

THE BIG-5 AND THE PERCEIVED EFFECTIVENESS OF LOVE ACTS

T Joel Wade, Jamie Vanartsdalen

Bucknell University, Lewisburg, PA

ABSTRACT

The present research was implemented in order to determine whether or not the Big-5 personality dimensions relate to the perceived effectiveness of love acts discovered in prior research. An internet based questionnaire was utilized and college undergraduates and as well as non-college students were included in the sample. The Big-5 dimensions of Agreeableness, Openness to Experience, and Emotional Stability were expected to be related to the perceived effectiveness of the Love acts. Additionally, men and women were expected to rate Love acts signaling commitment and exclusivity as most effective. The results obtained were consistent with the hypotheses and are discussed in terms of prior research.

Key words: love acts, personality, Big-5

INTRODUCTION

According to the Sexual Strategies Theory, men and women faced different adaptive problems and different constraints on their reproductive success throughout human evolutionary history (Buss & Schmitt, 1993). Thus, there are two different sexual strategies, a short-term mating strategy and a long-term mating strategy. Each strategy also has benefits.

For men, the potential reproductive benefit of long-term mating is that it offers the possibility of acquiring an entire lifetime of a women's reproductive capacity (Buss & Schmitt, 1993). In order to do so, men must identify which women are reproductively valuable, ensure certainty in their paternity of any children produced, are likely to strongly commit to a long-term mateship, and possess strong parenting skills (Buss & Schmitt, 1993). A potential reproductive benefit of a short-term mating strategy is that by copulating with multiple women a man's chances of insemination are greater. However, while a short-term mating strategy involves inseminating a number of fertile women men adopting this strategy must deal with the problems of fertility, sexual accessibility, and minimal commitment (Buss & Schmitt, 1993). For women, the primary benefit of seeking long-term mates is gaining continuous access to a man's resources and parental investment (Buss & Schmitt, 1993). The problems for a woman, therefore, become identifying men of high status and wealth who are willing to invest resources in her and her children. Moreover, any benefits that women might accrue from short-term mating, although not desirable due to a lack of continuous access to a mate's resources, mean immediate extraction of resources as well as securing protection from abuse by non-mated males, and possibly better genes (Buss & Schmitt, 1993). Thus, not surprisingly, long term mating is highly desirable for both men and women. Additionally, in college aged students, while men and women engage in a large amount of hook-ups, they prefer long-term mates (Garcia & Reiber, 2008). Overall, young adults of college age are having sex for pleasure, but in addition, over half of these students are reporting emotional gratification as a motivational factor. This suggests that a cognitively-driven desire for intimacy also underlies this sexual activity (Garcia & Reiber, 2008). That cognitively-driven desire might be, or might involve, love.

Love is a very old and powerful emotion (Fisher, 1992) that serves as a positive influence in many areas of life. Love evolved in order to satisfy the need to bond with one another in order to increase our

ability to survive, as well as to direct particular aspects of reproduction (Buss, 1988a; Fisher, 1998). There is also direct evidence that love leads to increased survival. Specifically, being attached to another individual increases one's ability to survive and thrive (Harlow & Zimmerman, 1959; Bowlby, 1982). Additionally, Fisher (2004) reports that love evolved in order for a man to become strongly attached to a woman, ensuring his commitment while the woman was raising the children, and for a woman to have a man around to help provide for, and help rear, offspring. It was important for women to keep men around since women were less able to partake in certain activities related to their survival and their child's survival due to their role of primary caregiver for the children. Women were assisted by the attached men in areas such as food gathering, shelter location, protection, and the imparting of life skills to offspring (Fisher, 2004). Also, for men, becoming attached enhanced their ability to have a genetic legacy. Fisher (1992) states that surviving the pull of attachment long enough to raise a child through infancy nurtured one's own DNA.

Parental investment also has an influence. Men and women each want partners who will be invested in the production of and survival of offspring. Parental investment concerns among men are primarily physically based. Specifically, men focus on reproductive fitness concerns that relate to future offspring production. Men desire women that are the best possible mates to bear their offspring because of the positive genetic qualities associated with physically fit women (Buss, 1989; Trivers, 1972). However, women desire a parental investment from men that indicates reproductive fitness through good genes, as well as a strong parental investment at the financial level (Buss, 1989; Trivers, 1972). Therefore, men and women display different assets in order to obtain mates. Men display assets that indicate status and good genes whereas women display assets that indicate fertility and successful mothering potential (Buss, 1988b; Buss & Dedden, 1990). The difference in resource display coincides with Buss' (1988a) delineation of the seven love act goals that men and women express differently: *resource display, exclusivity, commitment, sexual intimacy, reproduction, resource sharing, and parental investment*.

In accordance with resource display, a man tries to prove his status and financial abilities to his partner in order to show his potential level of parental investment, or ability to provide for future offspring (Buss, 1988a). Women on the other hand will dress up for their partner in order to signal youthfulness, attractiveness, and health which are all factors and determinants of a reproductively valuable female (Buss, 1988a). Therefore, the resource a man displays is his ability to financially invest in future offspring, and the resource a woman displays is her ability to produce offspring.

Mate attraction tactics are useful in order to portray resources to the opposite sex that are important for future offspring. In addition to physical displays, there may also be important behavioral displays to the opposite sex that signal investment in relationships. Although biologically speaking, conception is of utmost importance, once in a relationship, men and women are required to partake in different love acts to ensure loyalty to one's partner, or exclusivity. According to Buss (1988a), love acts related to exclusivity have two main purposes, (1) ensuring high confidence in paternity and (2) ensuring mutual commitment to the reproducing pair. An example of a love act for this category includes "never cheating on one another" (Buss, 1988a). With a cheating man, a woman loses the parental investment from the man, and with a cheating woman, a man's chance of having to provide for and raise another man's offspring increases. Thus, female infidelity of a sexual nature is forgiven much less often than male sexual infidelity (Shackelford, Buss, & Bennett, 2002). An important goal of a love act then is marriage (Buss, 1988a).

Buss' (1988a) findings on the importance of particular love acts are now well known, but more recent research set out to determine which love acts are perceived as most effective. Wade, Auer, and Roth (2009) carried out three studies, determining the prototypical love acts as well as which love acts were perceived as most effective. Since love acts related to exclusivity are important (Buss, 1988a), Wade, et al.'s, (2009) research found that these love acts were also rated as most prototypical. However, surprisingly, love acts related to displays of reproductive value and those relating to resource display were not rated as most prototypical love acts. Wade, et al., (2009) state that exclusivity acts may be considered more prototypical acts of love because they signify attachment, a key feature to romantic love. In regards to effectiveness, love acts portraying exclusivity were rated as the most effective way to show a partner that one loves him or her (Wade, et al., 2009). Love acts signaling exclusivity may be perceived as most effective because they may imply attachment and commitment to a partner (Wade, et al., 2009). Wade, et al., (2009) did not take into

account the personality of the individuals doing the rating of the love acts. Also, surprisingly, no research has examined love acts in relation to the personality of the perceiver.

Personality plays a critical role in mate selection and marital happiness (Botwin, Buss, & Shackelford, 1997). Botwin, et al., (1997) report that men and women both desire mates who are similar to themselves in personality. Also, having a mate who shows certain personality characteristics, particularly high Agreeableness, high Emotional Stability, and high Intellect-Openness is associated with higher levels of marital happiness (Botwin, et al., 1997). Thus, an individual's personality as well as the personality of her/his mate plays a role in mate selection as well as marital satisfaction. Additional research shows that personality plays a role in close relationships and relationship satisfaction as well.

In an exploration of the association between personality as measured by the Big-5 and satisfaction, love style, and intimacy in close relationships, White, Hendrick, and Hendrick (2004) reported that Neuroticism was negatively correlated with satisfaction for both men and women, Extraversion was positively correlated with satisfaction for both men and women combined, but not for either sex separately, and Agreeableness was significantly and positively correlated with satisfaction for men only. White, et al., (2004) also report that in terms of intimacy, Agreeableness was a significant predictor for the combined sample of men and women. However, Conscientiousness was not significantly correlated with satisfaction for either sex and it was not a predictor of relationship satisfaction (White, et al., 2004). These two aforementioned studies show that some personality traits (Neuroticism, Extraversion, Conscientiousness, and Agreeableness) may relate to aspects of love, i.e., relationship satisfaction and intimacy.

In addition, research utilizing the Big-5 personality dimensions shows that security and attachment styles appear to be associated with different personality dimensions (Roisman, et al., 2007; Shaver & Brennan, 1992). Individuals with a secure attachment style are less neurotic and more extraverted than insecure individuals and more agreeable than those with an avoidant attachment style (Roisman, et al., 2007; Shaver & Brennan, 1992). Also, individuals with an avoidant attachment style show low Agreeableness and high Neuroticism (Shaver & Brennan, 1992). Attachment styles are also related to relationship status (Shaver & Brennan, 1992). An attachment style of anxious-ambivalence is associated with not being in a relationship and with being in a shorter relationship, as well as lower levels of satisfaction and commitment within these short-term relationships (Shaver & Brennan, 1992). Taking into account the aforementioned research on personality, relationship satisfaction, and attachment, since love is related to attachment styles, and attachment styles are related to the Big-5 personality dimensions, love acts should also be associated with the Big-5 personality dimensions.

However, while we know which love acts are considered most effective, presently no research has examined how personality affects the perception of love acts. This knowledge should be ascertained since personality plays a role in mate selection and marital satisfaction. Therefore, the present study sought to determine if and how the Big-5 personality dimensions are related to the perceived effectiveness of love acts. Since no other research has focused on Big-5 personality dimensions in relation to love act effectiveness this aspect of the research is exploratory.

Hypotheses

Based on Wade, et al.'s (2009) research, love acts signaling commitment and exclusivity should be perceived as most effective by men and women. Specifically, the love acts: *"they got married"*, *"he proposed to her"*, *"he shares his emotional feelings with her"*, *"they are not afraid to be completely honest with one another"*, *"he never cheated"*, *"they support and advise one another"*, *"they moved in together"*, and *"she said I love you"* should be perceived as most effective. Wade, et al., (2009) report that these love acts signal exclusivity and commitment. The Big-5 personality dimensions are expected to be associated with the perceived effectiveness of love acts also since the Big-5 and attachment styles are associated and since love is related to attachment styles. Furthermore, the Big-5 dimensions are also expected to be associated with the perceived effectiveness of love acts since Botwin, et al., (1997) report that the Big-5 dimensions are related to marital happiness. Specifically, Botwin, et al., (1997) report that having a mate who exhibits high Agreeableness, high Emotional Stability, and high Intellect-Openness is associated with higher levels of marital happiness.

Therefore, in the present research, Agreeableness, Emotional Stability and Openness to Experience are expected to be associated with the perceived effectiveness of the love acts. Since no prior research has examined this this aspect of the research is exploratory. Thus, no specific hypotheses regarding which specific love acts will be associated with Big-5 personality dimensions are put forth.

MATERIALS AND METHODS

Participants

Participants were 37 men and 65 women from a private University in the Northeastern United States and Facebook, ranging in age from 18 to 28, $M=19.46$, $SD=1.88$. The sample was 82% White, 8% Black, 10% Other. Participants were recruited from introductory psychology classes, and through the internet via posting a link to the research questionnaire on Facebook. Participants from the introductory psychology classes' involvement was in partial fulfillment of requirements associated with the course. Internet participants did not receive any compensation for taking part in the research. This study was approved by the University's Institutional Review Board.

Procedure

Participants received a questionnaire that included demographic questions regarding: age, sex, sexual orientation, sexual experience history, relationship status, medication use, and birth-control use. The next page of the questionnaire contained 43 love acts and the instructions from Wade et al. (2009) which directed them to rate the effectiveness of each love act using a 7 point scale where 1= not very effective and 7 = very effective. The next page of the questionnaire contained the Big-5 items and instructions from Gosling, et al. (2003) that instructed participants to rate the extent to which each pair of traits applies to them using a 7 point scale where 1 = strongly disagree to 7 = strongly agree.

RESULTS

A series of Mixed Model Repeated Measures ANOVAs were computed. A 2 (Sex of Participant) x 43(Love acts) Mixed Model Repeated Measures ANOVA revealed an interaction of sex of participant and love acts being rated, $F(91, 42) = 2.39$, $p < .001$, see Table 1. Women rated "He gave her a gift" as a more effective act of love then men did ($t(100) = -2.11$, $p=.037$), ($M=4.77$, $SD=1.30$, and $M=4.24$, $SD=1.04$ for women and men respectively). Men rated "She would prioritize him over other activities, often giving something up for him" as a more effective act of love then women did ($t(100) = 2.52$, $p=.014$), ($M=5.35$, $SD=1.25$ and $M=4.63$, $SD=1.46$ for men and women respectively). Women rated "They support and advise one another" as a more effective act of love then men did ($t(99) = -3.17$, $p=.002$), ($M=6.02$, $SD=1.08$ and $M=5.25$, $SD=1.30$ for women and men respectively). Women rated "They held hands" as a more effective act of love then men did ($t(100) = -2.62$, $p=.010$), ($M=4.31$, $SD=1.60$ and $M=3.49$, $SD=1.37$ for women and men respectively). Women rated "She verbally expressed her love by saying "I love you"" as a more effective act of love then men did ($t(100) = -2.59$, $p=.011$), ($M=5.98$, $SD=1.05$ and $M=5.38$, $SD=1.28$ for women and men respectively). Women rated "They moved in together" as a more effective act of love then men did ($t(100) = -2.36$, $p=.020$), ($M=6.17$, $SD=.894$ and $M=5.68$, $SD=1.20$ for women and men respectively). Women rated "She met his family" as a more effective act of love then men did ($t(100) = -3.83$, $p < .001$), ($M=5.68$, $SD=1.09$ and $M=4.84$, $SD=1.01$ for women and men respectively).

Tab. 1: Mean Perceived Effectiveness of Love Acts Across Sex

Love Act	Males	Females	Love Act	Males	Females
They got married	6.68(.709)	6.75(.751)	She took care of him when he was ill	5.46(1.43)	5.31(1.35)
He proposed	6.57(.728)	6.62(.701)	They cuddled in bed	4.70(1.18)	4.89(1.34)
He shares his feelings	5.97(.986)	6.23(1.20)	She purchased expensive gift for him	5.03(.957)	4.85(1.23)
They are not afraid to be completely honest	6.08(1.14)	6.49(.753)	He gave her a gift	4.24*(1.04)	4.77*(1.30)
He never cheated	6.38(1.06)	6.16(1.29)	He maintained eye contact with her	4.92(1.38)	5.43(1.27)
They support/advise one another	5.25*(1.30)	6.02*(1.08)	He took her out to dinner	4.57(1.04)	4.46(1.31)
They moved in together	5.68*(1.20)	6.17*(.894)	They had sex	4.14(1.58)	4.57(1.82)
She said I love you	5.38*(1.28)	5.98*(1.05)	He gave her oral sex	4.32(1.56)	3.97(1.57)
He gave her flowers	4.76(.830)	4.86(1.31)	She performed sexual acts for him	4.35(1.57)	3.80(1.64)
They went away together for a few days	5.78(.976)	5.72(1.17)	They held hands	3.49*(1.37)	4.31*(1.60)
They went on a date	4.49(1.19)	4.42(1.22)	She hugged him	2.86(1.44)	3.50(1.86)
She's comfortable with PDA for him	5.46(1.07)	5.29(1.37)	They spent a lot of time together	4.81(1.22)	5.28(1.19)
They spent more time together than with friends	4.73(1.43)	5.08(1.15)	She prioritized him over others	5.35*(1.25)	4.63*(1.46)
He kissed her	3.89(1.61)	4.14(1.63)	He annoyingly and playfully teased her	3.22(1.48)	2.97(1.41)
They spent more time together than with friends	4.73(1.43)	5.08(1.15)	She prioritized him over others	5.35*(1.25)	4.63*(1.46)
They spend more time together sober than not sober	4.92(1.30)	5.23(1.53)	She made dinner for him	4.70(1.02)	4.46(1.11)
He traveled a long distance to see her	5.41(1.04)	5.72(.857)	He gave her a backrub	3.92(1.59)	4.06(1.38)
He serenaded her	4.84(1.56)	4.85(1.34)	He acted differently with friends	3.00(1.43)	2.83(1.44)
He complimented her looks	4.11(1.31)	4.28(1.62)	She commuted a distance to see him	5.35(1.23)	5.20(1.25)
She gives him most of her attention in public	4.89(1.27)	4.45(1.23)	He had extended phone call with her	4.28(1.26)	4.71(1.36)
They talk to one another a lot	4.84(1.39)	5.09(1.50)	He wrote notes and letters to her	5.03(1.30)	5.48(1.29)
He sacrifices for her	5.41(1.09)	5.55(1.21)	She met his family	4.84*(1.01)	5.68*(1.09)
She would help him	4.24(1.46)	4.58(1.51)			

Standard deviations are in parentheses. Higher numbers mean the particular love act was perceived as more effective, * = means are significantly different, $p < .05$. Exclusivity and commitment acts from Wade, et al., (2009) are in bold text.

The 2 (Sex of Participant) x 43 (Love acts) Mixed Model Repeated Measures ANOVA also revealed a significant effect for the 43 Love acts, $F(42, 50) = 20.80$, $p > .0001$, see Table 2. In general, Love acts signifying commitment and exclusivity were perceived as most effective. Additional Mixed Model Repeated Measures ANOVAs computed across sexual relationship experience, current relationship status, and across birth control usage for women did not reveal any additional significant effects.

Tab. 2: Mean Perceived Effectiveness of Love Acts

Love Act	Mean(SD)	Love Act	Mean(SD)
(a) They got married	6.71(.76)	She took care of him when he was ill	5.38 ^{abcdef} (1.32)
(b) He proposed	6.62(.71)	They cuddled in bed	4.85 ^{abcdef} (1.23)
(c) They are not afraid to be completely honest	6.38(.90)	She purchased expensive gift for him	4.92 ^{abcdef} (1.10)
(d) He never cheated	6.27(1.12)	He gave her a gift	4.57 ^{abcdef} (1.22)
(e) He shares his feelings	6.23(1.03)	He maintained eye contact with her	5.24 ^{abcdef} (1.27)
(f) They moved in together	5.99(1.06)	He took her out to dinner	4.53 ^{abcdef} (1.20)
They support/ advise one another	5.73 ^{abcdef} (1.21)	They had sex	4.35 ^{abcdef} (1.74)
She said I love you	5.75 ^{abc} (1.17)	He gave her oral sex	4.05 ^{abcdef} (1.57)
He gave her flowers	4.82 ^{abcdef} (1.14)	She performed sexual acts for him	3.96 ^{abcdef} (1.65)
They went away together for a few days	5.80 ^{abcdf} (1.03)	They held hands	3.95 ^{abcdef} (1.53)
They went on a date	4.46 ^{abcdef} (1.19)	She hugged him	3.25 ^{abcdef} (1.74)
She's comfortable with PDA for him	5.42 ^{abcdef} (1.21)	They spent a lot of time together	5.14 ^{abcdef} (1.20)
He kissed her	4.04 ^{abcdef} (1.59)	He annoyingly and playfully teased her	3.09 ^{abcdef} (1.44)
They spent more time together than with friends	5.00 ^{abcdef} (1.21)	She prioritized him over other	4.91 ^{abcdef} (1.43)
They spend more time together sober than not sober	5.18 ^{abcdef} (1.36)	She made dinner for him	4.59 ^{abcdef} (1.08)
He traveled a long distance to see her	5.65 ^{abcdef} (.89)	He gave her a backrub	3.99 ^{abcdef} (1.47)
He serenaded her	4.90 ^{abcdef} (1.42)	He acted differently with friends	2.85 ^{abcdef} (1.44)
He complimented her looks	4.28 ^{abcdef} (1.48)	She commuted a distance to see him	5.35 ^{abcdef} (1.11)
She gives him most of her attention in public	4.66 ^{abcdef} (1.25)	He had extended phone call with her	4.56 ^{abcdef} (1.28)
They talk to one another a lot	5.00 ^{abcdef} (1.42)	He wrote notes and letters to her	5.31 ^{abcdef} (1.29)
He sacrifices for her	5.53 ^{abcdef} (1.13)	She met his family	5.39 ^{abcdef} (1.09)
She would help him	4.48 ^{abcdef} (1.40)		

Higher numbers mean the particular love act was perceived as more effective. Superscripts denote significant differences, $p < .05$, e.g. mean for row a, "they got married", is significantly different from means for rows that have an 'a' in their superscript, etc.. Comparisons of all 43 means are not included in the table. Exclusivity and commitment acts from Wade, et al., (2009) are in bold text.

Correlations were computed to determine whether or not the Big-5 personality dimensions were related to the perceived effectiveness of the love acts, see Table 3. Table 3 shows that Extraversion was not significantly correlated with the perceived effectiveness of any love acts. Agreeableness was significantly correlated with the perceived effectiveness of the love acts: "He gave or purchased flowers for her" ($r = -.26$), "He complimented her appearance." ($r = -.26$), "He was annoying and playfully picked on her" ($r = -.22$), and "He rubbed her back" ($r = -.27$). Conscientiousness was significantly correlated with the love act "He kissed her" ($r = .20$). Emotional stability was significantly correlated with the love acts: "She would help him" ($r = -.28$) and "They support and advise one another" ($r = -.38$). Openness to Experiences was significantly correlated with the love acts: "He spent more time with her than his friends" ($r = .28$), "She gives him all or most of her attention while out in public" ($r = .21$), "They support and advise one another" ($r = .22$), and "He gazed into her eyes and kept a lot of eye contact" ($r = .23$).

Tab. 3: Correlations Between Big 5 Personality Dimensions and the Perceived Effectiveness of Love acts

Love Acts	Big 5 Personality Dimension				
	Extraversion	Agreeableness	Conscientiousness	Emotional Stability	Openness
They got married	-.14	-.07	.02	.08	.06
She took care of him	-.14	.13	-.06	-.15	.11
He proposed	.01	-.06	.02	.06	-.01
They cuddled in bed	-.06	-.02	.08	-.05	.06
He took her out to dinner	-.01	-.15	-.06	-.09	.05
They held hands	-.08	-.07	.19	-.12	.14
They spent a lot of time together	.05	-.003	-.01	-.09	.08
She prioritized him over others	-.01	.11	-.13	.01	.08
She made dinner for him	.02	-.07	.02	.002	.14
He gave her a <u>backrub</u>	-.012	-.27*	.08	.04	.03
He had extended phone call with her	-.04	-.06	.15	.06	.0001
He shares his feelings	-.13	.04	-.01	-.04	.19
She purchased expensive gift for	-.05	-.08	-.16	.01	-.04
They are not afraid to be completely honest	-.17	.17	.09	.06	.17
He gave her a gift	-.10	-.11	-.08	-.12	-.04
He never cheated	.08	.05	-.01	-.02	-.04
He maintained eye contact	.07	.04	.18	.09	.23*
They support/advise one another	-.06	-.13	.12	-.39*	.22*
They moved in together	.07	-.01	-.09	-.004	-.02
They had sex	-.04	.04	.02	.01	.06
She said I love you	.07	-.05	.07	-.01	-.10
He gave her oral sex	.002	-.07	-.05	.10	-.01
He gave her flowers	-.034	-.26*	-.13	-.06	-.12
She performed sexual acts for him	-.03	-.05	-.06	.06	.01
They went away together for a few days	.07	-.04	-.16	.11	-.02
They went on a date	-.07	-.13	-.03	-.02	-.02
She hugged him	-.04	-.01	.17	-.04	.04
She's comfortable with PDA for him	.02	-.04	-.05	-.07	-.04
He kissed her	-.07	-.12	.20*	-.10	.02
He annoyingly and playfully teased her	-.10	-.22*	.13	.03	.15
They spent more time together than with friends	.01	-.07	-.07	-.16	.28*
They spend more time together sober than not sober	-.06	-.03	-.15	.01	-.04
He traveled a long distance to see her	.01	-.11	.02	-.14	.13
He serenaded her	.13	.12	.02	-.03	.14
He acted differently with friends	-.14	.03	-.04	.09	-.08
He complimented her looks	.06	-.26*	.02	-.14	.03
She commuted a distance to see him	-.04	-.06	.08	-.02	.18
She gives him most of her attention in public	.12	-.09	-.11	-.03	.21*
They talk to one another a lot	-.12	-.12	-.04	.11	.10
He wrote notes and letters to her	.05	-.04	.07	-.01	.19
He sacrifices for her	-.06	.06	-.01	-.18	.16
She met his family	.01	.03	.15	-.03	.03
She would help him	.05	.004	-.01	-.28*	.09

* = $p < .05$.

DISCUSSION

Consistent with the hypothesis and prior research (Buss, 1988a; Wade, et al., 2009), love acts signaling commitment and exclusivity (“they got married”, “he proposed”, “ he shares his emotional feelings with her”, “they are not afraid to be completely honest with one another”, “he never cheated”, “they support and advise one another”, “they moved in together”, and “she said I love you”) were rated as the most effective ways to show a partner that one loves him or her. These acts may have been rated as most effective because they seem to imply attachment and commitment to a partner, which are very important for relationships and survival. Fisher (2004) reports that attachment is a key aspect of love and can enhance one’s survival. Therefore, these types of love acts are rated as most effective ways to show a partner that he or she is loved.

Additionally, sex differences occurred. Women rated the love acts “He gave her a gift”, “She would prioritize him over other activities, often giving something up for him”, “They held hands”, “She said I love you”, “They moved in together”, and “She met his family” as most effective while men rated the love act “She would prioritize him over other activities, often giving something up for him” as more effective. This sex difference may be a reflection of men and women’s different experiences expressing love as Ackerman, Griskevicius, and Li (2011) report. Alternatively, it is possible that women may feel that the love acts “He gave her a gift”, “She would prioritize him over other activities, often giving something up for him”, “They held hands”, “They moved in together”, and “She met his family” are also acts of commitment and exclusivity more strongly than men do, and as a consequence women rated these acts as more effective. However, further research is warranted in order to ascertain the validity of this explanation.

Also, as hypothesized, the Big-5 personality dimensions were found to be somewhat associated with the perceived effectiveness of love acts. However, while Agreeableness, Openness to Experience and Emotional Stability were related to the perceived effectiveness of some love acts, Conscientiousness was also related to the perceived effectiveness of a love act. Agreeableness was significantly correlated with the love acts: “He gave or purchased flowers for her”, “He complimented her appearance”, “He was annoying and playfully picked on her”, and “He rubbed her back”. Also, conscientiousness was significantly correlated with the love act “He kissed her”. Emotional stability was significantly correlated with the love acts “She would help him” and “They support and advise one another”. Lastly, Openness to Experiences was significantly correlated with the love acts: “He spent more time with her than his friends”, “She gives him all or most of her attention while out in public”, “They support and advise one another”, and “He gazed into her eyes and kept a lot of eye contact”. These acts may have been correlated with perceived effectiveness of the particular love acts because security and attachment styles appear to be associated with different personality dimensions (Roisman, et al., 2007; Shaver & Brennan, 1992).

Gosling, et al. (2003) described those high in Agreeableness to be trusting, generous, sympathetic, and cooperative. In the present research the correlations between Agreeableness and the effectiveness of the love acts was negative suggesting that those low in Agreeableness perceive acts that suggest or indicate generosity as most effective. These individuals, not being very cooperative themselves may find these particular love acts more effective because they indicate cooperativeness and generosity. The individuals may want a partner to give them what they themselves do not have.

Individuals low in Emotional Stability, i.e., those who are not very relaxed and self-confident, may rate helping one’s partner and supporting/advising each other as effective love acts because these acts signals non-anxious, calm and helpful qualities to a partner. Being less emotionally stable these individuals find these helpful positive actions from a mate to be very effective acts of love. Individuals low in Emotional Stability may crave love acts that indicate relaxation and self-confidence. Thus, love acts signaling these traits are perceived as very effective acts of love.

Individuals who are more Open to Experiences can also be described as curious, reflective, creative, deep, and open-minded (Gosling, et al., 2003). Love acts that indicate giving time, attention, and support to a mate may signal that an individual is a deep, open-minded person capable of listening and relating to others. These individuals may want partners who are like themselves since Botwin, et al., (1997) report that

men and women both desire mates who are similar to themselves in personality. Therefore, individuals high in Openness to Experience may rate the actions that are indicative of a similar personality as most effective.

Conscientiousness may be correlated with the act: “he kissed her” because kissing can enhance bonding due to the oxytocin and vasopressin releases that take place with kissing a partner (Hughes, Harrison, & Gallup, 2007). Therefore, these individuals, being conscientious and intelligent, may feel this is the best way to show a partner that one is committed to them and that this is the best way to secure and/or maintain a commitment from a partner.

The present research mirrors Buss’s (1988a) findings and Wade, et al.’s (2009) findings showing that, overall, participants rated acts that displayed mutual support, commitment, marriage and exclusivity, and fidelity as the most effective love acts. These actions play important roles in relationships, and love (Fisher, 1998, 2004), and therefore these results are not surprising. Furthermore, these results suggest that Big-5 personality dimensions may be significantly related to the perceived effectiveness of particular love acts.

Overall, these findings are consistent with other evolutionary theory based research examining emotional access, which plays a role in commitment. For example, prior research shows that emotional access (commitment) plays a role in mate expulsion, and in jealousy induction. A lack of emotional access (commitment) leads to mate expulsion (Wade, Palmer, DiMaria, Johnson, & Multack, 2008) and individuals report a greater likelihood of manipulating their emotional commitment to their partners in order to induce jealousy in their partners (Weinstein & Wade, 2011; Wade & Weinstein, 2011). Additionally, the findings in the present research are also consistent with Garcia and Reiber’s (2008) evolutionary theory based research showing that although men have a stronger desire for short-term relationships, men and women both desire long term committed relationships. The findings are also consistent with Buss’s (2000) evolutionary theory based research on jealousy showing that individuals desire partners who are exclusive because failure to do would lead to a lower likelihood of an individual being able to pass their genes along to the future generations. These findings show that commitment and exclusivity play fundamental roles in human mating desires and actions.

Limitations

This study used participants between the ages of 18 and 28, the majority being college students from a private University in the Northeastern United States, and 82% of the participants were White. Future research should be implemented to determine whether the same love acts are perceived as effective by an older and more ethnically diverse population. The personality traits of older individuals at different stages of their lives may also have an effect on which love acts are perceived to be most effective.

Additionally, this research used self-reports of the perceived effectiveness of the love acts and self-reports of how strongly Big 5 personality traits apply to individuals. Self reports can be subject to socially desirable responding. Future research should incorporate social desirability measures in order to control for this. Also, the present research examined the perceived effectiveness of love acts rather than the actual effectiveness of love acts. Therefore, future research should examine, if possible, via observational methods, how effective the love acts actually are in communicating love to a partner. Lastly, since the Big-5 personality dimensions aspect of this research was exploratory additional research examining Big-5 personality dimensions in relation to love act effectiveness is warranted in order to fully determine if personality dimensions are associated with the perceived effectiveness of love acts.

ACKNOWLEDGEMENTS

The authors would like to thank the Editors and anonymous Reviewers for their helpful comments and suggestions on an earlier version of this manuscript.

REFERENCES

- Ackerman, J. M., Griskevicius, V., & Li, N. P. (2011). Let's get serious: Communicating commitment in romantic relationships. *Journal of personality and social psychology*, 100(6), 1079-1094.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality*, 65(1) 107- 136).
- Bowlby, J. (1982). *Attachment*. New York: Basic Books.
- Buss, D. M., (1988a). Love acts: The evolutionary biology of love. In Sternberg, Robert J. and Barnes, Michael L. (Eds.). *The psychology of love*. (pp. 100-118). New Haven, CT, US: Yale University Press.
- Buss, D. M. (1988b). The evolution of human intrasexual competition: Tactics of mate attraction. *Journal of Personality and Social Psychology*, 54(4), 616-628.
- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences*, 12, 1-49.
- Buss, D. M. (2000). *The dangerous passion: Why jealousy is as necessary as love and sex*. Free Press.
- Buss, D. M., & Dedden, L. A. (1990). Derogation of competitors. *Journal of Social and Personal Relationships*, 7, 395-422.
- Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *American Psychological Association: Psychological Review*, 100(2), 204- 232.
- Fisher, H. E. (1992). *Anatomy of love: The natural history of monogamy, adultery, and divorce*. New York: Norton and Company.
- Fisher, H. E. (1998). Lust, attraction, and attachment in mammalian reproduction. *Human Nature*, 9(1), 23-52.
- Fisher, H. E. (2004). *Why we love: The nature and chemistry of romantic love*. New York: Henry Holt.
- Garcia, J. R., & Reiber, C. (2008). Hook-up behavior: A biopsychosocial Perspective. *Journal of Social, Evolutionary, and Cultural Psychology*.
- Gosling, S. D., Rentfrow, P. J. & Swann, W. B. (2003). A very brief measure of the big-five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Harlow, H., & Zimmerman, R. R. (1959). Affectionate responses in the infant monkey. *Science*, 130, 421-32.
- Hughes, S. M., Harrison, M. A., & Gallup G. G. Jr. (2007). Sex differences in romantic kissing among college students: An evolutionary perspective. *Evolutionary, Psychology*, 612-631.
- Roisman, G. I., Holland, A., Fortuna, K., Fraley, R. C., Clausell, E., & Clarke, A. (2007). The adult attachment interview and self-reports of attachment style: An empirical reappraisal. *Journal of Personality and Social Psychology*, 92(4), 678-697.
- Shackelford, T. K., Buss, D. M., & Bennett, K. (2002). Forgiveness or breakup: Sex differences in responses to a partner's infidelity. *Cognition and Emotion*, 16(2), 299-307.
- Shaver, P. R., & Brennan, K. A. (1992). Attachment styles and the "big five" personality traits: Their connections with each other and with romantic relationship outcomes. *Personality and Social Psychology Bulletin*, 18(5), 536-545.
- Trivers, R. (1972). Parental investment and sexual selection. In B. Campbell, (Ed.), *Sexual selection and the descent of man: 1871-1971*, (pp. 136-179), Chicago: Aldine.
- Wade, T. J., Auer, G., & Roth, T. (2009). What is love: Further investigation of love acts. *Journal of Social, Evolutionary, and Cultural Psychology*, 3(4), 290-304.
- Wade, T. J. & Weinstein, A. B. (2011). Jealousy induction: Which tactics are perceived as most effective? *Journal of Social, Evolutionary, and Cultural Psychology*, 5(4), 231-238.
- White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big five personality variables and relationship constructs. *Personality and Individual Differences*, 34, 1519-1530.
- Weinstein, J. L., & Wade, T. J. (2011) Jealousy induction methods, sex, and the Big-5 personality dimensions, *Psychology*, 2(5), 517-521.