The Effect Of Model Females' Age On Mate Choice Copying In Adult Females

Abstract

This study explored the effect of model females' age on mate choice copying in adult females. The study's sample size was 120 and all the participants were female. This study includes participants' that have an age range between 30 and 40 and who are single. Here, the study presents observer adult females with information on the mate preferences of a younger and older model female and examined which model had a stronger effect on the subsequent mate choice of the observer. To measure mate choice copying the study used several stimuli which contain the same male picture and picture of different aged females with the same male that is shown before. We hypothesized that as the model females' age increases, the attraction rate of the male increases too. Therefore there is a positive correlation between the cueing in on the relative size (age) of the model and mate copying trials.

Key words: copying,mate-choice,imitation,sexual-selection

Introduction

Mate Choice

The increased interest in mate choice in animals has been generated partly by the continued dynamism in evolutionary biology. However, many social scientists and psychologists are vigorously opposed to understanding human behavior in general and the sexuality of humans from that particular view of evolutionary perspective (Wood & Eagly, 2002). Research shows that non-human animals make use of social information when engaging in a variety of activities, including mate selection (Dugatkin, 1992; Vakirtzis, 2011). Mate choice is an essential topic for research because it determines the quality of offspring by sexual selection, the choice of the female. *Mate choice* can be defined as the process that occurs whenever the effects of traits expressed in one sex lead to non-random matings with members of the opposite sex (Halliday 1983; Kokko et al. 2003). Literature suggests that mate choice is based on genetic influences. Nevertheless, recent research shows that environmental factors also influence mate choice. Our goal is to address the environmental factors' impact on mate choice. In particular, we focus on a woman's preferences and choice of mate and sexual partner and how others' choices affect that mate choice.

Mate Choice In Nonhuman Species

Mate choice is the primary step in evolution. Therefore, to provide an introduction to both theoretical and empirical literature on mate choice, first, we need to understand mate choice in other species (Andersson, 1994; Darwin, 1871). Mate choice in animals is a unique response to a specific stimulus that leads to an associated behavior. When a female encounters a possible mate, it considers the diverse characteristics of that mate, which signifies the quality and whether the male is advantageous to them. These characteristics

are generally related to the phenotype of the mate. This sexual selection results in offspring that will be handed to the next generation. In their research, Darwin and Wallace (1858) discovered that natural selection drives evolutionary change within species and results in the origin of new species. Darwin (1871) also found the sexual selection, which is a mechanism that operates within species that is the principal factor in the evolution of sex difference. However, he cannot determine why females are choosier of the sex and males tend to compete over mates (Cronin,1991). This can be one of the reasons for our research or other researchers in this area selecting women to examine mate-choice copying.

Mate Choice In Humans

Similar to other mammals, humans woman invest heavily in parenting and are careful when choosing a sexual partner (Buss, 1994). Therefore, researches that examine human mate choosing also suggest the existence of mate choice behavior among women, but the presence among men is still unclear. (Anderson&Surbey, 2020). The majority of MC research concentrates on females because the importance of mate selection is more remarkable for females than it is for males (Rodeheffer et al., 2016). In terms of evolution, it has been proven that women try to create better-quality offspring. Women with a preference for a “reliable man willing to commit to her'' were selected because “the resources, aid, and protection” which those men provided caused them to have “children who survived and thrived. (Buss, 1988) Men create as much offspring as possible and tend to be rich in quality rather than quality. It is a fact that is seen more often. Considering this situation, mate choice requires much more time and energy for females. Females are more selective, sifting, and careful while making mate selection because the mate they will choose will determine the qualities of the offspring. For this reason, choosing a suitable mate should be indispensable for a qualified offspring that is worth so much effort. In most species where mate choice copying experiments are conducted, females become pregnant with a new offspring; that is why mate-choice copying is very beneficial for females in the mate choice process. Females find mates of their same-sex species more attractive. The fact that a male is chosen by another female gives the impression that most of the features sought in the selection phase are in this male, and this man is risk-free to produce offspring. Thus females tend to copy the preferences of their same-sex other. As it is stated, the reason is that females care more about the quality of offspring so mate-choice copying is observed more in females. The issue that should not be overlooked here is short-term relationships where there is no offspring. Although evidence indicates that men do, on average, desire and seek short-term mates more than women do (Wilson, 1978), women also seek short-term mating too. In short-term relationships, most of the time physical attractiveness is considered more than other characteristics of both sexes. This situation makes more difference in short-term relationships in women, whom we say that mate-choice copying is seen more in long-term relationships. In short-term relationships, the cost will be almost the same for both sexes, and suspicions and searches become equal. For this reason, it is expected not to see a significant mate choice copying behavior in women who are considering a short-term relationship and observing that they focus more on physical characteristics.

Mate Choice Copying

Mate choice copying suggests that mate choice can be learned and changed according to others' selections and decisions. However, classical studies argue that mate choice is more related to our genes; in other words, it is innate and cannot be changed. On the other hand, recent studies influence and lead researchers to focus on mate choice from another perspective that focuses more on environmental factors. Since copying refers to imitating a manner or behavior of others, mate choice copying happens when a female copies another female's mate choice when a female's sexual decisions are socially bent toward other females. This social impact shows the environmental effect on mate choice. Mate-choice copying is a type of social learning in which an individual's mate choice is impacted by other conspecifics of the same sex's apparent choices. In their social environment, species observe their same sex's mate choices and shape their choices by getting influenced by them. The attractiveness of the opposite sex partner tends to be increased as demand for them increases. Mate choice copying is seen in 20 different nonhuman species (Vakirtzis 2011; Jones and DuVal 2019). Since humans are social species that use information collaboratively and choose mates for a long time, humans likely copy their same sex's mate choices. Being eager to find attractive people who have already proven that they are reliable and eligible leads to mate choice copying. Selected opposite sex species are seen as perfect and effortless applicants for long-term mating and producing ideal offspring. Instead of taking risks and choosing without observing others, species share information by observation and imitate their same sex's choices for mating. In this way, mating is becoming more riskless. However, it is not certain if the populations' choices are beneficial for the offspring, and these choices are being copied too. Hence whether mate-choice copying is helpful or harmful is an ascertained topic.

Mate Choice Copying in Nonhuman Species

Recent studies suggest that there is evidence of social influence on animal mate-choice copying. A variety of research indicates that nonhuman species' mate choice determinations are affected by seeing the mating determinations of others. Matos, Varela, and Santos conduct their study to investigate whether ants learn from other aunt's mating determination. First, experienced females mate with green males this shows positive public information about green male ants. Second, experienced females start to reject some of the green males so mating decreases and this shows both positive and negative public information about the green male ants. Also, it generates positive public information about red male ants. Experienced females' mating choice of red ants affects the observer female ant and makes them tend to mate with red male ants too. Also, experienced females' rejection of red ants affects the observer female ant and creates negative information. Mate-choice copying thus seems to effectively affect the course of sexual selection. (Matos et al., 2014). Another study on guppies investigates the effect of older guppies' preferences on mate choice on younger guppies. Amlacher and Dugatkin present mate preference of both younger and older guppies to an observed guppie. In this way, they determined the observer guppies' mate-choice copying in accordance with what is observed. Once again it is proven that social information is significant and effective in mate choice copying of animals. They found that younger females were indeed more likely to copy the mate choice of older females (Amlacher&Dugatkin,2005). This study can be given as an example of the effect of

age on mate choice copying in nonhuman species, however, there is not much research on humans that examines age differences.

Mate Choice Copying In Humans

Initial studies demonstrate that non-humans and humans are influenced by similar factors when evaluating opposite-sex others when we consider mate-choice copying. There is much diversity in this research on factors that affect mate choice. Sigall and Landy (1973) examined the impact of physical attractiveness on individual preferences. Participants are positioned in a room with a target male and a female who is either attractive or unattractive, and they define the relationship between them as if they are couples or not associated with each other. They found that the presence of attractive females does not affect given target males' attractiveness ratings unless the female is described as the target male's girlfriend. Therefore it can be suggested that attractiveness score was associated with the target male and female confederate more than physical attractiveness. Another researcher Waynforth (2007), who explores the mate choice copying in humans, investigated the factors of expectations and sexual experience on mate choice. In this study, females were shown photographs of pairs of men and females without stating that they were in a relationship. Participants were required to rate the attractiveness of the target male. 2 weeks later, participants were shown the same men's and women's photographs. Still, they were explicitly described as if they were in a romantic relationship this time. And again, they were asked to rate the attractiveness of men. Results demonstrated that the higher initial female attractiveness ratings predicted increased male ratings when pictured in a couple. In other words, a man's perceived attractiveness increased when he was romantically paired with an attractive woman.

Age Difference in Mate Choice Copying in Humans: Our Study

According to research, it can be argued that non-humans and humans are influenced by similar factors when evaluating opposite-sex others. In our study, we want to examine the effects of these factors on mate choice copying. When we did the literature review we discovered multiple sorts of research that we also mentioned above that examine factors such as physical attractiveness (Sigall and Landy, 1973) or expectations and sexual experience (2007) in humans and we believed that age can have a big impact on mate choice copying because it indicates lots of things in our daily life too such as fertility, experience, and knowledge.Inspired by studies on animal species for mate choice copying and studies on humans, we designed this study. In light of existing research, we decided to do the study on women, taking into account that mate-choice copying is seen more in women than in men. The study aimed to measure the effect of the age factor in the process of women's mate choice copying. In previous experiments on humans, it was seen that guppies were affected by age in the mate choice copying process. It was observed that younger older female guppies imitated the choices of older female guppies. At the same time, it has been observed in studies conducted on humans that women are affected by the choices of their fellows and find men with partners more attractive. In the light of other studies, especially these two studies, it has been hypothesized that women will be affected by the choices of older women in the mate choice copying process. It will be measured how attractive women find a man, and then they will see this man with the female model they are in a romantic relationship with. Different participant groups will see these female models at different ages,

so the effect of age will also be seen. After the man is seen to be in a relationship, women will be asked to give information about how attractive the same man is again. Thus, it is aimed to obtain a result parallel to the hypothesis.

Methods

The study was designed to test the effect of model females' age on mate-choice copying in humans. Participants were females who were between 30-and 40 years old. All participants are required to be heterosexual and single. The study involves females given opinions of other females of different ages according to their group. Participants' choices were analyzed between-subject design before and after and assessed whether there is a difference or not. The dependent variable is the attractiveness rate that the participant gave to the male picture and the independent variable is different aged females' opinions. 120 middle-aged females were selected by a simple random sampling method. There were 3 groups of 40 people each. Participants in all groups first were presented with a 35-year-old man's photograph which was found from university face databases and asked how attractive they find this man. Participants rated the attractiveness of the male on a 10 point scale in which 1 is unattractive and 10 is very attractive. Afterward, participants were presented with the opinion of another random 20/35/50 years old female on the same male. Group 1 received opinions from 20-year-old females. Group 2 was presented with opinions of 35 years old females'. Group 3 was given opinions of 50 years old females. Seeing other different-aged females' opinions on the male photograph, participants were again required to evaluate the attractiveness of the 35 years old male photograph that they previously rated on the 10 point scale. Differences between the attractiveness rates before and after seeing other different-aged females' opinions were observed. Differences were analyzed by t-test.

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