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## Abstract

Out of the many theories as to why and how humans choose their long-term mates, two different models are explored in the present study. Evolutionary models examine the mating strategies used by the two sexes, focusing on the resources each sex can provide to their mate and any subsequent offspring. Alternatively, cognitive models explore the reasons behind a human's thought processes and potential emotions that contribute to mate choice. Evolutionary models cannot explain all human mating, especially those who cannot reproduce heterosexually. Specifically, the LGBTQ+ community have been historically overlooked regarding these theories. The present study investigated whether human mate preference is most accurately described using a cognitive versus an evolutionary model. It was hypothesized that the mating preference for those who identify as being part of the LGBTQ+ community will be best explained by a cognitive model, while the mating preference of heterosexual participants will be best explained by an evolutionary model. Participants (N=97) were asked to rate certain traits, first for themselves and then for a potential future partner. Results showed that a cognitive model could explain mate preference for both LGBTQ+ and heterosexual individuals [linear regression:  $df = 1$ ,  $F = 983.528$ ,  $p < .0001$ ,  $R^2 = .912$ ] Someone who rated a characteristic in themselves highly would rate that characteristic important in a partner highly as well. Those who recreate this study should try a random sampling method, and further, explore how people's expression of their sexuality impacts their long-term mate preference.

*Keywords:* LGBTQ+, self-perception, mate preference, cognitive model, evolution model

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## **How Our Relationships with Ourselves Impact Our Relationships with Others**

Human beings are some of the only species that will regularly mate for life with a single partner. Across almost all cultures, humans have some version of marriage, or life pair bonding, which involves making a long-term commitment to the health and well-being of one's partner. There are many theories as to the reasons why humans choose to mate for life. Of these reasons, people may choose life partners due, at least in part, to the resources that can be acquired through such a partnership, such as housing, financial security, and assistance in raising offspring. Males and females typically provide different resources in the context of a long-term relationship. From an evolutionary perspective, females typically provide the gestational period of carrying the offspring, the risk associated with the birthing process and are often responsible for raising said offspring as well. The male typically offers food, shelter, protection to both the mother and any offspring, as well as an intangible good, such as social status.

### **Parental Investment Theory**

The choice of partner based on resource and offspring attainment can be explained using Parental Investment Theory (PIT). PIT is characterized by the idea that the sex who must invest more time and resources when producing offspring will be choosier when selecting a mate (Trivers, 1972). In almost all cases, the choosier sex is the female, who chooses a male mate who can provide resources aiding in the reproductive process (Trivers, 1972).

It is the responsibility of the parents to provide resources to their offspring. In this case, resources can be food, water, shelter, financial stability, protection, and other

survival needs. These resources will then increase the likelihood of survival of both individuals and any offspring, as well as increase the potential to produce additional offspring (Trivers, 1972).

### **Providing Resources**

Providing resources has the potential to increase the likelihood of the offspring's survival, thus increasing the probability that said offspring will reach sexual maturity and reproduce. Each parent will typically invest different resources in various amounts to ensure the survival and future reproduction of the offspring. Only males provide the original biological investment of the male impregnating the female, and this investment is not reciprocal.

Females provide an immense amount of energy and require many resources during gestation. First, the female must have the energy to menstruate, then carry the child through the gestational period, and then go through the birthing process. In total, these processes take a minimum of 10 months. Additionally, the human birthing process is a traumatic and potentially life-threatening event for both the mother and child, especially prior to the advent of modern internal medicine. During pregnancy, a woman is also more vulnerable to attacks from predators and rivals as well. After the child is born, the mother will traditionally breastfeed the child, which also costs additional energy and resources. The female will also provide the feeding and raising of the offspring (Trivers, 1972). Growing to sexual maturity is typically a slow process, thus the offspring will require protection from the male parent.

Males have relatively low risk involved in the process of reproduction compared to females, as their biological contribution ends after insemination. According to Buss

(1989), males traditionally provide food, shelter, and protection, both to the female mate and the offspring, both before and after birth. Additionally, Buss (1989) states that males can also provide additional learning, status elevation, power, or other non-tangible resources. Females have much higher risk associated with the process of gestation and childbirth, compared to males, who have very little risk associated. Thus, it is important for both males and females to choose mates wisely, and this is one explanation as to why males and females have different methods of mate selection.

### **Mating Strategies**

Due to the vast differences in energy need to produce and raise a child between males and females, there are different strategies used by the sexes to obtain a mate. Females tend to be choosier to ensure that they receive substantial investment from the male (Trivers, 1972). Given that females have a higher inherent investment in reproduction (i.e., menstruation, gestation, birthing, and breastfeeding), a substantial, nonreciprocal level of risk is assumed. Thus, being choosier in a mate increases the likelihood that the female will have access to the resources needed to gestate, birth, and raise a child to sexual maturity (Trivers 1972). There are two major strategies that a female can adopt when choosing a mate. One strategy is pair bonding with a single mate. Pair bonding occurs when a pair of mates choose to commit to each other in a long-term, typically monogamous fashion (Gray et al., 2004). This increases the likelihood that the male will stay with the female and continue to provide resources that the female may not be able to access otherwise (Gray et al., 2004).

Females also have the potential to get pregnant from one male, while pair-bonding with another male. This would ensure that she and her offspring are gaining the

more desirable biological investment from the first male and gaining the social and emotional benefits from the other male. These benefits are typically resources, such as housing and income. This would mean that the child may have the physical attributes the female finds more conducive toward the survival of the offspring. Males cannot use this same strategy, since maternal parentage is essentially always certain, while male parentage is not (Trivers, 1972).

Males rely on different strategies when choosing a mate. Males have a lower inherent investment in reproduction, as the male contribution simply involves the energy needed to produce sperm and engage in copulation. This provides males with mating strategies that are typically not available to females. Males have the option of mating with a single or a small number of females and invest more time and resources into each offspring, resulting in a higher quality of the progeny and increasing the likelihood of survival of the offspring to sexual maturity (Trivers, 1972). While they still may choose to, males are not required to exert more resources than their initial biological investment to the female in order to produce offspring. They are not biologically required to raise the offspring and provide resources, although many still do so. This provides males the benefit of many offspring, with only some surviving to sexual maturity. An additional strategy utilized by males is to impregnate many females, without investing resources needed for the offspring. This would mean that many of those offspring will not survive to sexual maturity, but some will (Trivers, 1972).

### **Parental Investment Theory in Practice**

Kenrick, Sadalla, Groth, and Trost (1990) explored Parental-Investment Theory (PIT) and found that females typically have stricter criteria when choosing a mate, as the

female investment in each offspring is significantly larger as compared to the male investment. Kenrick et al. (1990) had participants rate potential mates on 24 characteristics, including, but not limited to intelligence, social status, income levels, and physical attraction. Females were more selective as compared to males, especially when it came to questions about characteristics that were related to status, such as whether the male was a college graduate (Kenrick et al., 1990). Having a mate with a higher status means likelier access to high quality of and/or an abundance of resources. Males were more selective around questions on youthfulness, which is typically associated with fertility.

### **Cognitive Theories of Mating**

While PIT can accurately account for a variety of aspects of human mate choice, there are human mating behaviors and practices that are not as easily explained. Evolutionary theories, like PIT, assume that reproduction is the driving factor behind long-term, committed relationships. While this does happen and may historically be the case, humans can form non-heterosexual relationships, in which reproduction is impossible. With over 11 million adults in the United State identifying as being a member of the Lesbian, Gay, Transgender, Queer, and additional orientations (LGBTQ+) (i.e., those who identify with a sexual orientation other than heterosexual) (Conron & Goldberg, 2019), evolutionary theories of long-term partner selection cannot account for long-term, potentially life-long non-heterosexual relationships in which sexual reproduction is impossible (Conron & Goldberg, 2019).

Humans use many criteria when selecting a mate. While PIT proposes factors related to reproductive potential are the primary criteria used in mate selection, cognitive

models focus on a person's thought processes behind their mate preference. A cognitive theory known as the 'likes attract model' (LAM) proposes that individuals rate self-perception on one trait to selectivity of mate preferences on the same trait (Buston & Emlen, 2003). This model states that, contrary to the popular anecdotal saying "opposites attract" in reference to mating choice, having similarities makes people more likely to enter a long-term partnership. The likes attract model states that people prefer a partner who is like them regarding physical attractiveness, wealth and status, family commitment, and sexual fidelity. In Buston and Emlen (2003), self-perception and mate preferences were the focus, and it was hypothesized that one would choose a mate based on their own self-perception as a mate. The participants answered 10 questions about attributes in a long-term partner, and then rated themselves as a potential partner using the same scale. Buston and Emlen (2003) demonstrated that the characteristics an individual deemed as important in a mate were closely related to those individuals' own self-perception. So, individuals that rated themselves as a physically attractive mate were more likely to value physical attractiveness in a potential mate, regardless of sex. However, it was shown that women typically rate characteristics such as drive, social status, financial stability, and an equal desire to have a family as desirable in a male mate. Likewise, males did typically rate characteristics such as physical attractiveness, health, and youthful appearance as more desirable in a female mate. The results of Buston and Emlen (2003) showed that people show a preference for those who are like them. While this study does not ask questions about fertility or reproductive ability, it does show that in heterosexual individuals, it is possible to adequately explain mating using a non-evolutionary theory.

Another cognitive model of mate preference is the “potentials attract model” (PAM). This model suggests that someone who rates themselves highly in sex-specific traits, will be able to make a greater demand in looking for a mate of the opposite sex who shows strong reproductive potential (Buston & Emlen, 2003). This would mean that a female would be looking for traits in a male that are the opposite of what she possesses (Buston & Emlen, 2003). This is a hybrid of both evolutionary and cognitive models.

More research is needed into the potential appropriateness of a cognitive model of human mate selection. Thus, the purpose of the current study is to explore the potential differences between self-perception of one’s desirable characteristics and desirable characteristics in a potential mate of those in the LGBTQ+ community. There is a significant lack of research regarding the LGBTQ+ community in many areas, and, most pertinent to the present study, patterns of mate selection. A study exploring LGBTQ+ individual’s self-perceptions and the traits these demographics seek in a long-term partner is necessary because it will grow and expand upon the knowledge of human mate preference that already exists. The addition of the LGBTQ+ community in this line of research helps move the study of human mating towards inclusion. The hypothesis of the present study is that the mating preference for those who identify as being part of the LGBTQ+ community will be better explained by a cognitive model, while the mating preference of heterosexual participants will be better explained by an evolutionary model.

## **Methods**

### **Participants**

There were 101 individuals recruited for the present study via a convenience sampling method via social media and word-of-mouth. All participants were between the

ages of 18 and 29 years. Of those who responded to the demographic question about sexuality, 12 identified as Lesbian, three identified as Gay, 40 identified as Bisexual or Pansexual, 38 identified as heterosexual, and 8 selected Other/Prefer not to say (see Table 2). Additionally, all participants identified as having previously been in, currently in, or are seriously interested in a long-term, committed relationship. Participants that were not interested in a long-term committed relationship were excluded from participation. Participants were assigned to either a heterosexual or LGBTQ+ group based on their self-identified sexuality from their survey response. The data from respondents who selected other/prefer not to say were excluded from the analysis.

### **Measurements**

In Part I, participants were asked to rank themselves on the following attributes on a Likert-type scale of 1-9, with 1 being not important at all and 9 being very important. The attributes were financial resources, physical attractiveness, faithfulness, parenting qualities, social status, health, desire for children, devotion, ambition, and strength of family bonds. In Part II, of this measurement, participants had to rate the same previous attributes. However, this rating was regarding attributes the individual would prefer to have in a long-term mate. This was based on Buston and Emlen (2003), and no validity or reliability metrics for the measurement scales are available.

Participants also answered demographic questions before the end of the survey. They were asked to select their sexuality as either Lesbian, Gay, Bisexual/Pansexual, and Heterosexual. There was also an option of Other/Prefer not to say, with an option to type in their sexuality if it was not listed. Participants were also asked to select their gender identity of either Female, Male, Non-Binary, or Other/Prefer not to say, with an option to

type in their gender identity if it was not listed. Questions on the survey also included those of age, race, ethnicity, and school year, if applicable.

### **Procedure**

Participants responded to a survey provided online via SurveyMonkey. They completed a disclosure statement and then answered questions regarding their age and whether they have been in, are in, or are interested in being in a long-term relationship. Then, participants answered questions related to their own self-perception as a long-term mate. Once the first section was finished, participants answered questions about desirable traits in a potential long-term romantic partner. Lastly, participants provided demographic information. All responses to all questions were voluntary and anonymous. Once participants completed all survey questions, they were thanked on a SurveyMonkey completion page.

### **Results**

Included in this study are 102 questionnaire respondents, ranging in age from 18-29 years (heterosexual:  $n = 38$ , mean age = 21.6,  $SD = 2.1$ ; LGBTQ+:  $n = 64$ , mean age = 20.9,  $SD = 1.8$ ). Responses from people who selected “Other” regarding sexuality were excluded, as the present study focused on individuals with a clearly defined sexual orientation.

Overall, individuals who rated themselves higher on any given attribute rated those same qualities in a potential future long-term partner as equally as important, as seen in Figure 3 [linear regression:  $df = 1$ ,  $F = 983.528$ ,  $p < .0001$ ,  $R^2 = .912$ ]. For both heterosexual and LGBTQ+ individuals, the overall mate-preference score was significantly positively related to the overall self-perception score. LGBTQ+s’ linear

regression: [ $df = 60, F = 445.39, p < .0001, R^2 = .883$ ]. As can be seen in Figure 1, there was a positive correlation between overall mate preference and participant's overall self-perception. In the heterosexuals' linear regression: [ $df = 35, F = 573.46, p < .0001, R^2 = .944$ ]. This can be seen in Figure 2. For both sexual orientations, a simple linear regression provided a better model fit as compared to a no-linear regression model.

## **Discussion**

The purpose of the current study was to explore the potential differences between self-perception and desirable characteristics in a potential mate of those in the LGBTQ+ community versus those who identified as heterosexual. The hypothesis of the present study is that the mating preference for those who identify as being part of the LGBTQ+ community will be better explained by a cognitive model, while the mating preference of heterosexual participants will be better explained by an evolutionary model.

While the results only partially support the hypothesis, nevertheless, they serve as promising evidence. It was found that an individual's preference in a mate is primarily based on how an individual perceives themselves, regardless of sexual orientation. This supports the notion of a cognitive model of mate human preference. This directly contradicts some aspects of Parental Investment Theory (PIT), as PIT states that a mate is selected based on the resources/value that the individual provides within the relationship, with males and females providing different resources in reproducing and raising offspring to sexual maturity. Following this, an individual should value characteristics in a mate that they themselves may not possess. Males should place greater value on physical attractiveness and sexual fidelity, meaning increased certainty of parentage, while

females should place greater value on strength and ability to provide (Trivers, 1972). The results of the survey showed that participants valued characteristics in a mate that they already possess, which indicates that PIT does not entirely explain human mating preferences. This serves as evidence of a cognitive mechanism of mate preference, in which an individual evaluates their own characteristics and attributes and seeks out a similar partner. These results are in line with those of Buston and Emlen (2003), who found that a cognitive model of mate preference was a better fit for explaining aspects of human mating, rather than an evolutionary one, within a purely heterosexual sample. These results demonstrated that people will generally choose mates who they rate highly in the same categories that they rate themselves, which aligns with the results from the present study as well.

This novel study is one of the first to provide evidence that suggests similarities between LGBTQ+ and heterosexual individuals regarding qualities they deem as important in a mate from a non-evolutionary perspective. Overall, people that rate themselves highly as a long-term mate will put more importance on mates who share similar characteristics with them, regardless of sexual orientation.

### **Limitations and Future Direction**

While this study was successful in finding evidence to support cognitive theories of mate preference, there were several limitations. This survey was collected via an online platform and posted on social media, thus relying on self-selection. This results in an inability to adequately generalize results to the larger population of interest. The sample sizes were also small, with sample size varying between the heterosexual and LGBTQ+ groups.

Given that human sexuality and mate preference is multifaceted, there are likely other variables that can impact the criteria one uses in mate selection. The ability to openly express one's sexuality, specifically regarding those who identified as LGBTQ+, is an important aspect to consider. Although this survey was posted online, it was posted in the Northeast of the United States, which is a geographical location typically associated with being more accepting to those in the LGBTQ+ community. Additionally, the participant pool was largely college students, which are typically more progressive and accepting. Realtor.com stated that 2 of the top 10 cities that were deemed "most LGBTQ+ friendly" are in New England, with the rest being more spread out around the country, with one being in Massachusetts and another in Vermont. To be considered "LGBTQ+ friendly" the towns had to have its own Pride celebration and its own LGBTQ+ center. Due to this, people who identify as such may feel more comfortable disclosing their sexuality and are able to openly pursue those whom they are attracted to with less fear for their safety than if they were in a different geographical location.

A 2018 short film titled "illuminate" came from a study from interviews of LGBTQ+ people who are or had been unable to freely self-express (Gupta, 2018). The interviewers found that being in the closet causes sociopolitical trauma, which is the trauma of a marginalized person living in a society that is not built for them (Gupta, 2018). This can apply to anyone who is negatively affected by sexism, racism, classism, homophobia, transphobia, ableism, and any other form of bigotry. The mental health of those individuals that are forced to be unable to self-express are negatively impacted by this sociopolitical trauma (Gupta, 2018).

Another limitation of the present study is the inclusion of those who are interested in a long-term relationship but have yet to do so. Someone who has not been in a long-term relationship may not have an accurate assessment of their self-perception as a long-term mate because they have not been one. They may not know what they need in a relationship. On the other hand, what someone desires in a mate may not be congruent with the individual whom they will engage in a long-term relationship with.

In future studies completed on this subject, using a random sampling method would aid in the generalizability of the study. Measuring other variables such as whether one is open with their sexuality would help provide background into a person's answers in a future survey. Finding a geographically diverse range of participants can also provide more insight and variety in responses. Additional longitudinal studies could also be performed comparing a person's partner preferences versus who they end up pair bonding with.

## **Conclusion**

Humans choose a long-term partner based on more than evolutionary mechanisms. In evolutionary theories, like PIT, males and females provide different resources and therefore are seeking resources different than those they provide. This can only explain some aspects of human mate preference. They fundamentally cannot be applied to individuals that are unable to sexually reproduce. In contrast, a cognitive model of mate preference may adequately explain the criteria by which an individual, regardless of sexual orientation, chooses a long-term partner. While PIT can explain certain aspects of human mating from an evolutionary standpoint, it cannot explain the

full spectrum of human mating and relationship formation. Cognitive theories can fill the gaps that are left by evolutionary theories.

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### Tables & Figures

	<b>What is your age?</b>	<b>What sexuality do you identify closest with?</b>	<b>What is your gender identity?</b>	<b>Are you of Hispanic/Latino/Spanish Origin?</b>	<b>How would you best describe yourself?</b>	<b>If applicable, what is your academic year?</b>
<b>N</b>	102	103	103	103	102	103
<b>Mean</b>	21.14	2.86	1.35	1.87	4.37	3.85
<b>SD</b>	1.925	1.299	.848	.334	1.469	1.417

Table 1. Demographics of Age, Gender Identity, Ethnicity, and Academic Year for Total Sample

#### What sexuality do you identify closest with?

	<b>Frequency</b>	<b>Valid Percent</b>
<b>Lesbian</b>	12	11.7
<b>Gay</b>	3	2.9
<b>Bisexual/Pansexual</b>	40	38.8
<b>Heterosexual</b>	38	36.9
<b>Other/Prefer not to say</b>	8	7.8
<b>Total</b>	101	100

Table 2. Demographics of Sexuality for Total Sample

**What is your gender identity?**

	<b>Frequency</b>	<b>Valid Percent</b>
<b>Female</b>	70	68
<b>Male</b>	10	9.7
<b>Non-Binary</b>	15	14.6
<b>Other/Prefer not to say</b>	8	7.8
<b>Total</b>	103	100

Table 3. Demographics of Gender Identity for Total Sample

**How would you best describe yourself?**

	<b>Frequency</b>	<b>Percent</b>
<b>American Indian or Alaskan Native</b>	2	2
<b>Asian</b>	3	2.9
<b>Black or African American</b>	6	5.9
<b>White</b>	84	82.4
<b>Other</b>	7	6.9
<b>Total</b>	102	100

Table 4. Demographics of Race/Ethnicity for Total Sample

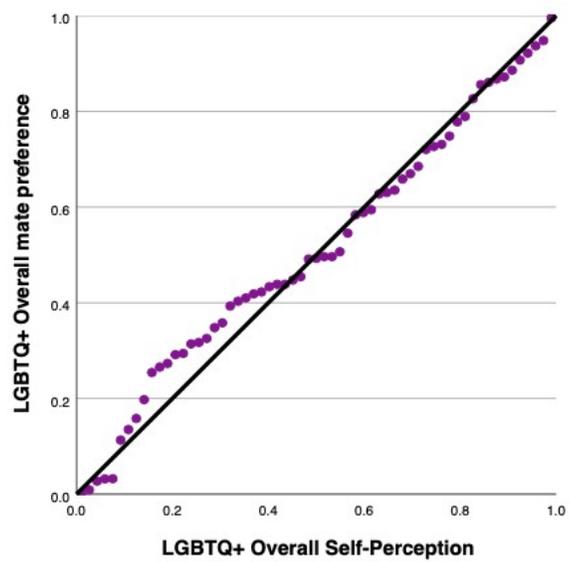


Figure 1. Overall Mean of LGBTQ+ Self-Perception and Mate Preference

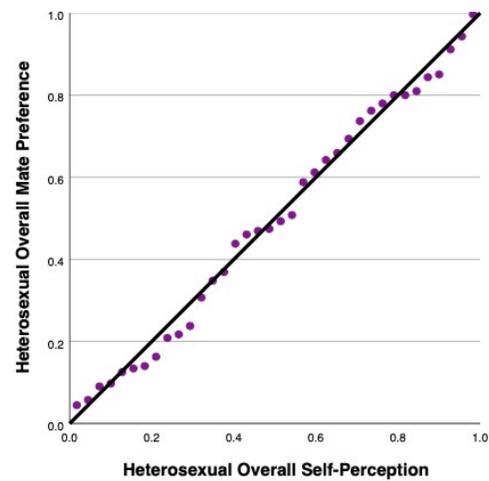


Figure 2. Overall Mean of Heterosexual group Self-Perception and Mate Preference

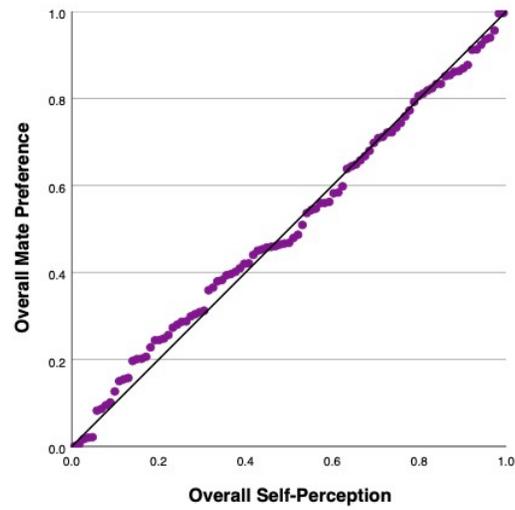


Figure 3. Overall Means of both heterosexual and LGBTQ+ Self-Perception and Mate Preference