



The demographics of mate value and self-esteem

Gary L. Brase*, Emma C. Guy

*Sunderland Business School, Division of Psychology, University of Sunderland, St Peter's Campus,
St. Peters Way, Sunderland SR6 0DD, UK*

Received 6 September 2002; received in revised form 24 January 2003; accepted 26 February 2003

Abstract

A revised version of the sociometer hypothesis account of self-esteem holds that self-esteem is a function of multiple indexes of how a person stands in relation to those around him or her. One of the areas in which people are proposed to be sensitive to their relative standing is their mate value—how attractive they are as a potential mate. Elements of one's mate value are tied to age and sex of a person, and marital status may also be a demographic variable that reflects mate value. A study with 161 participants, representing a range of ages and marital standings, found that age, sex, and marital status were related to self-estimates of mate value and efforts to enhance mate value. In turn, mate value and mate value enhancement effort—in addition to marital satisfaction—were significant predictor variables for self-esteem.

© 2003 Elsevier Ltd. All rights reserved.

Keywords: Physical attractiveness; Self-esteem; Theory of evolution; Human sex differences; Social comparison; Age; Marital status

1. Introduction

Certain self-esteem enhancement programs, popular in schools and other public institutions, implicitly carry an assumption that self-esteem is primarily based upon subjective belief states. Specifically, the premise of such programs is that improvements in self-esteem can be made without a necessary reference to objective criteria in the external world. For example, self-esteem under this view can be characterized by the possession of traits such as tolerance and respect for others, accepting responsibility for one's actions, integrity, pride in one's accomplishments, being loving and lovable, ambitious, and being capable of self-direction (e.g. Branden, 1994; Owens, Stryker, & Goodman, 2001). Although these are certainly positive traits for people to have and

* Corresponding author. Tel.: +44-494-515-3541; fax: +44-191-515-2308.

E-mail address: gary.brace@sunderland.ac.uk (G.L. Brase).

we encourage their development in people, defining self-esteem exclusively in terms of these traits leads to implications as to the presumed nature of self-esteem. In particular, all these traits enjoy a property known as *non-zero-sumness*: increases in these traits in one person or group of people does not have any implications for decreases in these same traits for other persons. Instead, these traits can, and are, often assessed by comparing how an individual currently views him or herself (perceived self) and that person's ideals (ideal self).

Other theories of self-esteem make greater reference to the individual's position relative to others and the external world. The recently influential sociometer hypothesis (Leary, Tambor, Terdal, & Downs, 1995) proposes that self-esteem acts as a monitoring and motivational system involved in the maintenance of interpersonal relationships. Perceived inclusory status acts as the monitor and is related directly to self-esteem. Lowered self-esteem and anxiety are hence products of perceived exclusion. The sociometer hypothesis can efficiently explain situational constraints on self-esteem, as reinforced by the high correlation between self-esteem and individuals' performances in domains that are judged important to others (Harter & Marold, 1991). Some of the findings of Leary and colleagues illustrate how the sociometer theory of self-esteem includes the assumption that self-esteem is indexed to a person's state in the world. In one study, either positive feelings about oneself (i.e. self-esteem) were generated by inclusion in a working group, or negative feelings about oneself were generated by exclusion. In another study, the same manipulation of people's feelings about themselves was found when they were included or excluded from interpersonal interactions. Thus, the sociometer model of self-esteem is fairly directly keyed to objective world states, rather than to purely subjective belief states.

That the sociometer model (and similar models) of self-esteem holds that self-esteem is based on objective world states is not problematic per se for self-esteem enhancement programs. There is very strong potential for conflict, however, in that a great many aspects of the world involve *zero-sum* situations—situations in which an increase in the standing of one person necessarily involves a decrease in standing for others (e.g. higher social status for one person in a hierarchy involves a relative decrease in status for at least one other person). If aspects of self-esteem are zero-sum in nature, then those elements of self-esteem cannot be enhanced in a population *en mass*. The processes of social inclusion and exclusion central to the sociometer hypothesis have zero-sum aspects to them (and in the studies by Leary et al., 1995, 1998 they were clearly zero-sum), but it is not entirely clear how rigidly social exclusion and inclusion must conform to a zero-sum format. Recent expansions proposed for the sociometer hypothesis, however, have suggested more research avenues that clearly involve zero-sum contexts.

1.1. Multiple sociometers

One of the lines of support for the initial proposal of the sociometer hypothesis was that monitoring social inclusion and exclusion was an adaptive problem; that the evolutionary processes that sculpted the functional design of the mind would likely have included a system to monitor social inclusion and motivate corrective action if the level of inclusion became too low (i.e. social exclusion; Leary et al., 1995). An adaptationist analysis of what evolutionary functions were likely to have been served by self-esteem, however, indicates that social inclusion in only one of such evolutionarily recurrent situations (Kirkpatrick & Ellis, 2001; Kirkpatrick, Waugh, Valencia, & Webster, 2002). Self-esteem can be considered as a system that monitors the environment

(both internal and external states of the world) for situations that historically (over evolutionary history) have indicated probable and significant inclusive fitness costs, and motivates corrective actions. Social inclusion/exclusion may be a rough category of some of these situations, including one's status in mating relationships, friendships, coalitions, and kinships. Furthermore, there are other, independent, situations that would appear to be equally plausible as candidates for evolutionarily important situations tracked by self-esteem sociometers, for example: ingroup status relative to outgroups of various sorts, interpersonal dominance, interpersonal status and intersexual attractiveness (Kirkpatrick et al., 2002). In other words, there may be a useful analogy between the functional design of overall self-esteem and the design of depth perception in the visual system. The perception of depth in the visual field is a single phenomenological experience, but there are several aspects of the visual information that the visual system can employ to produce this phenomenon (Holway & Boring, 1941; Coren & Ward, 1989). Similarly, self-esteem may be output as a single state of awareness, or "feeling", but actually be a composite of the results from multiple sociometers.

1.1.1. Self-esteem and mate value

One domain that would clearly be an evolutionarily significant area for monitoring and motivating corrective action (i.e. tied into the self-esteem sociometer system) is one's own mate value (see also Barkow, 1989; Kenrick, Groth, Trost, & Sadalla, 1993; Kiesler & Baral, 1970; Tooby & Cosmides, 1990; Trivers, 1972). A person's mate value is a theoretically quantified estimate of how valuable that person would be as a partner in a reproductive relationship. As such, mate value is roughly measured operationally by estimates of "attractiveness" to members of the opposite sex. Many variables contribute to mate value, including physical, personality, and demographic factors (much of this work is summarized in Buss, 1999). Some aspects of mate value are idiosyncratic variations, such as in personality, physique, and other traits that vary within an otherwise uniform demographic population (e.g. fluctuating asymmetry and waist-to-hip ratio; Gangestad & Simpson, 2000; Singh & Young, 1995). Other aspects of attractiveness and mate value vary systematically with population demographic variables. For example, males in general find younger reproductive-age females more attractive than older females (younger females have a larger portion of their reproductive potential remaining than older females; e.g. Buss, 1989; Kenrick & Keefe, 1992). Females, in turn, find males somewhat older than themselves to be more attractive (older males tend to have more resources and status to help provide for offspring; e.g. Buss, 1989).

1.2. Age and sex

Prior research on the individual effects of age and of sex on self-esteem have been inconclusive. Some studies have found higher levels of self-esteem for men, compared to women (Fahrenkamp, 2001; Hong et al., 1993), but other studies have not found a sex difference (Sieber, 1997). Some studies have found higher levels of self-esteem for older people (Hong, Bianca, Bianca, & Bollington, 1993; Woodard & Suddick, 1992), but other studies have not found an effect of age (Erdwins, Mellinger, & Tyer, 1981; Fahrenkamp, 2001; Sieber, 1997).

As major elements of mate value, age and sex would appear to be important likely variables regarding psychological outcomes such as self-worth and self-esteem, but their influence would

perhaps be indirect rather than direct. Ben-Hamida, Mineka, and Bailey (1998) proposed that efforts to increase one's own mate value would have different emotional consequences for men and women. In particular, biological traits of youth and physical attractiveness—valued as traits in women by men—tend to be less controllable than status and power—traits valued in men by women. There is a negative correlation between age and physical attractiveness (Perlini, Marcello, Hansen, & Pudney, 2001), and although aging and many aspects of physical appearance are as uncontrollable for men as they are for women, the effects of aging are of much greater relevance to women's attractiveness and mate value. Feingold (1990) attributed women's preoccupation with their appearance as partly due to men's greater emphasis on youth and healthful appearance, while a man's aged appearance does not deter women to the same extent. Ben-Hamida et al. (1998; and Buss, 1994) also suggested that preferences for potential mates who are very desirable (i.e. of high mate value) have produced a motivation to appeal to members of the opposite sex. So, to increase chances of mating with highly desirable partners some individuals may seek to increase their mate value. Male attempts to boost their mate value should thus be more controllable and successful (on average) than women's attempts, as time and effort in a profession is likely to increase one's status and resources. On the other hand, the passage of time (past the age of reproductive maturity) has a negative effect on women's reproductive potential, and hence mate value and attractiveness. Repeated failures by women to enhance their mate value over time may lead to thoughts of uncontrollability, which can then lead to feelings of helplessness, anxiety, depression, and lowered self-esteem. Thus, somewhat paradoxically, greater efforts and emphasis on maintaining or increasing one's attractiveness can (eventually) have negative effects on women in terms of self-esteem.

Subsequent research has been supportive of this general thesis. Self-perceived body image has been found to be predictive of self-esteem for women, but not for men (Wade & Cooper, 1999). Santor and Walker (1999) found that physical attractiveness (rated by an observer) was related to self-worth (which is strongly related to global measures of self-esteem), although their results were not broken down by sex. Furthermore, Santor and Walker found that the effect of attractiveness, as well as of dominance, on self-worth were mediated by the extent to which people believed that others were interested in them because of those attributes. Finally, Wade (2000) found specific physical features that were significant predictors of self-esteem for men and for women, but they were different features for the two sexes. Aspects of the body related to strength and dominance (reflexes and face) predicted male self esteem (adjusted $R^2 = 0.28$), whereas aspects of the body related to fecundity (a sex appeal subscale) predicted female self-esteem (adjusted $R^2 = 0.25$).

1.3. Marital status

Another characteristic that is often used as a major demographic variable (in addition to sex and age) is marital status. Marital status is not directly linked to attractiveness and mate value in the way that age and sex are, but nevertheless may be a powerful indirect cue of mate value. For the outside observer, a person being married indicates that a person is more likely to have some value as a partner (after all, they are a partner to someone already). Moreover, one's own successful marriage may be used as a cue for assessing one's own mate value (e.g. via a sociometer process).

Research on the relation between marriage or marital status and self-esteem is limited. MacDonald, Ebert, and Mason (1987) found that people in intact marriages (compared to divorced) had higher self-esteem, but Fahrenkamp (2001) found that marital status (separate from general

perceived social support) was not predictive of self-esteem. Shackelford (2001) established significant effects of marital disharmony and conflict on self-esteem, which were predicted based on two evolutionary hypotheses. Firstly, it was hypothesized that self-esteem tracks costs inflicted by one's spouse. One particularly large cost a woman can inflict on her husband's self-esteem is sexual infidelity, and wives' sexual infidelity was found to be a strong predictor of low self-esteem in men. In contrast, spousal derogations of attractiveness was a better predictor of women's low self-esteem, which is consistent with the above results of Wade and Cooper (1999). Shackelford's second hypothesis was that self-esteem tracks one's own mate value. Self-esteem was measured using a four-dimensional model of global, physical, social, and intellectual self-esteem, and it was found that women's physical attractiveness correlated with physical, social and global self-esteem as predicted, whereas men's physical attractiveness correlated only with physical self-esteem.

Marriages, of course, are not all the same. While there may be an overall effect of marital status on self-esteem, the quality of a marriage should also be an important element in mediating any effect of marriage on self-esteem. Indeed, a positive correlation has been demonstrated between global indexes of self-esteem and sexual and marital satisfaction (Roberts & Donahue, 1994). It has been suggested that marital satisfaction and dissatisfaction may function as psychological states that track costs and benefits of marriage (Shackelford & Buss, 1997, 2000), which appears to overlap somewhat with social exchange/equity theories of relationship satisfaction and dissatisfaction (a positive correlation has been demonstrated between global indexes of self-esteem and sexual and marital satisfaction; Roberts & Donahue, 1994). The prior research by Shackelford, although important and useful, was based upon a sample of newlywed couples who had been married under a year. This makes his findings of limited use in discussions about the longer term effects of marriage (and indeed, of aging and marriage). Additionally, marital satisfaction was likely to have been particularly high in this sample—yielding a restricted range of scores—as the couples were in the “honeymoon period” of marriage.

1.4. Hypothesis and predictions

The overall hypothesis of this study is that key demographic variables (i.e. sex, age, and marital status) will be systematically related to both people's rated mate value and the amount of effort they put into increasing their mate value. Furthermore, these two variables (mate value and mate value enhancement) should significantly predict levels of self-esteem. This hypothesis can be further broken down into specific predictions:

1. Mate value will decline with age for females, but increase with age for males.
2. Mate value will be higher for married people.
3. Efforts to enhance one's mate value will be greater for females than for males, and will be greater for single people than for married people.
4. Differences in mate value enhancement predicted above (3) will become larger with age
5. Self-esteem will be higher for those people who perceive themselves as having high mate value, and who spend less effort on mate value enhancement.
6. Self-esteem will be better predicted by mate value and mate value enhancement levels than by the demographic variables of age, sex, and marital status, and any effects of these demographic variables will be mediated to some extent by these two mate value measures.

2. Method

2.1. Participants

One hundred and sixty-one university student participants were recruited from classrooms and other campus settings, including evening classes and other sites more likely to result in an older, more demographically diverse sample. The participants consisted of 78 males and 83 females, of whom 64 were married and 97 were unmarried. 82 of the participants were between 18–25 years of age, 49 were between 26–35, and 30 were 36 years of age or older. Data from 6 participants who were engaged to be married were removed, as they did not fit well into the marital status categories relevant to the present research.

2.2. Materials and procedure

Each participant was asked to sign a consent form and answer a two-page questionnaire. The questionnaire included items asking for their sex, age, marital status, and if they had any children (and if so, how many). If married, they were asked the number of years they had been married and how satisfied they were with their marriage (on a scale of 1–7; 1 = Not at all–7 = Very). Following these items, participants were given the following two items:

- “Many people look at specific characteristics in choosing their potential marriage partners. Some common desirable traits include: Being socially exciting, age, being physically attractive, having a good sense of humor, having good financial/professional status, being of high intelligence, being in good health, and liking children. Overall, how would you rate your level of desirability as a partner on a scale of 1–9 (1 = Extremely desirable–9 = Extremely undesirable)”
- “Considering your value as a partner, how much effort do you put into increasing your desirability? Please state on scale of 1–5 (1 = Very little time–5 = Great amount of time)”

The final part of the questionnaire consisted of the [Rosenberg \(1965\)](#) Self-esteem scale. The Rosenberg self-esteem scale, which is a global-self esteem measure, was used for two reasons. First, we wanted a general self-esteem measure that was not constructed in any way that could be seen as designed to conform to the predictions being tested here. Second, The Rosenberg scale has been used in many prior studies, and thus provides good comparability with previous results. The Rosenberg scale has high reliability with test-retest correlations typically in the range of 0.82 to 0.88 and Cronbach’s alpha for various samples between 0.77 and 0.88. ([O’Brien, 1985](#)). On completing the questionnaire, participants were debriefed verbally as to the aims of the study.

3. Results

Scores from the Rosenberg self-esteem scale were calculated and these, along with responses from all the other questionnaire items, were entered into SPSS for analysis. Age was split into

three categories: 18–25, 26–35, and 36+ years old. For clarity, scores on the mate value self-rating (on a scale of 1–9, with 1 = Extremely desirable–9 = Extremely undesirable) were reversed so that higher scores indicate higher mate value.

3.1. Mate value

A $2 \times 2 \times 3$ factorial ANOVA (Sex \times marital status \times age) found a strong main effect for marital status [$F(1, 149) = 7.115$, $P = 0.008$, $\text{Eta} = 0.046$], in the predicted pattern of married participants rating themselves as having higher mate values (mean: 5.95) than those who were unmarried (mean: 5.25). A second significant main effect, for age [$F(2, 149) = 3.373$, $P = 0.037$, $\text{Eta} = 0.043$] showing decreasing self-esteem with increasing age, appears to have been driven by an interaction between participant age and sex [$F(2, 149) = 3.664$, $P = 0.028$, $\text{Eta} = 0.047$]. Fig. 1 shows that the nature of this interaction is largely as predicted: assessed mate value declines with age for females but increases with age for males (across the first two age categories). Not predicted was the subsequent drop in assessed mate value for males in the oldest group (over 36 years), compared to the 26 and 35 years old group. None of the other results of the analysis were statistically significant.

3.2. Efforts to enhance mate value

Another $2 \times 2 \times 3$ factorial ANOVA (Sex \times marital status \times age) was conducted, this time using as the dependent variable the amount of effort expended on increasing one's desirability (mate value enhancement). A strong main effect for sex of participant [$F(1, 149) = 66.929$, $P < 0.001$,

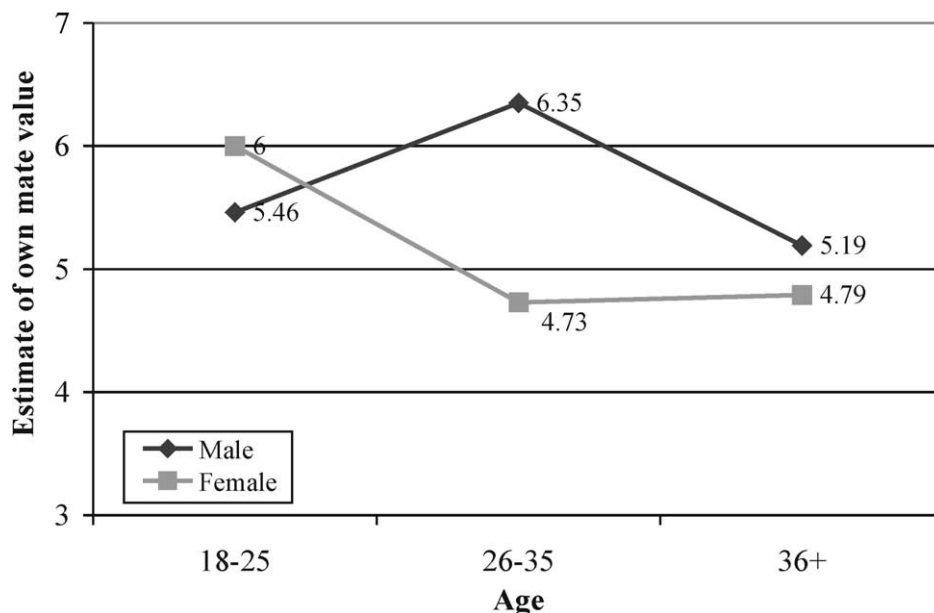


Fig. 1. Significant interaction between age and sex of participants in self-assessments of their own desirability as a partner (i.e. mate value) (ratings reversed from original questionnaire, so that higher values indicate higher mate value estimates).

Eta = 0.310] and a sex \times age interaction trend [not significant at the 0.05 level: $F(2, 149) = 2.695$, $P = 0.071$, Eta = 0.035] revealed that women overall put more effort into enhancing their mate value and that, whereas women maintain this level of effort across the age ranges, men's efforts to enhance their mate values declines with age (Fig. 2).

Significant main effects of both age [$F(2, 149) = 3.316$, $P = 0.039$, Eta = 0.043] and marital status [$F(1, 149) = 9.101$, $P = 0.003$, Eta = 0.058] were both produced by a significant interaction [$F(2, 149) = 9.433$, $P < 0.001$, Eta = 0.112]. Fig. 3 illustrates that this interaction is produced by mate value enhancement efforts becoming more prevalent with age in single people, but much less prevalent with age in married people. None of the other results of the analysis were statistically significant.

3.3. Self-esteem and mate value

To assess the relationship between self-esteem and mate value assessment, efforts to increase mate value, and other variables in this study, bivariate and partial correlations were calculated for variables of interest. To clearly identify the most significant predictors of self-esteem, a step-wise multiple regression was performed (ratings of desirability, effort put into increasing desirability, and marital satisfaction were standardized, as they were rated on different scales).

The multiple regression found that three variables significantly predicted self-esteem: mate value enhancement effort (negatively related), assessed mate value, and rated marital satisfaction (both positively related). These three variables combined accounted for about 23% of the variance in self-esteem (adjusted $R^2 = 0.228$; see summary in Table 1). Collinearity diagnostics found

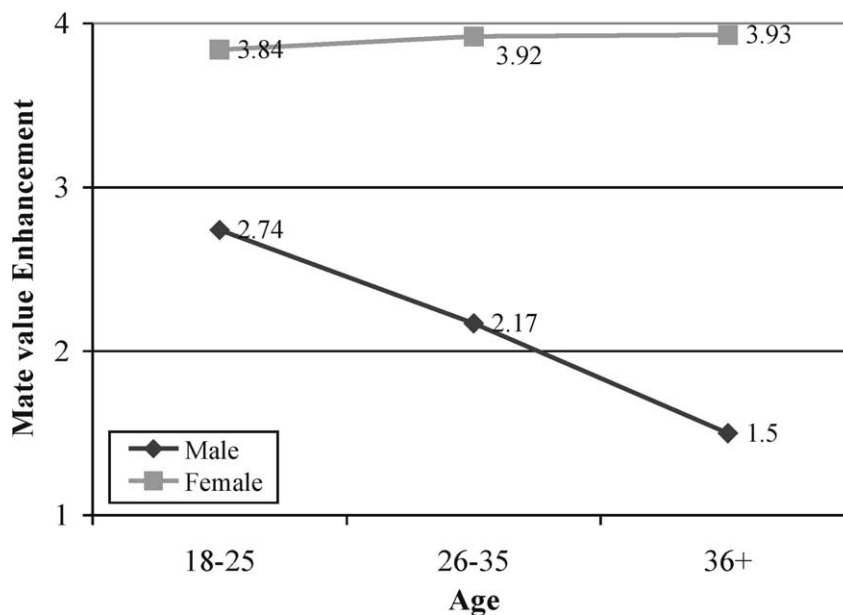


Fig. 2. Significant main effect for sex and interaction trend for age and sex in rated amount of effort put into increasing one's own desirability (i.e. mate value enhancement).

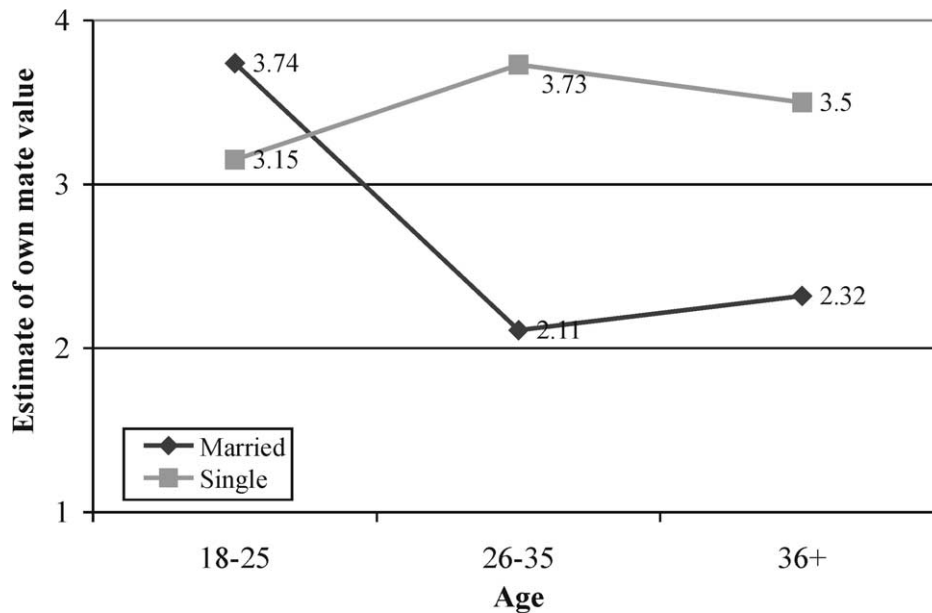


Fig. 3. Significant main effects and interaction between age and marital status in rated amount of effort put into increasing one's own desirability (i.e. mate value enhancement).

Table 1
Multiple regression for variables predicting self-esteem scale scores

	Standardized coefficients			Adjusted <i>R</i> square	Correlations	
	Beta	<i>t</i>	Sig.		Zero-order	Partial
(Constant)		60.81	0.000			
Effort into increasing desirability (mate value enhancement)	−0.279	−2.35	0.022	0.110	−0.354	−0.305
Own desirability rating (mate value)	−0.281	−2.39	0.020	0.176	−0.325	−0.309
Marital satisfaction	0.254	2.15	0.036	0.228	0.307	0.281

no problems with multicollinearity, and an analysis of residuals found no significant outliers or violations of normality.

In addition to the predictions that higher mate value and less effort on mate value enhancement would be significant predictors of higher self-esteem, it was predicted that these factors would to some extent mediate any predictive power of age, sex, and marital status. Age did not correlate with self-esteem ($r=0.02$), although age was significantly correlated with both mate-value ($r=0.16$, $P=0.043$) and mate value enhancement efforts ($r=-0.18$, $P=0.019$). A mediational model was therefore not constructed for the variable of age. Fig. 4a–b show the bivariate (zero-order) correlations between the remaining variables and partial correlations (second-order) between: (a) The demographic variables and self esteem, controlling for mate value ratings and mate value enhancement effort, and (b) the demographic variables and the mate value variables, controlling for the other demographic variables. The patterns of correlations indicate that: (a) sex

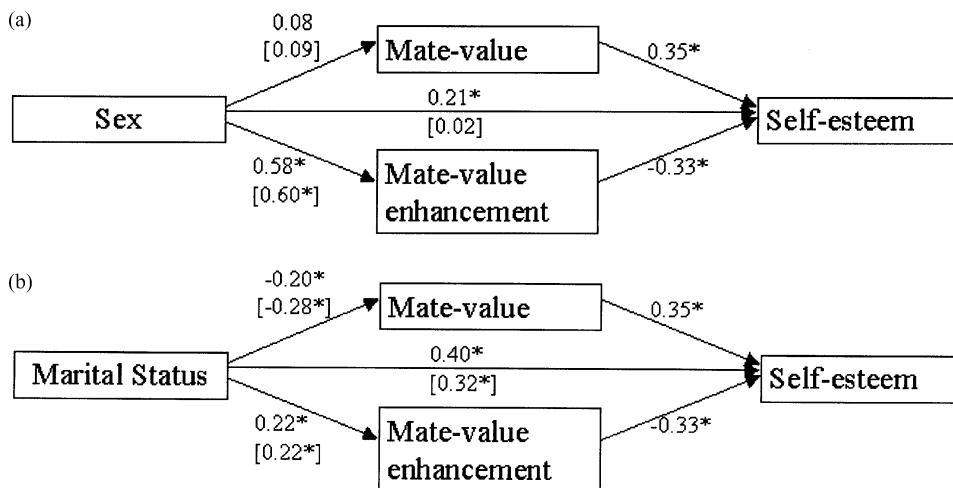


Fig. 4. a–b. Correlations between participants' sex (a), and marital status (b) and self-assessed mate value, effort put into mate value enhancement, and self-esteem scores (correlations in brackets are second-order partial correlations, controlling for: (1) the other two demographic variables when assessing correlations to mate value variables, and (2) the mate value variables when assessing correlations with self-esteem scores).

is significantly correlated with self-esteem scores, but this relationship is almost entirely mediated by mate value and mate value enhancement effort; and (b) marital status is significantly correlated with self-esteem scores, and remains so even after a slight mediational influence is removed.

4. Discussion

Overall, the results were broadly supportive of our predictions and hypotheses. The prediction that mate value will decline with age for females, but increase with age for males was supported overall, although there was a drop in male mate value in the later age category that was not predicted. This may possibly represent a time in life, within this sample and culture, that males reach a point that significant changes in their standings on aspects relevant to their attractiveness (e.g. social status, resources, etc.) become increasingly unlikely. Further research would be needed to assess this speculation.

The prediction that mate value will be higher for married people was supported. As with most demographic variables, this variable is only quasi-independent and one should be careful not to draw conclusive causal inferences from the results. Married people have higher self-esteem—possibly because they are married or possibly they are married because they have historically had higher self-esteem. It is difficult, without longitudinal research, to be more specific on this issue.

The predictions that: (a) efforts to enhance one's mate value will be greater for females than for males, (b) will be greater for single people than for married people, and (c) these differences will become larger with age, were all supported. An interesting additional finding, which could be investigated further, was that mate value enhancement rating were actually *higher* for 18–25 year old married participants, as compared to single participants of the same age (before sharply reversing). These findings can be summarized by noting that single women, across all ages, exert

the highest levels of effort into increasing their desirability (i.e. mate value), whereas older, married males exert the least amount of effort.

As predicted, (higher) self-perceived mate value and (less) effort spent on mate value enhancement were related to higher self-esteem. In fact, a multiple regression analysis found that these were the two best predictors of self-esteem within the present data. A third significant predictor variable, marital satisfaction, was found, and this result fits well with the work by [Shackelford \(2001\)](#) on marriage and self-esteem. Age of the participants was not directly related to self-esteem, consonant with the findings of [Erdwins et al. \(1988\)](#), [Fahrenkamp \(2001\)](#), and [Sieber \(1997\)](#), but contrary to [Hong et al. \(1993\)](#) and [Woodard and Suddick \(1992\)](#). Males had significantly higher self-esteem scores than women, as found by [Fahrenkamp \(2001\)](#) and [Hong et al. \(1993\)](#) and contrary to the findings of [Sieber \(1997\)](#). This sex difference in self-esteem, however, was almost totally moderated by the effect of sex on ratings of mate value and mate value enhancement activity. It would seem, then, that the present and prior findings of sex differences in self-esteem may be specifically due to sex differences in intersexual attractiveness. Finally, marital status was a significant predictor of self-esteem levels (contra [Fahrenkamp, 2001](#)), and this was only mildly moderated by the mate value factors. It therefore appears that, to whatever extent that marital status is related to self-esteem, its relationship is independent of its (also significant) relation to perceived mate value and mate value enhancement activity.

4.1. Generalizability and other issues

A number of issues should be noted regarding how generalizable the present results may be. This should be considered an initial study on this topic, and further work would benefit from a number of extensions that can establish how broadly applicable these findings are. First, it would be preferable to have larger and more uniform sample sizes across all the age, marriage, and sex categories (likely necessitating a move from university samples to community samples). Second, as level of marital satisfaction emerged as a significant predictor variable for self-esteem (see also, [Roberts & Donahue, 1994](#)), it may be useful to adjust the rating scale for this variable to increase its sensitivity. The present measure used a 7-point scale [as used by [Shackelford \(2001\)](#)], and the mean response was 6.41 (Standard deviation: 1.01). There is a concern that ceiling effects may be restricting the range on this measure. Various directions can be pursued from these initial findings, in terms of establishing generalizability. Some of the directions include: moving to a general population sample rather than a university sample, cross-cultural replications, including even older (e.g. post-menopausal, post-retirement) age groups, and looking at longer-term marriages (most of the current respondents had been married under 10 years). Extensions of the present research can be made by studying similar phenomena in the context of other types of relationships (e.g. opposite-sex and same-sex friendships, and homosexual relationships) and people in specific relationship stages not addressed here (e.g. divorced, separated, engaged, long-term cohabitation without marriage, levels of commitment within relationships).

Another issue for further exploration is specific dimensions of mate value that are particularly associated with changes in self-esteem. As noted earlier, mate value is a composite of many traits and characteristics, including aspects of physical appearance, personality, behaviors, and emotional dispositions ([Ben-Hamida, et al., 1998](#)). The present study used a single overall measure of “desirability as a partner” to measure this construct, but it is not infeasible that social comparison and sociometer processes occur for many individual features that contribute to rated desirability and mate value.

4.2. Theoretical implications

The present findings provide empirical support for the speculations by Ben-Hamida et al. (1998) that the greater uncontrollability of traits key to female mate value create a higher risk of self-esteem damage. Furthermore, this pattern became clearer, as predicted, with increasing age. The proposal that there are multiple sociometers, registering the individual's standing relative to others, provides a route by which it becomes understandable—indeed, predicted—that self-esteem (the experienced summary output of these sociometers) should be apparently related to a variety of domains of human behavior and relationships. Furthermore, it indicates against an eventual discovery of any single factor that would “repair” self-esteem. Instead, self-esteem is an aggregate of how a person is faring in relation to others and in relation to their expectations. It also supports the notion of multidimensional measures of self-esteem, in addition to global self-esteem measures. Some dimensions of self-esteem may use subjective standards that vary from person to person (e.g. one's ideal weight) as criteria against which a person assesses their current position (e.g. perceived weight), and in those it may be possible to enhance self-esteem for entire groups of individuals. Other dimensions of self-esteem, however, are almost certainly founded on objective standards, such as the positions of oneself in comparison to others, and in those contexts the elevation of one person's self-esteem is likely to be quite difficult to accomplish without some detriment for the self-esteem of others (i.e. there is a zero-sum relationship between the self-esteem levels of different persons).

Acknowledgements

The authors would like to thank Sandra Brase for her encouragement and support. Portions of this research were conducted as part of a final-year undergraduate research project.

References

- Barkow, J. (1989). *Darwin, sex, and status*. New York, NY: Oxford University Press.
- Ben-Hamida, S. B., Mineka, S., & Bailey, M. J. (1998). Sex differences in perceived controllability of mate value: an evolutionary perspective. *Journal of Personality & Social Psychology*, 75(4), 953–966.
- Branden, N. (1994). *The six pillars of self-esteem*. New York, NY: Bantam Books.
- Buss, D. M. (1989). Sex differences in human mate preferences. Evolutionary hypotheses tested in 37 different cultures. *Behavioral and Brain Sciences*, 12, 1–49.
- Buss, D. M. (1994). *The evolution of desire: Strategies of human mating*. New York, NY: BasicBooks.
- Buss, D. M. (1999). *Evolutionary psychology: the new science of the mind*. London: UK: Allyn & Bacon.
- Coren, S., & Ward, L. M. (1989). *Sensation & perception* (3rd ed.). San Diego, CA: Harcourt, Brace, Jovanovich.
- Erdwins, C. J., Mellinger, J. C., & Tyer, Z. E. (1981). A comparison of different aspects of self-concept for young, middle-aged, and older women. *Journal of Clinical Psychology*, 37, 484–490.
- Fahrenkamp, E. J. (2001). Age, gender, and perceived social support of married and never-married persons as predictors of self-esteem. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 62(2-B), 1130.
- Feingold, A. (1990). Gender differences in effects of physical attractiveness on romantic attraction: a comparison across 5 research paradigms. *Journal of Personality and Social Psychology*, 59, 981–993.

- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: trade-offs and strategic pluralism (plus commentaries). *Behavioral and Brain Sciences*, 23, 573–644.
- Harter, S., & Marold, D. B. (1991). A model of the determinants and mediational role of self-worth: Implications for adolescent depression and suicidal ideation. In G. Goethals, & J. Strauss (Eds.), *The self: an interdisciplinary approach*. New York: Springer-Verlag.
- Holway, A. H., & Boring, E. G. (1941). Determinants of apparent visual size with distance variant. *American Journal of Psychology*, 51, 21–37.
- Hong, S. m., Bianca, M. A., Bianca, M. R., & Bollington, J. (1993). Self-esteem: the effects of life-satisfaction, sex, and age. *Psychological Reports*, 72, 95–101.
- Kenrick, D. T., Groth, G. E., Trost, M. R., & Sadalla, E. K. (1993). Integrating evolutionary and social exchange perspectives on relationships: effects of gender, self-appraisal, and involvement level on mate selection criteria. *Journal of Personality and Social Psychology*, 64, 951–969.
- Kenrick, D. T., & Keefe, R. C. (1992). Preferences in mates reflect differences in human reproductive strategies. *Behavioral and Brain Sciences*, 15, 75–133.
- Kiesler, S. B., & Baral, R. L. (1970). The search for a romantic partner: the effects of self-esteem and physical attractiveness on romantic behavior. In K. H. Gergen, & D. Marlow (Eds.), *Personality and social behavior* (pp. 155–165). Reading: Addison-Wesley.
- Kirkpatrick, L. A., & Ellis, B. J. (2001). Evolutionary perspectives on self-evaluation and self-esteem. In G. Fletcher, & M. Clark (Eds.), *The Blackwell handbook of social psychology: vol. 2: interpersonal processes* (pp. 411–436). Oxford, England: Blackwell.
- Kirkpatrick, L. A., Waugh, C. E., Valencia, A., & Webster, G. D. (2002). The functional domain-specificity of self-esteem and the differential prediction of aggression. *Journal of Personality and Social Psychology*, 82, 756–767.
- Leary, M. R., Haupt, A. L., Strausser, K. S., & Chokel, J. T. (1998). Calibrating the sociometer: the relationship between interpersonal appraisals and state self-esteem. *Journal of Personality and Social Psychology*, 74, 1290–1299.
- Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: the sociometer hypothesis. *Journal of Personality and Social Psychology*, 68(3), 518–530.
- Macdonald, N. E., Ebert, P. D., & Mason, S. E. (1987). Marital status and age as related to masculine and feminine personality dimensions and self-esteem. *Journal of Social Psychology*, 127, 289–298.
- O'Brien, E. J. (1985). Global self-esteem scales: unidimensional or multidimensional? *Psychological Reports*, 57, 383–389.
- Owens, T., Stryker, S., & Goodman, N. (2001). *Extending self-esteem theory and research: sociological and psychological currents*. New York, NY: Cambridge University Press.
- Perlini, A. H., Marcello, A., Hansen, S. D., & Pudney, W. (2001). The effects of male age and physical appearance on evaluations of social desirability and resourcefulness. *Social Behaviour And Personality*, 29(3), 277–288.
- Roberts, B. W., & Donahue, E. M. (1994). One personality, multiple selves: integrating personality and social roles. *Journal of Personality and Social Psychology*, 62, 199–218.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: New Jersey: USA: Princeton University Press.
- Santor, D. A., & Walker, J. (1999). Garnering the interest of others: mediating the effects among physical attractiveness, self-worth and dominance. *British Journal Of Social Psychology*, 38(4), 461–477.
- Shackelford, T. K. (2001). Self-esteem in marriage. *Personality and Individual Differences*, 30, 371–390.
- Shackelford, T. K., & Buss, D. M. (1997). Marital satisfaction in evolutionary psychological perspective. In R. J. Sternberg, & M. Hojjat (Eds.), *Satisfaction in close relationships* (pp. 7–25). New York, NY: The Guilford Press.
- Shackelford, T. K., & Buss, D. M. (2000). Marital satisfaction and spousal cost-infliction. *Personality and Individual Differences*, 28(5), 917–928.
- Sieber, K. O. (1997). Self-concept across the adult life span: Relationships to sex, gender roles, and life circumstances. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 58(5-B), 2737.
- Singh, D., & Young, R. K. (1995). Body weight, waist-to-hip ratio, breasts, and hips: role in judgments of female attractiveness and desirability for relationships. *Ethology and Sociobiology*, 16(6), 483–507.
- Tooby, J., & Cosmides, L. (1990). On the universality of human nature and the uniqueness of the individual: the role of genetics and adaptation. *Journal of Personality*, 58, 17–67.

- Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the descent of man 1871–1971* (pp. 136–179). London: Aldine.
- Wade, T. J. (2000). Evolutionary theory and self-perception: sex differences in body esteem predictors of self-perceived physical and sexual attractiveness. *International Journal of Psychology*, 35(1), 36–45.
- Wade, T. J., & Cooper, M. (1999). Sex differences in the links between attractiveness, self-esteem and the body. *Journal of Personality and Individual Differences*, 27, 1047–1056.
- Woodard, P. G., & Suddick, D. E. (1992). Self-esteem of older adult college students. *Perceptual and Motor Skills*, 74, 193–194.