EFFORTFUL OR NATURAL? WHICH ATHLETIC TRAITS ARE MOST

ATTRACTIVE?

A THESIS

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By:

Andrew Shimkus

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ABSTRACT

The current research sought to investigate the influence of athletic efforts on how one is perceived as a potential short and long-term mate. When conscientiousness, which is the ability to exert self-control in the process of attaining a long-term goal (Nettle, 2006), was displayed in an athlete through a vignette, it was predicted that the athlete would be preferred as a long-term mate, whereas a naturally talented athlete would be preferred as a short-term mate. After exposure to this vignette of a college basketball player displaying his/her diligence or inherent talent, and answering a number of questions regarding his/her attractiveness as a potential mate, it was found that mating preferences on athletes partially coincide with existing literature on gender-differentiated mating behavior, despite none of the hypotheses being fully supported. Moreover, being diligent in one's efforts in athletics positively promotes perceptions of various characteristics, such as intelligence, health, liveliness, and dominance.

Keywords: athletics, conscientiousness, mating, attractiveness, short-term, long-term

INTRODUCTION

The current study will assess the influence of effort and talent as they relate to mating behavior. Specifically, this research will examine success due to effort versus success due to talent. These opposing dispositions in one's approach will be manifested within one's efforts or talent in the game of basketball. Understanding a potential mate's intentions and motivations are key components within mating behavior. Exploring the depths of effort versus natural talent will expand the existing literature on how one selects a potential mate. The current research falls in line with the larger picture of mating behavior, which stems from over a century of extensive research.

Introduction to Human Mating

The evolutionary process is full of nuances that facilitate changes over successive generations. This process has helped shape the world in which we live, and how we behave. One of the large pieces of evolution is the idea of natural selection (Darwin, 1871). This is the process by which certain organisms within a species pass their genes on to the future over others. The most important component to this selection process is the idea of reproduction. Darwin's "bottom line" states that the process of mating and reproduction is a greater dimension of evolution than survival.

This reproduction comes about from one's mating behaviors. These behaviors are a result of several nuances within our evolved psychology. A large dimension of how we mate today relates to the idea of parental investment.

Within our species, there is a large asymmetry between males and females regarding the amount of effort required to attain offspring (Trivers, 1972). Trivers' *Parental Investment Theory* states that because of the high amount of time and energy

females must undergo to facilitate the reproductive process, they tend to be more selective than males when choosing a mate. The "investment" that one gives to offspring is defined as effort given to one offspring at the cost of providing time and energy to another offspring. Reproduction is costly. Females must endure the long process of pregnancy in addition to childbirth, whereas males need not do any of this. The number of kids that females can have at once is constrained by nature; they have a finite number of eggs, making each attempt at bearing a child extremely important. Males on the other hand continuously produce sperm, and could theoretically be the fathers of multiple children in a short period of time. Females are equipped with a biology that has adapted to being selective in mating, whereas males are born to be less selective. However, over evolutionary time, different contexts have presented our ancestors with different problems, thus eliciting various mating strategies (Buss, 1998)

In fact, both genders can in fact utilize both short-term and long-term strategies. This is known as *strategic pluralism* (Gangestad & Simpson, 2000). The idea of strategic pluralism, emulates the idea that multiple strategies come in to play within the mating domain. These strategies can be dictated by the environment and current social circumstances. Being that females are more selective than males, the qualities they select within males can be influenced by the context, vice versa. Many of the changes that lead to this temporal shift depend on context and one's current life circumstances. One's current life situation may alter the way in which one approaches problems in the environment.

For example, as Buss (1998) states, women who pursue a short-term mate can potentially acquire immediate resources, mate insurance if her current mate were to

become hurt or die, as well as "genetic benefits" from mating with a "superior man." In fact, during the fertile phase of the ovulatory cycle, females actually tend to prefer male risk-takers who display masculine features (Giebel, Weierstall, Schquer, & Elbert, 2013). In a situation where a female's current partner may not provide resources or reproductive certainty, females can adopt a short-term mating strategy to ensure reproduction (Buss & Schmitt, 1993). One's situation overall can have a profound impact on the mating strategy that one comes to act upon.

Males and Females

The physical traits we see in males today indicate that they are better suited for competition due to the physical nature of *intrasexual competition* males were exposed to over evolutionary time (Puts, 2010). Perhaps this can help explain research that found that males tend to participate in athletics more than females (Deaner, Geary, Puts, Ham, Kruger, Flex, Windegard, & Grandis 2012). As a result, the sporting domain, and the physicality that it encompasses fits more with the evolved male psychology than female.

When males examine potential female mates, they tend to look for traits related to physical attractiveness because these traits serve as an indicator of overall health and the ability to bear offspring (Buss, 1989). Some other traits that males use to distinguish attractive from unattractive females are Waist-to-hip ratio, eye size, and "lustrous hair" (Buss, 2003; Gallup & Friedrick, 2010). In a long-term mate, males value faithfulness and sexual loyalty (Buss, 1989). These preferences in a long-term mate came with an evolutionary history of facing the adaptive problem of *paternal certainty* (Buss, Larsen, Westen, & Semmelroth, 1992). Here, males can never be completely sure that the child a woman has was his own, unless she is incredibly faithful to him. As a result of this

adaptive hurdle, males have come to value this trait in a long-term partner. Conversely, in a short-term mate, males value physical attractiveness and cues related to sexual opportunity (Buss & Schmitt, 1993). Mating with multiple females is a trend within males' evolutionary history, which helps explain the fact that this behavior is seen less within females (Buss & Schmitt, 1993). In this situation, simply mating with a female is the only relevant criterion. Traits such as sexual experience are valued in this context, because it signifies the potential opportunity for the female to engage in this behavior, which is adaptive in a short-term context.

Ratings of attractiveness for female athletes have been complicated. Knight and Giuliano (2001) found that news articles focusing on females' attractiveness elicited higher levels of attractiveness than articles focusing on females' athleticism. Therefore, perhaps the sporting domain does not appeal to men when assessing females to mate with, and does not allow them to grasp the physical attractiveness of women. Female athletes are often seen as violating typical gender roles, and may be seen as automatically homosexual, in part because they may be seen as less feminine (Griffin, 1992). For females, femininity is another way of referring to heterosexuality (Griffin, 1992). This heterosexuality may be brought into question among female athletes.

On the other hand, Schulte-Hostedde, Eys, Emond, and Buzdon (2010) found that female team-sport athletes are perceived as healthier, more dependable, ambitious, and having a more pleasing disposition than both individual sport athletes, and more importantly, females who engaged in an extracurricular activity. This suggests a positive influence of athletic participation in terms of how males perceive female athletes. Moreover, Knight and Giuliano (2003) found that when exposed to an ambiguously

sexually oriented athlete or a heterosexual athlete, males with an ambiguous sexuality were more susceptible to be seen as violating typical gender norms because they were seen as more feminine; this sort of violation was not seen among female athletes whose sexual orientation was ambiguous. Heterosexual female athletes, as well as those who were sexually ambiguous were rated as having the same amount of femininity, and being no more masculine than each other, whereas sexually ambiguous males were seen as less masculine than heterosexuals. While all of these discussed results fail to show that being an athlete increases the attractiveness of a female directly, the fact remains that being an athlete allows females to display particular traits that are seen as attractive to potential mates. The current research seeks to bridge this gap to show that the traits females display through sports directly impact their perceived attractiveness.

Due to the fact that these results indicate a disconnect between how female athletes are perceived, the current research seeks to further explore the current perceptions of female sport involvement through their approach to the game of play. Utilizing the personality trait conscientiousness (compared to natural talent) is predicted to deem diligent female athletes as preferable for a long-term partnership because of the signals of faithfulness and investment it provides. Perhaps participating in sports may decrease the femininity of female athletes in this study. However, manipulating females' approach to the game is predicted to elicit attractiveness (long-term in particular) because of the strong signals this provides to potential mates.

Females tend to find traits such as ambitious-industriousness, high social status, and high amount of resources to be attractive in a long-term mate (Buss, 1989). These traits signal the long-term investment of the male, both in terms of resources and

protection of potential offspring. This would ensure the survival of the parents as well as the offspring in the future. In the short-term however, females tend to prefer traits related to physical strength and dominance (Buss & Schmitt, 1993). In fact, research has shown that females higher in attractiveness themselves show greater preferences in indicators of good genes in potential mates, including being more masculine, physically attractive, having greater sex appeal, being good looking, and being physically fit (Buss & Shackelford, 2008). Mating with a male who possesses traits such as these operates to function as a way for a female to gain resources quickly, and ensure a strong genetic lineage for the future (Geher, 2014). The logic here is that if a female mates with a male who has heritable traits that are strong, then one's offspring will possess a similar level of aptitude. As a result, a dominant and attractive male is preferred more in the short-term.

Conscientiousness

While many traits are involved in the preferences of mating, the current research will examine an athlete's approach to basketball; the approach that will be manipulated is whether or not the athlete is naturally talented or conscientious. The current research will use the definition formulated by Nettle (2006), which states that conscientiousness is the ability to exert self-control in the process of attaining a long-term goal; it is the delay of "instant gratification" to pursue a long-term plan. This trait emphasizes a mental drive for future success. The adaptive nature of these traits displays the fact that the pursuit of success would have put one in a better position to survive and reproduce than if one were impulsive. A related trait found by Buss (1989) to be attractive in a long-term mate was ambitiousness-industriousness. The longevity dimension of this trait, and an ability to

foster future success is what females tend to look in a male when pursuing a long-term mate.

These traits were selected in males because they ensured a high level of potential survival under ancestral conditions. (Buss, 1989). This is due to the fact that females must invest a lot in the reproductive process (Trivers, 1972). As a result, females tend to prefer males who display traits that signify they will be around for the long term to provide resources and protection for the future.

Low conscientiousness is related to short-term mating behaviors (Schmitt & Shackelford, 2008). Conscientiousness is also negatively associated with relationship infidelity and sexual promiscuity (Schmitt, 2004). Therefore, conscientiousness brings about a long-term theme within the planning of one's behavior. Buss (1998) found that traits related to "resource potential" are preferred more for a long-term mate than a short-term mate. These include traits such as "having a promising career," "has good financial prospects," "likely to succeed in profession," "likely to earn a lot of money," and "has a reliable future career" (pp. 223). The mental drive and capacity to earn for the future is what females tend to find attractive when pursuing a long-term mate.

Conscientiousness is also associated with preventative health behaviors and perceived physical health (Takahashi, Edmonds, Jackson, & Roberts, 2007), as well as a smaller likelihood of growing up to be a drinker and smoker (Friedman, Schwarts, Tomlinson-Keasey, Tucker, Martin, Winegard, & Criqui, 1995). This trait is a predictor of longevity. Outside of mating and athletics, the trait helps to facilitate long-term success on a physical level, and comes to bring about healthy behaviors.

Within athletics, the current research seeks to understand the extent to which an athlete displaying effortful tendencies tends to elicit long-term preferences from others. Conversely, this project will investigate how this trait contrasts with natural talent, and the predicted short-term preferences that are suggested to arise from it.

The Current Study and Hypotheses

The idea of sport participation can influence the way in which one perceives an athlete as a potential mate due to the fact that sports can be an "honest indicator" of mate quality (Lombardo, 2012). Athletics can also serve as a platform to potentially display socially-relevant traits such as the ability to work well with others (Schulte-hostedde, Eys, & Johnson, 2008). The current research looks to build on these principles and assess the extent to which one's approach to athletics facilitates perceptions of attractiveness in a mate, particularly as a short and long-term mate.

While athletics follow a historical lineage that coincides with the evolution of males more than females, the trait of conscientiousness within one's approach to athletics is predicted to provide cues of investment and long-term relationship potential for both males and females. Conscientiousness is related to higher trust, faithfulness and parental investment (Nettle, 2006). All three of these traits are heavily valued in long-term relationships for both males and females. Thus, the predicted preferences for mates will be the same for both genders. As a result of all this previous research, the following hypotheses have been formulated:

H1: A conscientious athlete, displaying diligence and effort, will be preferred more as a long-term mate than a short-term mate.

H2: Naturally talented athletes will be preferred more as a short-term mate than a long-term.

H3: The effects produced both in H1 and H2 will be stronger in the female ratings of males than in the male ratings of females.

Because of the scant research on female athletes from an evolutionary perspective, it is predicted that the way in which males athletes will be viewed will fall more in line with existing literature. Thus, the current study expects stronger effect sizes for the ratings females give for male athletes; in other words, the effect sizes for the differences between the short and long-term perceptions of attractiveness will be larger when females rate male targets, than when males rate female targets.

Due to the complex nature of mating behavior, a number of scales are also being utilized in this research to control for additional sources of variability. Participants will complete a measure of their *Life-History Strategy.* Life History Strategy refers to the idea that the mating strategy one adopts can be influenced by one's current life circumstances and the context one lives in. Understanding this construct will allow the researcher to control for participants' allocation of time and energy with respect to short or long-term mating in the mating domain. Participants will complete the Mini-K scale to measure their Life-History Strategy (Figueredo, Vasquez, Brumbach, Schneider, Sefcek, Tal, Hill, Wenner & Jacobs, 2006).

To gauge the participants' perceptions of their own attractiveness, the Mate Value Inventory (Kirsner, Figueredo, & Jacobs, 2003) will be used within the current research. This will allow the researcher to understand how attractive participants feel they are. As stated earlier, Buss and Shackelford (2008) found that attractive women tend to have higher standards for the qualities they wish for in a mate than those lower in attractiveness. However, these ratings of attractiveness were found through observer ratings, whereas the mate value inventory assesses participants' ratings of their own value. Kirsner et al. (2003) found a positive relationship between one's perceived mate value and the mate value of a potential long-term partner, meaning that the more one's own value, the more value one will look for in a mate. Understanding these values will aid in the understanding of the participants, and how they may approach a future mate.

Moreover, because this research is contingent upon the personality of a target, it is important to understand the personality of the raters. Therefore, participants will fill out the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003). This scale tests the Big 5 personality traits, which are extravertedness, agreeableness, neuroticism, openness, and conscientiousness. Dijkstra and Barelds (2008) found that participants in their study showed a tendency to prefer a partner with a personality makeup similar to their own. Moreover, these researchers found that a male who was conscientious, extraverted and less neurotic was more ideal for what females wanted than men.. Schulte-hostedde et al. (2010) investigated the perceptions of personality characteristics, such as ambition, health, and intelligence among male and female athletes. The current research seeks to build on this research and investigate the potency of these characteristics among

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athletes further. Collecting all of this information will allow the researcher to gauge the nuanced nature of the participants' personality

Finally, due to Giebel et al's (2013) research on the influence of the ovulatory cycle on mating preferences, information on female participants' ovulatory cycle will be asked. These items will include the beginning date of their last cycle, the beginning date of the next one, how regular their cycle is, how many days typically occur in-between cycles, and whether or not they are taking contraceptives.

METHOD

Participants

116 participants completed this survey. The average age was 24.47 years, ranging from 18 to 46. 26 participants were male, while 90 were female. Participants were recruited from the State University of New York at New Paltz. Undergraduate students will receive two credits for their psychology major (if Psychology is their course of study), or credit for a class. This recruitment, and awarding of credit will be done using the "Sona System." Additionally, participants were recruited through SUNY New Paltz's list-serv e-mail list.

Design

An experimental design was utilized for the current research. The manipulations consisted of inherent talent and conscientiousness/diligence. These were displayed through a vignette stating that an athlete was either naturally talented or very hard working. The subject variable, gender, was also utilized for analysis. This allowed for two conditions within the study that participants will be randomly assigned to. This study also consists of a control condition. These participants will not receive a vignette; they will see the photograph of the target and go straight to the rating portion of the study.

Materials

The only hardware involved in this research was the use of a laptop or personal computer by the participants. They were directed to the online software "Qualtrics" where they were given instructions on how to access the study's survey.

Procedure

First, participants filled out a demographic questionnaire indicating their age, gender, race, highest education-level, relationship status, whether or not they are currently sexually active, and whether or not they believe in pre-marital sex (see Appendix A). Being that this is a study on examining attractiveness and mating behaviors, participants who were in an intimate relationship during the time of completion were asked to think about the target athlete as though they are currently single. Moreover, females received questions regarding their ovulatory cycle on the demographic questionnaire. They were asked when the last menstrual period was, and their best estimation of the first day of it. They used calendars to assist in finding the specific day their menstrual period began, retrieved from www.calendarlabs.com

Next, they were given a description of the target basketball player. The description encompassed the manipulation of inherent talent or conscientiousness (see Appendix B). Conscientiousness in this study is operationally defined as the ability to exert self-control in the process of attaining a long-term goal; it is the delay of "instant gratification" to pursue a long-term plan (Nettle, 2006). The description explained how the target was a varsity college basketball athlete, who works hard or does not work hard regarding future success in the game. The paragraphs were exactly the same except for the manipulation of words that denote whether the athlete was conscientious or naturally talented. The specific word manipulations between conditions are as follows:

- Hardest worker; most naturally talented
- Diligence; raw ability

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- Determined; gifted

- Hustles and looks to improve for the duration of training; does not hustle and looks to saves his/her energy for the game.

- Slowly continues to improve his/her abilities for the future; makes little attempt to further build his/her skill-set for the future.

The description was equipped with a photograph of the target. Each photo has been rated as "neutral" or moderately attractive by previous research. The male target photograph was a photo that participants in research conducted by Rodway, Schepman, and Lambert (2013) rated as possessing an average level of attractiveness. The female photograph was adopted from Nakamura and Kawabata (2014). This photo was rated as neutral, or possessing an average level of attractiveness. Males and females were both given one photograph of the target that is the preference of their sexual orientation, such that a heterosexual male will receive a female target, and a homosexual male will receive a male target.

Participants in the control condition were not given the vignette; they simply saw the photograph and went straight to the rating portion of the study.

After seeing the photograph and reading the paragraph, participants filled out a number of scales. They rated on a one two seven Likert scale how much they agree to engage in multiple relationship types, as adopted by Schulte-Hostedde et al (2008): one date, sexual intercourse, short-term relationship, and long-term relationship. A short-term relationship was defined as a relationship lasting less than one month, and a long-term relationship was defined as a relationship longer than six months. All of these items were

rated on a one to seven Likert Scale where one indicated "strongly disagree," and seven meant "strongly agree." A four denoted that they were "neutral" (see Appendix C). In addition to these items, participants filled out a number of filler items to hide the questions of interest. These questions include information about how much participants read, their favorite musical genre, etc. Some of these items were adopted from Schulte-hostedde et al. (2010) and Dijkstra and Barelds (2008), and were included to gauge different perceptions of the target, such as how intelligent and healthy participants felt they were.

To measure Life-History Strategy, participants completed the Mini-k scale (Figueredo, Vasquez, Brumbach, Schneider, Sefcek, Tal, Hill, Wenner & Jacobs, 2006). This measurement used a Likert Scale where a negative three indicates "strongly disagree" and a positive three means "strongly agree. "A zero means "unsure" (see Appendix D). Life History Strategy refers to the idea that the mating strategy one adopts can influenced by one's current life circumstances and the context one lives in. The alpha value (α) of the Mini-k scale = 0.70 (Figueredo et al., 2006).

The Mate Value Inventory (Kirsner, Figueredo, & Jacobs, 2003) was used within the current research. Items were rated on a 7-point scale, where negative three meant one is low on the trait, positive three denoted that one is extremely high on this trait (see Appendix E). The alpha value (α) of this scale = 0.88 (Kisner et al., 2003). This scale examines how one understands one's own value as a mate.

Finally, participants filled out the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003). This scale tested the Big 5 personality traits, which are extravertedness, agreeableness, neuroticism, openness to experience, and

conscientiousness. The alpha values (α) of each trait are .68, .40, .73, .45, and .50,

respectively. This scale examined these personality traits on a seven point Likert scale

where one indicates "strongly disagree," and seven indicates "strongly agree." A four on

this scale indicated a neutral position (see Appendix F).

  Within the first and final page of the survey, participants were informed of the

primary investigator of the study, resources to contact if they were distressed, and how to

receive credit for participation if they were a psychology student at SUNY New Paltz

(see Appendix G).

RESULTS

1. Testing Effects of Target Characteristics and Gender of Rater on Markers of Attractiveness

Hypothesis one stated that conscientious athletes would be preferred more as a long-term mate than a short-term mate. This hypothesis was not supported. Hypothesis two stated that a naturally talented athlete would be preferred more as a short-term mate than a long-term mate. This hypothesis was partially supported as a marginally significant interaction was found between gender and effort type (natural, conscientious, control) on willingness to engage in a short-term relationship. The current study predicted that the results would be the same for males and females, which was found not to be the case. Males were more willing to engage in a short-term relationship with the naturally talented target. This finding partially supports the prediction of this study. Hypothesis three predicted that the effects of female ratings of the male target would be stronger than males rating females. Males and females did not show predicted results in terms of preferring a conscientious athlete for the long-term, as well as a naturally talented athlete for the short-term. Because no consistent difference was found, there was no stronger effect on males or females. Thus, hypothesis three is not supported.

A 3x2 between subjects factorial analysis of variance (ANOVA) was run to test for an interaction effect between effort type and gender. This analysis was run separately the four main dependent variables in question: sexual intercourse, one date, short-term relationship, long-term relationship. It was also run on the variable, "attractiveness" of the target. Means, separated by gender, effort type, and effects found can be seen in Tables 1-5. Due to the calculations of standard errors to standard deviations, the standard

deviations for each variable are all similar in value. However, they are still included in

the tables for clarity.

Table 1

Means and Standard Deviations between Gender and Willingness to Engage in Sexual Intercourse with the target

Gender	Effort	Mean	Standard Deviation
Male	Natural:	4.44	1.62
	Conscientious:	4.50	1.61
	Control:	3.55	1.62
Female	Natural:	2.86	1.62
	Conscientious:	2.76	1.62
	Control:	2.42	1.61

Significant main effect of gender at $p < .05$

Table 2

Means and Standard Deviations between Gender and Willingness to Go on One Date with the target

Gender	Effort	Mean	Standard Deviation
Male	Natural:	5.44	1.79
	Conscientious:	3.33	1.78
	Control:	3.64	1.78
Female	Natural:	4.07	1.78
	Conscientious:	4.48	1.78
	Control:	3.45	1.78

Marginally significant interaction effect on gender and effort at $p < .05$

Table 3

Means and Standard Deviations between Gender and Willingness to Engage in a Short-term Relationship with the target

Gender	Effort	Mean	Standard Deviation
Male	Natural:	4.33	1.67
	Conscientious:	3.33	1.67
	Control:	2.36	1.67
Female	Natural:	2.76	1.67
	Conscientious:	3.41	1.67
	Control:	2.84	1.67

Marginally significant interaction effect on gender and effort at $p < .05$

Table 4

Means and Standard Deviations between Gender and Willingness to Engage in a Long-term Relationship with the target

Gender	Effort	Mean	Standard Deviation
Male	Natural:	3.89	1.56
	Conscientious:	4.33	1.56
	Control:	2.46	1.56
Female	Natural:	2.17	1.56
	Conscientious:	3.14	1.56
	Control:	2.13	1.56

Table 5

Means and Standard Deviations between Gender and ratings of the target's Attractiveness

Gender	Effort	Mean	Standard Deviation
Male	Natural:	4.33	1.17
	Conscientious:	4.33	1.17
	Control:	4.27	1.17
Female	Natural:	3.52	1.17
	Conscientious:	3.97	1.17
	Control:	3.65	1.17

Significant main effect of gender at p < .05

A significant main effect was found for gender on willingness to engage in sexual intercourse with the target, $F(1,109) = 51.16$ $p < .05$, $\eta2 = .961$. On average, males ($M = 4.16$, Std. Error = .33) were more willing to have sex with the target than were females ($M = 2.68$, Std. Error = .17), irrespective of the target's effort type.

A marginally significant interaction effect of gender and effort was found on willingness to go on a date with the target, $F(2,109) = 2.90$, $p = .059$, $\eta2 = .051$ The effect of effort type on willingness to go on a date depended on the gender of the participant; males were more willing to go on a date with the natural athlete, whereas females were more willing to go on a date with the conscientious athlete (see Figure 1).

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Figure 1

Marginally Significant Interaction Between Gender and Effort on Willingness to Go on One Date with the Target
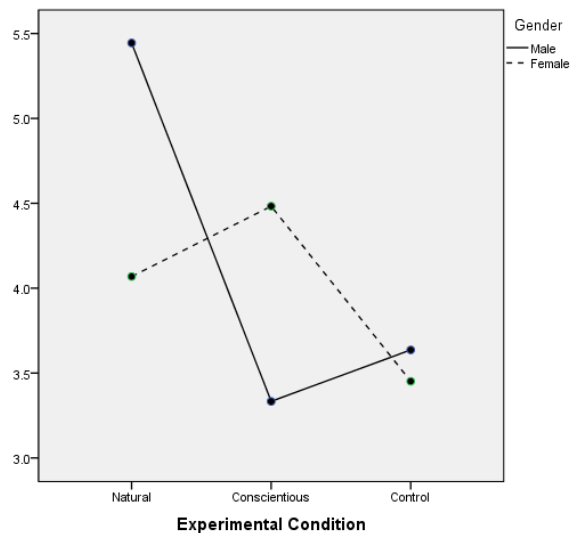
Dependent Variable on the Y Axis: 1-7 scale measuring participants' willingness to go on one date with the target.

A marginally significant interaction effect of gender and effort was found on willingness to engage in a short-term relationship with the target, $F(2,109) =3.00$, $p =$ .054, $\eta2 = .052$. The effect of effort type on being in a short-term relationship with the target depended upon the gender, where males were more interested in a short-term relationship with the target when they were natural in their athletic efforts (see Figure 2).

Figure 2

Marginally Significant Interaction Between Gender and Effort on Willingness to Engage in a Short-term Relationship
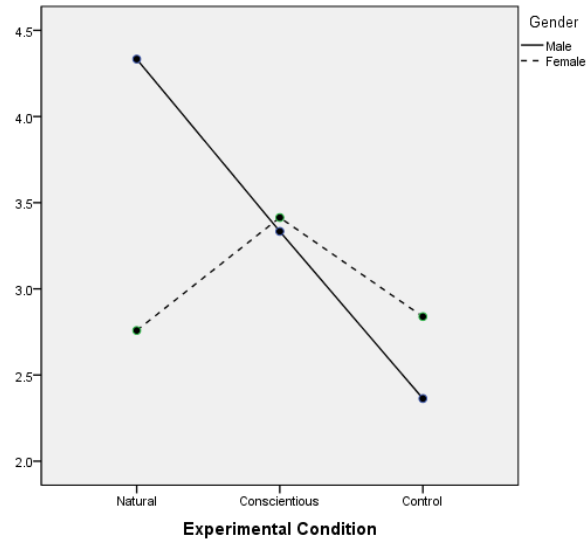
Dependent Variable on the Y Axis: 1-7 scale measuring participants' willingness to engage in a short-term relationship with the target.

A significant main effect of gender was found on the ratings of the target's attractiveness, $F(1,110) = 22.18, p < .05, \eta2 = .90$. On average, males ($M = 4.31$, Std. Error = .24) rated the target as more attractive than females ($M = 3.71$, Std. Error = .12), regardless of whether the athlete was natural or conscientious.

2. Investigating the Strength of the Results

To understand additional sources of variability in the results, the current study assessed the impact of participants' life-history, mate value, and personality on ratings of willingness to engage in the four main relationship types. Correlation analyses were run between these items of measurement and four main relationship types in question (sexual intercourse, one date, short-term relationship, long-term relationship). Correlations between the Big 5 and the four relationship types can be found in table 6. The only significant correlations among all of these items were among the personality trait was extraversion. Extraversion was positively correlated with willingness to engage in sexual intercourse ($r = .21, p < .05$), and one date ($r = .25, p < .05$) with the target. In other words, the more extraverted participants were, the more they tended to agree to have sex with the target and go on a date with the target.

To investigate this potential confound further, a between-subjects analysis of covariance (ANCOVA) was run to test for an interaction effect between gender and effort type (natural, conscientious, control) on willingness to have sex with, and go on one date with the target (controlling for extraversion). The main effect of gender on willingness to engage in sexual intercourse with the target was no longer significant after controlling for

extraversion, $F(1,96) = .09$, *ns*. The original results of the main effect were partially due to the results of the participants' level of extraversion, and not the manipulation alone.

For willingness to go on a date with the target, the marginally significant interaction effect of gender and effort reached statistical significance when controlling for extraversion, $F(1,96) = 3.21$, $p < .05$, $\eta 2 = .06$. However, extraversion was also found to be a significant covariate, $F(1,96) = 7.12$, $p < .05$, $\eta 2 = .07$. Therefore, the results of this interaction, while significant, suggest that the interaction between the independent variables only tell part of the story.

Table 6

Correlation values between the Big 5 Personality Traits and Relationship Types

	Conscientiousness	Openness	Agreeableness	Extraversion	Emotional Stability
Sex	r = -.09	r = .12	r = -.15	r = .21*	r = -.08
One Date	r = -.08	r = .13	r = -.12	r = .25*	r = -.18
Short-term	r = -.05	r = -.00	r = -.05	r = .04	r = -.08
Long-term	r = -.09	r = .06	r = -.10	r = .15	r = .00

Significant at p < .05

DISCUSSION

The current study was designed to test for an effect of effort within the game of basketball on perceptions of short and long-term attractiveness. The study hypothesized that an athlete who was more conscientious and diligent in his/her efforts would be preferred as a long-term mate, whereas a more naturally talented athlete would be seen as more preferable as a short-term mate. Additionally, this study predicted that this effect of effort on relationship type would be stronger among males than females. None of the hypotheses were fully supported. Hypothesis two was only partially supported. However, the prediction that male and female preferences for a short-term relationship partner would be the same (naturally talented athlete) was not supported.

Of note, the current research aligned exposure of athletes with the sexual orientation of the participants. For example, a primarily homosexual male was exposed to a male target. Therefore, the ability to discern gender preferences is still appropriate given the fact that participants with a particular sexual orientation were still shown a potential romantic partner of the gender they prefer. Also, in the future, the current research seeks to investigate the influence of the ovulatory cycle as well as the use oral contraceptives with respect to how females view a potential partner.

Effects of Gender and Effort type on Perceptions of Short-term, Long-term, and General Attractiveness

While none of the hypotheses were fully supported, the pattern of findings within this research tend to agree with much of the past research on sex-differentiated mating strategies, and qualities involved in the process (Buss 1989; Buss & Schmitt, 1993; Buss, 1998; Gallup & Frederick, 2010). For example, dating, which is a form of courtship, is

typically used to evaluate a potential mate for a future relationship (Miller, 2007). There was an interaction between gender and effort type on willingness to go on a date with the target, such that males were more willing to go on a date with a natural basketball player, whereas females were more willing to go on a date with a diligent player. These results indicate the gender differences in typical mating behavior such that when given the opportunity to court a potential mate, females preferred a mate displaying hard-work and long-term potential in his/her craft. In fact, Schulte-hostedde et al. (2008) found that females preferred going on one date with a team-sport athlete more than both an individual sport athlete, as well as a person who participated in an extracurricular activity. Given these findings by Schult-hostedde et al. (2008), as well as the results in this study, there is a pattern where when females have when exposed to an athlete, they tend to prefer going on a date with the athlete who possesses the ability to work hard in his/her sport of play, and interact well with others. Perhaps these abilities signal strong social skills and the ability communicate effectively, both of which are critical when going on a date, and paramount for engaging in a seriously committed relationship down the road.

Males preferred the natural athlete for a date, on average, more than the conscientious athlete. Males also preferred the natural athlete for a short-term relationship over the conscientious athlete. Finally, they found the target more attractive, on average, than females did. For heterosexual males, this latter finding perhaps could be due to the nature of the photograph used. This study used a photograph from research by Nakamura and Kawabata (2014), where the female in the photograph was seen as "neutral", or possessed an average level of attractiveness. However, in the trials where this face was

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deemed this quality, participants were shown a total of 120 faces. As a result, the attractiveness of the face used in this study is subject to skepticism because of the nature of the sample in that study. Perhaps the face in question is actually attractive, but compared to the particular faces used by Nakamura and Kawabata (2014) it was average. Due to the conflicting results in the current study and Nakamura and Kawabata (2014), the attractiveness of the female face used in the study must be questioned. Conversely, perhaps the male photograph taken from research by Rodway, Schepman, & Lambert (2013) was simply unattractive, but was found by their sample to be average. This would explain the differences between the ratings of attractiveness between the photos as well.

For heterosexual males, due to the fact they deemed the face more attractive, on average, than females found the target, perhaps this can help shed light on their willingness to say they would date and engage in a short-term relationship with the natural athlete. Schulte-hostedde et al (2010) found that when males view females, highly attractive females tend to be seen as more promiscuous than females with a low level of attractiveness. Moreover, traits related to sexual experience and promiscuity are what males tend to look for in a short-term mate (Buss & Schmitt, 1993), compared to the sexual loyalty and faithfulness that males prefer in a long-term mate (Buss, 1989). Thus, given the fact that males found the target more attractive than females, and prefer the natural target for a date and a short-term relationship, the males in this study perhaps felt that the natural target was better geared for this short-term relationship. The attractiveness, coupled with the natural talent perhaps signaled promiscuity and short-term related signals that make her more fitting as a short-term mate. Additionally, perhaps the ability to succeed naturally in sport signified a greater level of overall fitness

and health. In fact, attractiveness is a main criterion in males' perceptions of females for both the short and long-term because it is an indicator of health and the ability to bear offspring. With this increased attractiveness perhaps came a greater perceived promiscuity, which perhaps led the female in the current study to be seen as preferable for short-term relations.

Despite the aforementioned issues regarding the photograph of the female in this study, heterosexual males still found the target more attractive, on average, regardless of condition. For the heterosexual males, this finding provides positive insight into the way female athletes can be viewed. Knight and Giuliano (2001) found that focusing on a female athlete's athleticism did not elicit higher levels of perceived attractiveness than focusing on the attractiveness itself. However, if there were a robust effect in the way in which athletic females are viewed, meaning that if a female athlete is displayed and automatically she is seen as less attractive than a non-athlete female, then the current research would have seen the control group female receiving the greatest amount of attractiveness (she was never specified to be an athlete). On the other hand, Knight and Giuliano had a written piece on the female's attractiveness (which led to greater perceived attractiveness ratings), while the control condition in this study had no description at all. While these two situations present different amounts of information to the participants, the fact remains that males were not turned off by the idea of seeing a female athlete compared to the female viewing the male.

The sexual orientation of a female is often brought into question when it is known she is an athlete insofar as she may be seen as homosexual. But research has found ratings of femininity and masculinity to remain the same for female athletes who are

heterosexual, as well as those whose orientation is ambiguous (Knight & Giuliano, 2003). Therefore, if female athletes (in the game of basketball) were automatically seen as homosexual, the expected results for this study would be that they would have been rated as having a low level of attractiveness for the natural and conscientious conditions because it would be questioning their femininity. Femininity, a way of denoting a female's heterosexuality would have been brought into question, which would have elicited lower levels of attractiveness for the female athletes in this study. However, the current results provided evidence for the opposite; when depicted as an athlete, the female was still seen as attractive.

LIMITATIONS

This research was limited by the small sample size as a whole, as well as the small number of males compared to females. A goal of the current research was to illuminate a greater understanding of how males perceive female athletes. However, because of the size of the sample, many of the statistical models had an abundance of error, making the ability to deduce concrete conclusions difficult.

Moreover, this research utilized college students as its main source of participant recruitment. As a result, generalizing among the population at large, particularly varying age groups is difficult.

Many of these results, particularly among the correlations found within the personality measures and life history, as well as mate value could come from the nature of the sample and the means of the research. Multiple items that are positively correlated could mean that participants completed this survey by simply clicking one option for all of the answers; this could explain the high correlations we see.

The vignette in this research utilized a collegiate basketball player. While the primary manipulation was the athlete's effort in the game of play, the fact that the athlete is in college perhaps suggests a level of cognitive competence to achieve a superior level of intellect compared to an athlete who does not possess this ability, which may provide additional cues of fitness overall.

Future research should continue to investigate efforts involved in the way athletes approach their craft. Moreover, different sports should be assessed, particularly addressing female involvement. Although males tend to show a greater interest in sports, even after the advent of Title IX (Deaner et al. 2012), female athletics should be incorporated in the research to formulate methods to increase female interest and involvement in these various forms of competition.

Moreover, future research should examine the mating preferences of those who are not primarily homosexual. While the majority of participants in the current research were primarily heterosexual, gaining insight as to the preferences of those who are not, especially within athletics would strengthen the future, as well as the existing literature on mating behavior.

The Bottom Line

The type of effort an athlete exhibited within the game of basketball did not influence perceptions of short and long-term attractiveness to a great degree as hypothesized. However, the current research found results consistent with much of the existing literature on the sex-differentiated preferences for mates, and traits involved in the process. Males overall found the target more appealing and were more willing to be engaged with the target in some form or fashion than females were. The findings in this

study provide greater insight into the complexities of mating practices, and help set the

stage for further research into the field of athletics from an evolutionary perspective.

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APPENDICIES

Appendix A: Demographic Information

Please complete the following items:

1) What is your age in years? _____

2) What is your gender?

___Male   ___Other

___Female

3) What is your race? _____

4) What is your ethnicity? _____

5) Indicate the highest level of education you have completed _____

6) What is your sexual orientation?

___Primarily Heterosexual

___Primarily Bisexual

___Primarily Homosexual

___Other

7) What is the current marital status of your parents?

___Married

___Separated

___Divorced

___Never married

8) Are you currently in an intimate relationship?

__Yes

__No

9) Are you currently married?

__Yes

__No

> 9A) If yes, have you had a marriage previously?
>
> __Yes
>
> __No
>
> 9b) If yes, how many? _____

10) Do you support sex before marriage?

__Yes

__No

11) Are you currently sexually active with a partner?

__Yes

__No

12) What is your current GPA (if you are currently a college student)?

_____

Please complete the following items:

13) Do you watch television?

__Yes

__No

 If so, what genre do you watch the most? _____

14) How many hours, do you estimate you spend watching television every week?

_____

15) How many hours, do you estimate you spend reading every week?

_____

16) If you are still in school, how many hours, do you estimate you spend studying every week?

_____

17) Were you raised in an upper, middle, or lower-class household?

__Upper

__Middle

__Lower

18) Were you raised in a one or two-parent household?

__One

__Two

On a scale of one to seven, please indicate how much you enjoy doing the following

(with 1 being not at all and 7 being very much)…

19) Watching Competitive Sports

1	2	3	4	5	6	7
Not At			Neutral			Very
All						Much

20) Playing Competitive Sports

1	2	3	4	5	6	7
Not At			Neutral			Very
All						Much

Please complete the following items:

21) Which is your favorite sport to watch? _____

22) Which is your favorite sport to play? _____

23) As a fan, please rate on a scale of one to seven how much you enjoy watching the

following professional sports…

A) Football

1	2	3	4	5	6	7
Not			Neutral			Very
At All						Much

B) Baseball

1	2	3	4	5	6	7
Not			Neutral			Very
At All						Much

C) Basketball

1	2	3	4	5	6	7
Not			Neutral			Very
At All						Much

D) Soccer

1	2	3	4	5	6	7
Not			Neutral			Very
At All						Much

E) Ice Hockey

1	2	3	4	5	6	7
Not			Neutral			Very
At All						Much

Please complete the following items:

24) On average, how many hours do you feel professional athletes read per week?

_____

25) On average, how many hours do you feel professional athletes watch television per week?

_____

25A) If any, what genre do you feel they most prefer? _____

26) Did you play any junior varsity or varsity sports in High-School?

__Yes

__No

If yes, please list them all _____

27) Did you play any junior varsity or varsity sports in college/junior college?

__Yes

__No

If yes, please list them all _____

28) Did you play or are currently playing any sports professionally?

__Yes

__No

 If yes, please list them all_____

29) What is your most preferred sport of play? _____

30) Please rate on a scale of 1 to 7, your athletic ability in your most preferred sport (with 1 being not good at all and 7 being very good):

1	2	3	4	5	6	7
Not Good			Average			Very
At All						Good

31) Please rate on a scale of 1 to 7 your own physical appearance, as compared to other men/women your age (with 1 being not attractive at all and 7 being very attractive):

1	2	3	4	5	6	7
Not Attractive			Average			Very
At All						Attractive

32) Please rate, on a scale of 1 to 7, how physically attractive you feel you are (with 1 being not attractive at all and 7 being very attractive):

1	2	3	4	5	6	7
Not Attractive			Average			Very
At All						Attractive

Please complete the following items

33) How many sexual partners have you had in the last month? _____

34) How many of these partners were those you are currently in a relationship with (if you are currently seeing someone) _____

*Females only

35) Would you answer some questions about your ovulatory cycle?

__Yes

__No

35b) If yes, are you post-menopausal?

__Yes

__No

36) Are you currently on any type of hormonal birth control that might influence your

menstrual cycle – for example, the "pill" or the NuvaRing?

__Yes

__No

January 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Jan 19: M L King Day

February 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Feb 16: Presidents' Day

March 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Apr 03: Good Friday
Apr 05: Easter Sunday

May 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

May 10: Mother's Day
May 25: Memorial Day

June 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Jun 21: Father's Day

July 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Jul 04: Independence Day

August 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

37) Using the calendars provided, please try to identify the FIRST DAY (the start) of your last menstrual cycle. (e.g., January 18th, 2015) (If you are currently menstruating, report the date that you STARTED menstruating.

It is very important that you are as ACCURATE as possible. Thank you.

_____/_____/_____

(Month/Day/Year)

38) Using the calendars provided, please try to estimate when you expect your menstrual cycle TO START (regardless of whether you are currently menstruating).

Date of Next Menstrual Cycle:

_____/_____/_____

(Month/Day/Year)

39) Are you currently menstruating?

___ Yes, I am currently menstruating.

___ No, I am not menstruating.

___ Yes, but I am at the VERY beginning of menstruating

___ Yes, but I am at the VERY end of menstruating.

40) Is your menstrual cycle regular?

___ It is highly regular.

___ It is regular most of the time

___ It is usually irregular

___ It is unpredictable

41) On average, what is the average length in days IN BETWEEN your menstrual cycles?

___22	___29	___36
___23	___30	_____Other
___24	___31	
___25	___32	
___26	___33	
___27	___34	
___28	___35	

Appendix B: Photograph and Vignette Manipulation

Nakamura and Kawabata (2014)   Rodway, Schepman, & Lambert (2013)

Please read the following statement about the person in the photograph:

<u>JASON</u>

Conscientious

This is Jason. He is a successful varsity collegiate basketball player. Out of all of the players on the team he is the hardest worker. Teammates have noted how much he stands out above others in terms of his diligence. He is very determined. At scheduled team practices, he hustles and looks to improve for the duration of training. He slowly continues to improve his abilities for the future.

Natural

This is Jason. He is a successful varsity collegiate basketball player. Out of all of the players on the team he is the most naturally talented. Teammates have noted how much he stands out above others in terms of his raw ability. He is very gifted. At scheduled team practices, he does not hustle and looks to saves his energy for the game. He makes little attempt to further build his skill-set for the future.

JESSICA

Conscientious

This is Jessica. She is a successful varsity collegiate basketball player. Out of all of the players on the team she is the hardest worker. Teammates have noted how much she stands out above others in terms of her diligence. She is very determined. At scheduled team practices, she hustles and looks to improve for the duration of training. She slowly continues to improve her abilities for the future.

Natural

This is Jessica. She is a successful varsity collegiate basketball player. Out of all of the players on the team she is the most naturally talented. Teammates have noted how much she stands out above others in terms of her raw ability. She is very gifted. At scheduled team practices, she does not hustle and looks to saves her energy for the game. She makes little attempt to further build her skill-set for the future.

Appendix C: Post-Manipulation Questionnaire –

42a) If you are currently in an intimate relationship, please put it aside and rate the degree to which you agree to engage in the following behaviors with the target**?** (with 1 being not at all and 7 being very much).

A) Sexual Intercourse

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

B) One Date

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

C) Short-term Relationship (Less than one month)

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

D) Long-term/Seriously Committed Relationship (More than 6 months)

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

43) If you are currently in an intimate relationship, please put it aside and rate the degree to which you agree with each of these statements (with 1 being not at all and 7 being very much).

E) Jason/Jessica is intelligent.

1	2	3	4	5	6	7

Strongly Disagree   Neutral   Strongly Agree

F) Jason/Jessica is healthy.

1	2	3	4	5	6	7

Strongly Disagree   Neutral   Strongly Agree

G) Jason/Jessica is sociable.

1	2	3	4	5	6	7

Strongly Disagree   Neutral   Strongly Agree

H) Jason/Jessica is self-confident.

1	2	3	4	5	6	7

Strongly Disagree   Neutral   Strongly Agree

I) Jason/Jessica is lively.

1	2	3	4	5	6	7

Strongly Disagree   Neutral   Strongly Agree

J) Jason/Jessica is an accurate thrower.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

K) Jason/Jessica is risky.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

L) Jason/Jessica is dominant

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

M) Jason/Jessica is prepared for a full-time job.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

Please complete the following items:

44) How many hours a week do you feel Jason/Jessica studies for school?

_____

45) How many hours do you feel Jason/Jessica reads per week?

_____

46) How many siblings do you feel Jason/Jessica has?

_____

47) Do you feel Jason/Jessica was raised in a one or two parent household?

__One

__Two

48) Please rate the degree to which you agree with each of these statements (with 1 being not at all and 7 being very much).

A) Jason/Jessica grew up in a low financial class family.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

B) Jason/Jessica grew up in a middle financial class family.

1	2	3	4	5	6	7
Strongly Disagree			Neutral			Strongly Agree

C) Jason/Jessica grew up in an upper financial class family.

1   2   3   4   5   6   7

Strongly Disagree   Neutral   Strongly Agree

D) Jason/Jessica grew up in a two-parent household.

1   2   3   4   5   6   7

Strongly Disagree   Neutral   Strongly Agree

E) Jason/Jessica grew up in a one-parent household.

1   2   3   4   5   6   7

Strongly Disagree   Neutral   Strongly Agree

F) Jason/Jessica grew up in an inner city.

1   2   3   4   5   6   7

Strongly Disagree   Neutral   Strongly Agree

G) Jason/Jessica grew up in a suburban area.

1   2   3   4   5   6   7

Strongly Disagree   Neutral   Strongly Agree

49) Please rate the degree to which you agree with each of these statements (with 1 being not at all and 7 being very much).

A) Jason/Jessica listens to rock music.

1	2	3	4	5	6	7

Strongly Disagree Neutral Strongly Agree

B) Jason/Jessica listens to country music.

1	2	3	4	5	6	7

Strongly Disagree Neutral Strongly Agree

C) Jason/Jessica listens to hip-hop music.

1	2	3	4	5	6	7

Strongly Disagree Neutral Strongly Agree

D) Jason/Jessica listens to classical music.

1	2	3	4	5	6	7

Strongly Disagree Neutral Strongly Agree

Please complete the following item:

50) How physically attractive is Jason/Jessica?

1	2	3	4	5	6	7

Very Average Very

Unattractive Attractive

Appendix D: Mini-K

The Mini-K

Please indicate how strongly you agree or disagree with the following statements. Use the scale below and write your answers in the spaces provided. For any item that does not apply to you, please enter "0."

Disagree Strongly	Disagree Somewhat	Disagree Slightly	Don't Know / Not Applicable	Agree Slightly	Agree Somewhat	Agree Strongly
-3	-2	-1	0	+1	+2	+3

	1. I can often tell how things will turn out.
	2. I try to understand how I got into a situation to figure out how to handle it.
	3. I often find the bright side to a bad situation.
	4. I don't give up until I solve my problems.
	5. I often make plans in advance.
	6. I avoid taking risks.
	7. While growing up, I had a close and warm relationship with my biological mother.
	8. While growing up, I had a close and warm relationship with my biological father.
	9. I have a close and warm relationship with my own children.
	10. I have a close and warm romantic relationship with my sexual partner.
	11. I would rather have one than several sexual relationships at a time.
	12. I have to be closely attached to someone before I am comfortable having sex with them.
	13. I am often in social contact with my blood relatives.
	14. I often get emotional support and practical help from my blood relatives.
	15. I often give emotional support and practical help to my blood relatives.
	16. I am often in social contact with my friends.
	17. I often get emotional support and practical help from my friends.
	18. I often give emotional support and practical help to my friends.
	19. I am closely connected to and involved in my community.
	20. I am closely connected to and involved in my religion.

Appendix E: Mate Value Inventory

Mate Value Inventory (MVI)

Please indicate how you would rate yourself on each of the following traits.

Trait	-3 Extremely low on this trait	-2 Somewhat low on this trait	-1 Slightly low on this trait	0 Neither high nor low on this trait	+1 Slightly high on this strait	+2 Somewhat high on this trait	+3 Extremely high on this trait
Desires Children							
Attractive Body							
Generous							
Ambitious							
Sociable							
Financially secure							
Faithful to partner							

Healthy						
Emotionally Stable						
Responsible						
Independent						
Kind and Understanding						
Attractive Face						
Intelligent						
Enthusiastic about sex						
Good sense of humor						
Loyal						

Appendix F: Ten-Item Personality Inventory

Ten-Item Personality Inventory-(TIPI)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which *you agree or disagree with that statement*. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1	2	3	4	5	6	7

I see myself as:
1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

Appendix G: Survey Welcome and Thank you page

Welcome Page:

Welcome!

This is a research study examining athletics from an evolutionary perspective, administered by the Evolutionary Psychology Laboratory at SUNY New Paltz. You must be at least 18 years of age and fluent in English to participate in this study.

If you decide to participate in this study, you will be asked to complete a web-based survey (approx. 30 minutes). The researchers will not be able to connect your responses to your identity. Please provide honest responses to all questions in the survey by yourself.

This project has been approved by the SUNY at New Paltz Human Research and Ethics Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. Please note that absolute confidentiality cannot be guaranteed due to the limited protections of Internet access.

You can direct questions regarding this study to the Principal Investigator, Andrew Shimkus (shimkusa1@hawkmail.newpaltz.edu). If you have any questions regarding your rights as a volunteer in research please contact SUNY New Paltz's Human Subjects Coordinator in the Office of Sponsored Funds at 1(845)-257-3282.

If you are a **PSYCHOLOGY MAJOR** at SUNY New Paltz and wish to get 1 credit for the SUNY New Paltz psychology subject research pool, please note that credit is granted automatically, **so be sure that you signed up for this survey via the sona system**. (http://newpaltz.sona-systems.com/) Please contact the Subject Pool Coordinator (SPC, psychsubjectpool@newpaltz.edu) regarding any technical issues with the survey.

Your completion of the following survey constitutes consent to participate. You may skip questions and stop completing the survey at any time without consequence.

Participants may become stressed from thinking about issues of sexuality and relationships. If this occurs, you are encouraged to stop the survey and contact the SUNY New Paltz counseling center (845) 257-2920.

Thank you for your cooperation.

Thank you Page:

Thank you for participating!

PSYCHOLOGY MAJORS at SUNY New Paltz

If you are a psychology major at SUNY New Paltz and signed up via the sona system, 1 credit has been automatically granted to your account. For questions or issues regarding the subject research pool, please email the subject pool coordinator (SPC, psychsubjectpool@hawkmail.newpaltz.edu).