

### Original Article

## Male Financial Consumption is Associated with Higher Mating Intentions and Mating Success

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**Abstract:** Cross-culturally, male economic power is directly related to reproductive success. Displays of wealth and social status are an important part of human male mating effort. The degree of male financial consumption may be related to variance in life history strategies, as differences in life history patterns are fundamentally differences in the allocation of effort and/or resources. Males who have higher mating intentions may maximize their economic displays, saving little and even spending beyond their capacity through the use of credit. These men may seek and possibly obtain a greater number of sexual partners. This hypothesis was tested in a randomly selected community sample of men aged 18-45 included in a telephone health interview. The degree of financial consumption was directly related to future mating intentions and past mating success, even when accounting for age, years of education completed, and marital status. The degree of financial consumption was not related to future mating intentions or past mating success for women in the same sample.

**Keywords:** reproductive strategy, risk taking, finance, mating effort, resource allocation

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### Introduction

This paper argues that human male tendencies for financial consumption, in terms of maximizing purchasing rather than accruing savings, partially reflect the allocation of resources to mating competition. In most animal species, males compete for females because females usually invest more in offspring and are therefore selected to be more discriminating in selecting mates (Bateman, 1948). Sometimes male mating competition involves fighting other males for rank or territory; sometimes it requires traits and displays that females prefer in their mates. Males who succeed in these competitions have more offspring, and this shapes traits that foster such success, even if those traits may also lead to detrimental consequences (Darwin, 1871).

Physiological sexual dimorphism in humans indicates that male mating competition is substantial (Leutenegger and Kelley, 1977; Plavcan and van Schaik, 1997), yet paternal

investment is still much larger in humans than in other primates (Buss and Schmitt, 1993; Geary and Flinn, 2001). Children who grow up without a father present suffer higher mortality rates (Hill and Hurtado, 1996) and paternal investment in offspring may enhance the offspring's reproductive success (Geary, 2005). Across cultures, women differentially evaluate male socio-economic status in considerations of partner suitability, as it may indicate paternal investment potential (Buss, 1989).

Darwin was initially puzzled by costly traits such as peacock tails that could not be accounted for by survival advantage; he later concluded that these were features that led to reproductive advantage (1871). For humans, male displays of wealth may literally be a costly signal analogue to the peacock's tail (Miller and Todd, 1998). Displays of prestigious consumer goods could be an honest signal of male mate value, as they would indicate available resources as well as skills at acquiring wealth (Colarelli and Dettman, 2003). Veblen (1899/1953) remarked on the relationship between prestige and the consumption of consumer goods and even suggested that inherited psychological mechanisms were responsible for this relationship. Colarelli and Dettman (2003) note that advertisers are well aware of the importance of prestige when marketing products, and will try to associate a product with prestige even when there is no functional relationship. An ethnographic study of Amazonian foragers and slash-and-burn farmers found that those who had greater monetary resources allocated a greater portion of expenditures towards luxury goods, and this tendency was stronger in men than in women (Godoy et al., 2007).

Male displays of wealth and social status may facilitate mating competition. During ancestral times, men with greater resource control married younger women, married more women, and produced offspring earlier (Low, 1998). Males who did not have substantial resources or status may have been unable to establish long-term relationships. Across a wide variety of societies, male reproductive success is a function of social and economic status (Hopcroft, 2006). Even in current foraging societies that are relatively egalitarian, men with higher status have more mating opportunities (Chagnon, 1992; Hill and Hurtado, 1996).

Several laboratory studies have demonstrated that situational primes making mating effort salient can induce male intentions to increase economic power as well as allocate financial resources to conspicuous products. Roney (2003) found that men reported stronger ambition and desire to earn money when in the presence of attractive women. This effect was even seen when the men simply viewed photographs of attractive women. In another study, men who were shown photographs of attractive women had intentions to allocate more money to conspicuous products, but not inconspicuous products (Griskevicius et al., 2007). Neither men who viewed photographs of unattractive women, nor women who viewed photographs of attractive or unattractive men exhibited this pattern. In a third study, men who viewed photographs of attractive women discounted the future more so when choosing between small monetary rewards than men who viewed unattractive women or women who viewed pictures of men (Wilson and Daly, 2004).

#### *Variability in male financial risk taking*

The degree of male financial consumption may be related to variance in life history strategy. Males who are relatively higher in mating effort may have a greater tendency to maximize their display of economic power, saving little and even spending beyond their capacity through the use of credit. These men may seek and possibly obtain a greater

number of sexual partners. There are several factors which may be related to both financial risk taking and mating effort in men.

First, both financial risk taking and mating effort may be related to age. Independent of birth cohort effects, men exhibit financial strategies that are increasingly more conservative as they age (Jianakoplos and Bernasek, 2006). In modern societies, male resource allocation for mating effort appears to shift towards paternal effort across adulthood, as indicated by fertility levels (Tuljapurkar, Puleston, and Gurven, 2007) and mortality rates from risky behaviors (Kruger and Nesse, 2004). Male testosterone levels in the U.S. begin to decline in the late third or early fourth decade, and decline at a constant rate in later decades (Baker and Hudson, 1983). Male mating effort may peak in young adulthood in part because young men may not have partners or offspring to invest in. This may increase their attractiveness to females because they would have more resources available for prospective partners and their potential offspring (Hill and Kaplan, 1999).

Secondly, entering into a committed relationship by definition implies a shift away from mating effort and towards investment in the relationship and potential offspring. This shift may be reflected in allocation of financial resources. Even among low-income households, married households had higher savings goals and greater frequency and amounts of savings deposits, compared to unmarried households (Grinstein-Weiss and Sherraden, 2006). Across ages, men who are unmarried demonstrate riskier behavior than those who are married, as demonstrated by divergence in mortality rates (Kruger and Nesse, 2006). Yet, marriage may not completely constrain mating effort, as both men and women may benefit from mixed mating strategies, investing in a stable partnership while simultaneously taking advantage of opportunities for extra-pair relationships (Gangestad and Simpson, 2000).

Third, Socio-Economic Status (SES) may influence both financial strategies and relationship stability. Men and women with higher educational attainment have a reduced likelihood of divorce (e.g., South, 2001). Individuals who develop in relatively uncertain environments are expected to develop riskier behavioral strategies to take advantage of possibly fleeting opportunities (Chisholm, 1999; Roff, 1992; Stearns, 1992), which may include riskier financial strategies. Socio-economic position is related to the degree of risk in male behavioral strategies, as indicated by the inverse relationships between male mortality rates from external causes with educational attainment and income (Kruger, and Nesse, 2006). Increases in the uncertainty of economic opportunities also elevated male mortality rates from external (behavioral) causes (Kruger, and Nesse, 2007). Those with relatively less financial resources may also find it more difficult to save because of the costs of expenditures for basic needs and non-luxury goods.

#### *Financial consumption and mating success*

The current study is designed to test the hypothesis that the degree of male financial consumption, in terms of the tendency to maximize purchasing rather than accruing savings, is associated with mating effort, as indicated by mating intentions and mating success. Caloric models of resource allocation are appropriate for pre-industrial populations, however male resource allocation in modern populations may be best measured in economic and temporal terms. In many modern societies, one can even allocate more resources than one has actually obtained through the use of credit and debt.

This increases the potential level of consumption in financial strategies, as debts that are not paid off promptly will accrue interest and increase overall costs.

The current analyses will examine the degree of risk in male resource allocation with financial consumption measures appropriate for modern credit based economies. Analyses will account for age, marital status, and educational achievement (as a SES indicator). These factors are not posed as alternative explanations, but rather are part of the complex set of relationships involving life history and behavioral strategies. The relationships of financial consumption with mating intention and mating success are expected to be substantially stronger for men than for women because female mate value is more centrally related to cues of fecundity rather than resource provisioning potential (e.g., Buss, 1989).

## **Materials and Methods**

Data to test this hypothesis were provided by randomly selected male ( $M \pm SD$  age =  $34 \pm 7$  years,  $n = 100$ ) and female ( $M \pm SD$  age =  $34 \pm 7$  years,  $n = 309$ ) telephone respondents included in a community health surveillance survey. Data from female respondents were analyzed to provide a comparison with the results for men. The study was originally designed to provide a broad assessment of community health rather than to examine these predictions, so this study includes limitations typical for secondary analyses of data (see Discussion).

The sampling plan was designed to compare demographically similar ZIP codes in the cities of Flint and Saginaw, Michigan, and suburban areas surrounding these cities. The sampling frame was all adults ages 18-45 whose households were included in non-commercial telephone sampling lists for seven designated ZIP Codes. Four men over age 45 accidentally included in the sample were excluded in these analyses. Eighteen cases were excluded due to missing data in the variables described below. Computer Aided Telephone Interviews (CATIs) were conducted by professional survey interview staff members at the Michigan Public Health Institute who were unaware of the hypothesis tested in this study.

Three items assessed tendencies for financial conservation versus consumption: I always live within my income range; Each income period, I set aside at least ten percent for savings; I pay off my entire credit card bill each month (Cronbachs alpha = .77). These items were reverse scored to create a scale of financial consumption. Three items adapted from the Sociosexuality Inventory (SOI; Gangestad and Simpson, 1992) indicated mating intentions and mating success. A timeframe was added to these items because part of the purpose of the study was to monitor trends across survey waves: With how many different partners have you had sexual intercourse within the past five years; How many sexual partners would you like to have in the next five years; In the past 12 months, how many different partners have you had sex with on one and only one occasion. Data for these items were not reliable as a scale (Cronbachs alpha = .41), so they were analyzed separately. Responses to these items were log transformed to guard against the influence of outliers.

Respondent age was calculated from reported birth date and interview date. Marital status was assessed with the item, "What is your current marital status?" with response options of single, married or partnered, separated, widowed, and divorced. Responses to this item were transformed into binary categories for married or partnered vs. single,

## *Male financial consumption*

separated, widowed, or divorced. Educational attainment was assessed by the item, “What is the highest grade or degree you completed in school?” and responses were transformed into years of education completed (e.g., High School = 12, Bachelor’s degree = 16).

Stepwise linear regressions included age, marital status, years of education completed, and financial consumption as predictors of each log transformed SOI outcome variable. Separate analyses were conducted for men and women, as the relationships between financial consumption and mating indicators were expected to be substantially weaker for women. Male and female samples were combined to provide a direct test of the predicted moderation by sex. Gender (1 = female, 2 = male) and financial consumption were multiplied to create an interaction term predicting each log transformed SOI outcome variable.

### **Results**

For men, older respondents were more likely to be married, have fewer sexual partners in the past five years, and have fewer one-time sexual encounters in the past 12 months (see Table 1). Married respondents on average completed more years of education, have fewer sexual partners in the past five years, and have fewer one-time sexual encounters in the past 12 months. The degree of financial consumption was directly related to the number of sexual partners in the past five years and the number of sexual partners desired in the next five years. The number of sexual partners in the past five years was directly related to the number of one-time sexual encounters in the past 12 months and the number of sexual partners desired in the next five years. The zero order correlations between financial consumption and indicators of mating intention or mating success were not significant for women.

**Table 1.** Zero-order correlations and standard deviations among variables for men

Variable	Married	Educ.	Consumption	Past	One-night	Future	<i>M</i>	<i>SD</i>
Age	.243*	.107	-.106	-.269**	-.227*	-.088	34	7
Married		.303**	-.092	-.288**	-.240*	-.122	.5	.5
Education			-.126	-.115	-.149	-.036	13	2
Consumption				.235*	.122	.217*	8	2
Past					.728***	.231*	4	6
One-time						.188	1	1
Future							1	1

$n = 100$ ; \* indicates  $p < .05$ ; \*\* indicates  $p < .01$ ; \*\*\* indicates  $p < .001$ . Married (0 = no, 1 = yes); Educ. = years of education; Risk = degree of financial risk taking; Past = number of sexual partners in the previous five years; One-time = number of sex partners on one and only one occasion in the past 12 months; Future = number of sexual partners desired in the next five years.

For men, financial consumption made a significant unique prediction of the number of sexual partners in the past five years and the number of sexual partners desired in the next five years (See Table 2). Financial consumption was not uniquely related to the number of one time sexual partners in men. Age was inversely related to the number of

sexual partners in past five years, and men who were married had fewer one time sexual partners in the past 12 months. For women, financial consumption was not significantly related to any mating indicator. Women who were older, completed more years of education, and were married had fewer sexual partners in the past five years. Women who completed more years of education had fewer one time sexual partners. Women who were older and women who were married desired fewer sexual partners in the next five years. The predictions using the interaction term for financial consumption and gender indicated that the relationships between financial consumption and the number of sexual partners in the past five years and the number of sexual partners desired in the next five years were substantially stronger for men than for women.

**Table 2.** Prediction of mating intentions and success

Predictor	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Sexual partners in past five years					
Constant	.675	.138	---	4.876	.001
Financial consumption	.027	.011	.231	2.393	.019
Age	-.007	.003	-.207	-2.145	.034
One time sexual partners					
Constant	.260	.034	---	7.644	.001
Married	-.128	.050	-.249	-2.543	.013
Partners in next five years					
Constant	.434	.032	---	13.693	.001
Financial consumption	.013	.006	.220	2.234	.028
Predicting number of partners by Gender x Financial consumption					
Outcome	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
Past five years	.010	.004	.147	2.785	.006
Next five years	.015	.003	.225	5.178	.001

## Discussion

Results support the prediction that the degree of consumption in male financial strategies would be related to mating intentions and mating success. Men who allocated more financial resources to expenditures rather than to savings and were more likely to spend more than they earned reported having more sexual partners in the past five years and desired a greater number of sexual partners in the next five years. These relationships were significant even when accounting for other possibly influential factors; age, marital status, and educational achievement.

These findings complement the results of typical psychological studies of students enrolled in introductory psychology courses. Whereas laboratory studies provide a higher degree of experimental control, the current study is based on reports of actual behaviors in a representative community sample. The randomly selected sample of men from the community are likely to have a wider range in life history strategy than predominantly young and often relatively affluent university students, and the older average age of respondents allowed for a greater degree of opportunity for the experiences and behaviors of interest. Behavioral measures were used for both financial strategy and mating success, in addition to measures of behavioral intentions.

The results of this study do contrast with previous studies on psychology students, in that the laboratory studies demonstrated short-term induction effects from primes of desirable mates on economic intentions. The current study examines relatively stable individual differences in both mating and financial strategies. The laboratory studies demonstrate the relationship between mating salience and financial strategies within individuals, the current study documents a similar relationship across individuals.

Although behaviors related to greater financial consumption predicted the number of mating partners in the recent past, it was not related to the number of one-time sexual encounters. These items adapted from the Sociosexuality Inventory (SOI) used different time frames. The total number of recent partners was assessed from the past five years, whereas sex partners for one and only one occasion were assessed only in the past 12 months. This temporal difference may partially account for the differences in results, although one-time sexual encounters may also be qualitatively distinct from other types of sexual relationships. Male resource provisioning is more important factor in female mate choice for long-term relationships than for short-term relationships (Gangestad and Simpson, 2000; Kruger, Fisher, and Jobling, 2003), so male resource displays may not be as influential as physiological Indicators of phenotypic quality.

The measures used in this study were quite brief compared to many psychological assessments. A more comprehensive assessment of financial strategies and mating effort could potentially consume an entire questionnaire. The data originated from a community health survey that covered a broad range of issues and was limited in length, given the constraints of telephone interviews with uncompensated respondents. Only three items were used to assess financial risk taking, and mating intentions and success were assessed with only three items from the SOI. Demographic measures utilized single items. Despite its brevity, the financial risk taking scale demonstrated high inter-item reliability and significant predictive power. The data were also collected from one geographic region in a single state in the USA. Future studies could attempt to replicate the results in additional populations.

Measures of educational attainment have previously demonstrated their utility as socioeconomic indicators. Educational attainment was also a significant predictor of financial strategies in the current study. Given the focus on financial risk taking, it would also have been valuable to assess respondents' income levels. However, this is a sensitive issue in the focus communities, which are subject to economic hardships related to trends in the American automotive industry. Previous surveys conducted in the same region utilizing similar methodologies had refusal rates from 45 to 60% on income items, despite attempts to modify items to increase the response rate. Respondents would also occasionally terminate the interview when asked about income. Because of the relatively low returns from income items in previous surveys, questions on income level were not included in the current study. A different survey conducted in the previous year in the same community found that educational attainment and household income were related,  $r(1320) = .39, p < .001$ .

One may argue that sexual behavior and financial risk taking would necessarily be correlated because of individual differences in generalized sensation seeking and risk taking. However, this would require an explanation of why these individual differences are maintained in populations, which would necessarily involve an explanatory framework compatible with the current understanding of evolution and human behavior. Recent studies

have demonstrated that there are distinct domains of risk taking, and distinguished between financial risks, physical risks, and social risks, for example (Kruger, Wang, and Wilke, 2007; Weber, Blais, and Betz, 2002; Wilke, Hutchinson, Todd, and Kruger, 2006). Also, these relationships were significant for men but not for women, and resource control is more centrally related to male than to female reproductive strategies. There was even greater statistical power to uncover these relationships for the female sample, as it was slightly more than three times the size of the male sample.

The promising results of this study may inspire future research on the connection between life history strategy and financial risk taking. More sophisticated measures could assess the proportion of economic resources allocated to visible luxury goods versus necessary staple goods. One could assess the degree of ostentation among various cars, clothes, and personal accessories. Longitudinal studies could assess developmental pathways, and indicate the directions of causality, which cannot be inferred from the cross-sectional data in the current model. For example, the data do not reveal whether the greater economic displays enabled by financial consumption were directly responsible for enhanced male mating success. Behavioral economics and social psychology have already benefited tremendously from the adoption of evolutionary models. This study suggests further advances may arise with the integration of life history into research on economic behavior.

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