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## When risky is attractive: sensation seeking and romantic partner selection

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### Abstract

This study examined the relationship between sensation seeking and evaluations of risk and attractiveness of potential romantic partners. We presented respondents with a series of computer-generated descriptions of potential romantic partners. The valence of the descriptions varied: some were composed only of positive attributes, some only negative, and others a mixture of positive and negative. Compared to low sensation seekers, high sensation seekers rated potential partners as more attractive, less risky and were more likely to want to date the individual described. However, they rated their likelihood of acquiring an STD infection after unprotected sex with the potential partner as lower than did the low sensation seekers. These differences between high and low sensation seekers were largest when the descriptions of potential partners contained only negative attributes and smallest when they contained only positive attributes. The findings demonstrate the importance of the sensation seeking trait in judgments of sexual risk and attractiveness in a romantic context and have implications for the development of effective health messages.

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### 1. Introduction

Selecting a romantic partner is rarely a purely rational exercise in which an individual evaluates the pros and cons of potential mates with conscious intent (Buss, 2003). Indeed, it is the interplay

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of attraction and assessment that makes the process of partner selection interesting—how specific aspects of a potential partner are noted and judged or ignored completely. For instance, some evidence suggests that potential “risky cues” such as sexual history are ignored with “attractive” partners (Agocha & Cooper, 1999). Although we know that people tend to seek information that confirms their favored decision after the decision has been made (Frey, Schultz-Hardt, & Stahlberg, 1996; Sternberg, 1996), we know less about the details of how pre-behavior cognition varies between individuals. Specifically, are there aspects of information that serve as cues to inform an individual about whether a romantic partner is “safe” or “risky”? If so, research exploring how individuals evaluate “risky cues” should also consider “attractive cues” to more fully understand the interplay between the two. Although one might expect that attractive personality characteristics invariably contribute to romantic attraction in a potential partner while risky personality characteristics inevitably reduce interest, for some people—such as high sensation seekers—the opposite may occur.

Although prior research has identified the behavioral differences between high and low sensation seekers, less is known about the cognitive precedents of these behaviors. For consciously controlled behaviors such as dating, a person’s cognitions certainly play an important role. In fact, all of the major models of behavioral prediction stress the critical influence of cognitions in determining behavior. According to the Integrative Model (Fishbein, 2001) for example, intention is the strongest predictor of behavior, and intention is a function of attitudes, subjective norms, and self-efficacy. Each of these three components is itself determined by beliefs or cognitions; therefore, cognitions are distal determinants of intentions and behavior. In order to understand a given behavior, then, one must ultimately understand the pre-behavioral cognitions that shape it. The present research investigated whether differences in high and low sensation seekers’ cognitions can help to explain evaluations of potential romantic partners.

The sensation seeking trait has been defined as “the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experience” (Zuckerman, 1979, p. 10). Individuals high in sensation seeking crave complex and stimulating experiences and will take risks to obtain them. Sensation seeking has been associated with participation in a range of risky activities including extreme sports, smoking, drug use, driving under the influence of alcohol, participating in risky experiments, and gambling (Zuckerman, 1994). Sensation seeking is higher in men than women, peaks in late adolescence or early 20s and then declines with age, and may also be higher in Whites than in Blacks (Zuckerman, 1994). High sensation seekers tend to gauge risk as lower than do low sensation seekers, even for activities that they have never tried (Zuckerman, 1994). Moreover, high sensation seekers anticipate feeling less anxiety in risky situations than do low sensation seekers (Hovarth & Zuckerman, 1993). These expectations increase the likelihood of high sensation seekers engaging in risky situations given the opportunity to do so (Zuckerman & Kuhlman, 2000).

Although there is clear evidence of the relationship between the sensation seeking personality trait and risk, less is known about how high sensation seekers evaluate specific elements of risk situations. For instance, although we know that high sensation seekers’ preference for novel experiences extends to sexual activities (Zuckerman, Tushup, & Finner, 1976), no data exist that identify attributes that are perceived to be risky to one’s health or perceived to be attractive by high versus low sensation seekers. This is an important area of research because the potential for

the transmission of STDs, including HIV, is more likely to occur with a risky partner and/or by engaging in risky sexual behaviors.

### *1.1. Sensation seeking and sexual behavior*

Because sensation seeking is reflective of values, interests, and general attitudes toward life, it is perhaps not surprising that there tends to be congruence in sensation-seeking levels within romantic dyads (Fisher, Zuckerman, & Neeb, 1981; Glicksohn & Golan, 2001; Thornquist, Zuckerman, & Exline, 1991): high sensation seekers look for partners that share their penchant for novel and stimulating behaviors, while low sensation seekers tend to be more attracted to those who desire less stimulation.

However, despite this tendency for assortative mating, there is some evidence that high sensation seekers may be less satisfied in their relationships overall. In a study of 58 couples, Thornquist et al. (1991) found that sensation seeking scores were negatively correlated with a measure of relationship satisfaction; high sensation seekers liked and loved their partners less, were less satisfied with the relationship, and saw more alternatives outside the relationship than did low sensation seekers. Further, sexual sensation seeking as measured by the sexual sensation seeking subscale (Kalichman et al., 1994) has also been found to be predictive of extradyadic dating and extradyadic sexual behavior in a sample of unmarried college students (Wiederman & Hurd, 1999).

Given the tendency of high sensation seekers to be dissatisfied with their current romantic relationship, we might expect that high sensation seekers are often “on the look out” for a new partner and may use different search and evaluation strategies than low sensation seekers to find one. High sensation seekers are likely to date more often than low sensation seekers and are also more likely to engage in risky sexual activities: Sensation seeking is positively correlated with more permissive attitudes towards sex, number of partners, and engagement in a broader range of heterosexual activities, and is also negatively related to the period of time a potential partner was known before having sex and to age at first intercourse (Hoyle, Fejfar, & Miller, 2000; Seto, Lalumiere, & Quinsey, 1995; Zuckerman et al., 1976). However, while high sensation seekers are more likely to engage in some risky sexual activities, there is mixed evidence as to the incidence of unprotected sex among heterosexuals in this group. While some researchers have found that both high and low sensation seekers are inconsistent in reported condom use (Donohew et al., 2000; White & Curtis, 1988), others have found that high sensation seekers are less likely to use condoms (Arnold, Fletcher, & Farrow, 2002; McCoul & Haslam, 2001). However, the inclinations to date more widely and to have sex with more partners, possibly combined with inconsistent condom use, may place high sensation seekers at greater risk for acquiring and spreading STDs.

### *1.2. Personal ads and internet dating*

The research described above suggests a strong relationship between sensation seeking and engaging in potentially risky sexual behavior. However, we do not know whether members of these two groups will evaluate the same information similarly or dissimilarly as part of the cognitive process of deciding their course of action. This is particularly important in the developing world of Internet dating, in which romantic relationships are initiated in cyberspace instead

of in person based on exchanged information about personal characteristics. Forming liaisons via the Internet is far from rare: *Match.com*, the largest online dating service, reported 4.5 million users in November 2002 (Gardiner, 2003). A study of Internet-based romantic relationship formation found that 23.7% of graduate students and 12.8% of undergraduate students reported meeting someone in person whom they had first met on the Internet, and 61.8% of graduate students and 42.1% of undergraduates reported that they personally knew someone who began or developed a committed relationship online (Donn & Sherman, 2002). However, computer-mediated communications provide little information about social or personal characteristics (e.g., age, appearance), or social position (Haythornwaite, Wellman, & Garton, 1998), other than what each individual chooses to reveal. Further, since a relationship has been established electronically, when people meet they may have the (unrealistic) impression that they know each other well and therefore they may tend to “trust” the person and express that trust by neglecting safe sex practices. Indeed, some health scientists predict that dating arranged on the Internet will contribute to the spread of sexually transmitted diseases (McFarlane, Bull, & Rietmeijer, 2002).

The purpose of this study was to examine differences between low and high sensation seekers in terms of risk and attractiveness judgments made about potential partners. Judgments were based on information presented in short vignettes that varied in content and valence such that the overall valence of the attributes in each vignette was either uniformly positive, uniformly negative, or a mixture of positive and negative attributes.

We know that high sensation seekers are more likely than low sensation seekers to engage in a range of stimulating and risky behaviors. They evaluate novel activities as less risky and also anticipate less anxiety in engaging in these behaviors, as compared to low sensation seekers. Thus, we hypothesized that, compared to low sensation seekers, high sensation seekers would view potential partners described in the vignettes as less risky and more attractive. In addition, high sensation seekers would be more willing to go on a date and would be more likely to anticipate engaging in unprotected sex with potential partners. Finally, compared to low sensation seekers, high sensation seekers should be less likely to anticipate harm (i.e., contracting an STD/HIV) from engaging in unprotected sex.

Second, based on our earlier research (Fishbein, Hennessy, Yzer, & Curtis, in press), we expected that both high and low sensation seekers will be most highly attracted to (and perceive the least risk from) potential partners described only with positive characteristics. Similarly, both high and low sensation seekers should be least attracted to and perceive the most risk from those described with uniformly negative characteristics. Judgments should be intermediate with respect to the mixed valence vignettes which contain both positive and negative descriptors. However, based on prior findings (Hennessy, Fishbein, Curtis, & Barrett, 2004), we expected primacy effects to come into play such that potential partners described with positive characteristics before negative characteristics will be viewed as more attractive and less risky than those described with negative characteristics followed by positive characteristics.

We also expected an interaction between sensation seeking and type of vignette. Given high sensation seekers' low avoidance/high approach gradient and tolerance for risk (Zuckerman & Kuhlman, 2000), we expected that the biggest difference between high and low sensation seekers would be seen when partners are described with uniformly negative characteristics and the smallest difference when the partners are described with only positive characteristics, with intermediate differences in ratings in the mixed positive/negative descriptions. Further, we hypothe-

sized that, given high sensation seekers' tendency for assortative mating, high sensation seekers may be less attracted to individuals described with purely positive characteristics than low sensation seekers. Also, because of the above-mentioned primacy effect, the difference between high and low sensation seekers should be greater when negative information is presented before positive information than when positive information is presented before negative information.

## 2. Methodology

In factorial surveys, respondents answer questions based on hypothetical scenarios (“vignettes”) constructed at random from sets of mutually exclusive descriptive phrases. By varying the elements of the scenarios and randomly assigning them to respondents, each combination of descriptive phrases defines a unique “treatment condition”. Responses are based on the data presented in the vignette: the respondent’s evaluation is the response variable, given the vignette stimulus. The construction and analysis of factorial surveys has been described in other studies (Hennessy, MacQueen, & Seals, 1995; Hox, Kreft, & Hermkens, 1991; Rossi & Nock, 1982). An overview of the methodology of the present study is presented below and is described in more detail elsewhere (Hennessy et al., 2004).

### 2.1. Procedures

Respondents were recruited on the campuses of two large Philadelphia universities. The project was described and informed consent procedures were followed with each potential respondent per university IRB requirements. Participants were each paid \$10 as compensation for their time while completing a questionnaire, which took approximately 30 min. Respondents completed the self-administered survey on individual laptop computers in a large room, with approximately 10–12 students participating at any given time. The survey was constructed and administered using MediaLab software (Jarvis, 1998).

### 2.2. Romantic partner descriptions

Respondents were first asked for gender and sexual orientation so that the potential romantic partners generated by the software would be appropriate for the respondent (i.e., self-identified heterosexual and bisexual respondents were presented with opposite sex romantic partners and self-identified gay/lesbian respondents with those of the same gender). All potential romantic partners were described as being single and between the ages of 18 and 25, because this was both the general age range of respondents and because preliminary research had shown that these two demographic elements were highly valued in a romantic partner (Fishbein et al., in press).

Respondents were then presented with 20 descriptions of different romantic partners using the factorial method; these were constructed from the attributes listed in Table 1. The attributes were selected based on results in Fishbein et al. (in press). Characteristics that were high or low on risk and attractiveness rating scales were selected to make sure that the romantic partner descriptions were extremely contradictory when both high risk and high attractiveness profiles were presented to the respondent. Each vignette was a combination of two types of frames: positive frames

Table 1  
 Attributes used to construct the romantic partner descriptions

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High risk attribute 1
1. Enjoys sexual experimentation
2. Believes that the more sexual experience, the better
High risk attribute 2
1. Can be described as “secretive and mysterious”
2. Wants to spend exciting nights together
High risk attribute 3
1. Uses drugs occasionally
2. Believes that life is short and one should live life to the fullest
High risk attribute 4
1. Can be described as a “free spirit”
2. Can be described as “living in the moment”
Low attractiveness attribute 1
1. Thinks that cleanliness is over-rated
2. Smokes cigarettes
Low attractiveness attribute 2
1. Is often pessimistic
2. Is often feels unfulfilled
3. Is agnostic in religious orientation
Moderator attributes <sup>a</sup>
1. Is a social drinker
2. Is open minded toward new ideas
3. Carries a laptop most of the time
High attractiveness attribute 1
1. Is faithful to friends and acquaintances
2. Is trustworthy in dealing with friends and acquaintances
High attractiveness attribute 2
1. Is supportive of others
2. Does not use drugs
High attractiveness attribute 3
1. Does not smoke
2. Wants to go on to graduate school
High attractiveness attribute 4
1. Is self-confident
2. Is generally happy with life
Low risk attribute 1
1. Strives to live responsibly
2. Believes that sex should be saved for someone really special
Low risk attribute 2
1. Strives to live cautiously
2. Wears glasses
3. Likes to attend cultural events

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<sup>a</sup> The moderator variables were not included in the analyses.

containing high attractiveness and low risk information and negative frames containing high risk and low attractiveness information. Each respondent evaluated five positive/positive (Pos–Pos) descriptions, five negative/negative (Neg–Neg) descriptions, five negative/positive (Neg–Pos) descriptions, and five positive/negative (Pos–Neg) descriptions. Here we treat the four vignette types as a single factor (even though they are constructed using two elements—valence and order) because our preliminary work found an interaction between valence and order; treating the vignettes as one factor allows us to directly compare the outcomes between all four type of vignettes.

The initial positive frame consisted of a choice from High Attractiveness attributes one and two, a choice from Low Risk attribute one, and a choice from the Moderating Attribute (see Table 1). The first negative frame consisted of a choice from High Risk attributes one and two, a choice from the Low Attractiveness attribute one, and a choice from the Moderating Attribute. Frames from the last half of the description were constructed in the same way: the last positive frame consisted of a choice from High Attractiveness attributes three and four and a choice from Low Risk attribute two, while the last negative frame consisted of a choice from High Risk attributes three and four and a choice from Low Attractiveness attribute two. There were symmetric restrictions placed on some of the selections to make the profiles internally consistent; for example, the high risk descriptor “the more sexual experience, the better” could not appear with the low risk characteristic of “believes that sex should be saved for someone really special” and the high risk descriptors “uses drugs occasionally” and “smokes cigarettes” could not appear with the contradictory highly attractive descriptors “does not use drugs” and “does not smoke.” The moderating attribute was randomly constructed from three elements: “is a social drinker”, “is open minded toward new ideas”, or “carries a laptop most of the time”. Our initial hypothesis was that these characteristics would have different effects on perceptions of attractiveness and risk based on specific contexts defined by the frames. Because they were randomly assigned to all first frames (positive or negative), they did not play a role in defining consistent or inconsistent information and were not analyzed here.

### 2.3. Measures

This study presented respondents with randomly constructed descriptions of potential romantic partners in the form of a personal advertisement. Each respondent viewed 20 such vignettes and was asked to evaluate the romantic partner descriptions on five dimensions that served as the study’s main outcome measures.

#### 2.3.1. Outcome measures

The outcome measures used in this study focused on respondents’ assessments of potential partners with respect to the following: the potential partner’s attractiveness (not necessarily physical); risk to the respondent’s health; the respondent’s likelihood of going on a date with that person; likelihood of having unprotected sex with the potential partner; and the likelihood of being infected with an STD/HIV after unprotected sex. The risk and attractiveness outcomes were measured on an 11-point scale (1 = low risk/attractiveness, 11 = high risk/attractiveness) and the likelihood items were scaled identically, with “extremely unlikely” and “extremely likely” as the endpoints.

### 2.3.2. Sensation seeking measure

Sensation seeking was assessed with a four-item measure. Although longer scales are more precise and reliable in principle, they may be impractical to use in many surveys because of limited space and respondent fatigue (Stephenson, Hoyle, Palmgreen, & Slater, 2003). The scale used in the present study is based on a reduced form of the BSSS (i.e., the Brief Sensation Seeking Scale; Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002). The BSSS is an eight-item measure that captures the four dimensions of the original, 40-item SSS-V: Thrill and Adventure Seeking, Experience Seeking, Disinhibition, and Boredom Susceptibility (Zuckerman, Eysenck, & Eysenck, 1978). The four-item version used in the present study uses one, rather than two, items per dimension. More specifically, respondents were asked to rate their agreement on a five-point agree/disagree scale for each of the following statements: I would like to explore strange places; I like to do frightening things; I like new and exciting experiences, even if I have to break the rules; I prefer friends who are exciting and unpredictable ( $\alpha = 0.79$ ). Stephenson and colleagues (Stephenson et al., 2003) found that this four-item scale correlated significantly ( $r = 0.89$ ,  $p < 0.001$ ) with the BSSS, which itself has been found to have strong construct and nomological validity (Hoyle et al., 2002). In addition, the four-item scale has been demonstrated to be both valid and reliable in a large, national survey of adolescent drug use (Hornik et al., 2002).

Following the procedures of most of studies of sensation seeking (e.g., Donohew et al., 2000; Hornik et al., 2002; Stephenson et al., 1999), respondents above the median were considered to be high sensation seekers, and those below, low sensation seekers. Slightly over half the sample, 56.7%, were classified as low sensation seekers ( $m = 10.3$  on a scale of 4–20,  $SD = 2.4$ ), and 43.3% were categorized as high sensation seekers ( $m = 15.9$ ,  $SD = 1.7$ ).

## 2.4. Analysis

Summary statistics and ANOVA were used to assess outcome differences between low and high sensation seekers and the effects of the information frames on the outcome variables. However, the significance tests for the *t*-tests and ANOVAs were calculated using generalized least squares regression to obtain correct standard errors when the data are nested (i.e., non-independent) due to the repeated measures nature of the design (Donner, 1985).

## 3. Results

### 3.1. Respondents

In this sample of 673 respondents between 18 and 28 years old ( $m = 20.7$ , median age = 20), 51% were female. The respondents were primarily Caucasian (34%) or African American (30%), with 16% of the sample identifying as Asian/Pacific Islander and 4% as Hispanic/Latino. Ten percent reported being of mixed race, and the remaining 6% failed to indicate their ethnicity. Approximately 93% reported heterosexual orientation, 4% reported bisexual orientation, and 3% reported homosexual orientation.

### 3.2. Demographic and sexual experience differences between high and low sensation seekers

Consistent with previous findings, males were more likely to be high sensation seekers than were females (52.1% vs. 34.9%,  $\chi^2 = 20.28$ ,  $p < 0.01$ ). Racial differences were also consistent with previous research that found that Caucasians are more likely to be high sensation seekers than are members of other ethnic backgrounds. In this study, 55.9% of Whites were categorized as high sensation seekers, compared to 31.8% of Blacks and 34.9% of Asians ( $\chi^2 = 29.00$ ,  $p < 0.01$ ).

High sensation seekers were significantly more likely to have ever had vaginal sex, with 77.7% of high sensation seekers reporting ever having had intercourse as compared to 63.4% of low sensation seekers ( $\chi^2 = 16.19$ ,  $p < .001$ ). However, there were no significant differences between low and high sensation seekers for other indicators of sexual experience and behavior, including the number of times a person had had sex, the number of sexual partners, or whether the respondent had used a condom in the past three months (all  $p > 0.11$ ). In addition, although the difference was only marginally significant (14.8% vs. 10.7%;  $\chi^2 = 2.47$ ,  $p = 0.07$ ), more high than low sensation seekers said they had met a partner through a personal ad.

### 3.3. Sensation seeking differences across outcome variables

An analysis of mean evaluations of the personal ad vignettes by low and high sensation seekers revealed significant differences for four of the five variables of interest. Averaging across all 20 vignettes, high sensation seekers rated the potential partners as more attractive (6.49 vs. 5.57 on the 11-point scale;  $t = -8.34$ ,  $p < 0.001$ ), and less risky (5.96 vs. 6.56;  $t = 5.92$ ,  $p < 0.001$ ) than did low sensation seekers. In addition, high sensation seekers indicated greater likelihood of going on a date with individuals described in the vignettes (6.53 vs. 5.59;  $t = -8.19$ ,  $p < 0.001$ ), and were less likely to believe that they would become infected with an STD/HIV than were low sensation seekers (6.27 vs. 6.96;  $t = 5.38$ ,  $p < 0.001$ ). High sensation seekers were also more likely to indicate a willingness to have unprotected sex with potential partners (2.71 vs. 2.44), but this difference was only marginally significant ( $t = -1.87$ ,  $p = 0.062$ ). Thus, consistent with expectations, high sensation seekers were more willing to engage in potentially risky behaviors but were less likely to believe that negative consequences would result from their risk taking. It should be noted that both high and low sensation seekers rated the likelihood of having unprotected sex toward the low end of the scale, suggesting a general awareness about the importance of practicing safe sex among this population.

### 3.4. Evaluations by type of vignette

Table 2 shows that for all five outcome variables, evaluations were more positive when the information presented was more positive in valence. In other words, judgments of attractiveness by both low and high sensation seekers were highest in the Pos–Pos vignette and lowest in the Neg–Neg vignette, as were evaluations of willingness to date and likelihood of having unprotected sex. In contrast, perceived risk and likelihood of getting infected were lowest in the Pos–Pos vignette and highest in the Neg–Neg vignette (see Table 3 for  $F$  test results for main effect of valence). Consistent with our expectations, evaluations in the Neg–Pos frame were less positive than were evaluations in the Pos–Neg frame for attractiveness ( $F = 130.13$ ,  $p < 0.001$ ), risk

Table 2

Average evaluation for outcome measures by romantic partner description

	Valence of romantic partner description means (SD)			
	Neg–Neg	Neg–Pos	Pos–Neg	Pos–Pos
Attractiveness	4.06 (2.81)	5.39 (2.86)	6.37 (2.65)	8.07 (2.31)
Risk	8.02 (2.39)	7.16 (2.36)	5.67 (2.31)	4.35 (2.26)
Willingness to date	4.17 (2.89)	5.33 (2.89)	6.46 (2.66)	8.03 (2.34)
Willingness to have unprotected sex	2.25 (2.25)	2.45 (2.31)	2.67 (2.44)	2.87 (2.57)
Likelihood of infection with STD/HIV if unprotected sex	7.99 (2.43)	7.38 (2.42)	6.08 (2.53)	5.21 (2.59)

 $n = 13923$  vignettes.

Table 3

Effects of vignette valence, sensation seeking, and their interaction

Outcomes	Main effect of valence ( $F$ test) <sup>a</sup>	Main effect of sensation seeking ( $F$ test)	Interaction
Attractiveness	411.56** (3, 673)	69.42** (1, 673)	12.37** (3, 673)
Risk	482.03** (3, 673)	35.04** (1, 673)	2.89* (3, 673)
Willingness to date	357.20** (1, 673)	66.99** (1, 673)	12.44** (3, 673)
Willingness to have unprotected sex	29.78** (3, 673)	3.53 (1, 673)	0.47 (3, 673)
Likelihood of infection with STD/HIV if unprotected sex	277.90** (3, 671)	29.10** (3, 671)	1.63 (3, 671)

\* $p < 0.05$ , \*\* $p < 0.001$ .<sup>a</sup> $F$  tests are corrected for repeated measures using generalized least squares regression. Respondent sample sizes are 382 low sensation seekers and 291 high sensation seekers.

( $F = 406.15$ ,  $p < 0.001$ ), likelihood of dating ( $F = 170.38$ ,  $p < 0.001$ ), likelihood of unprotected sex ( $F = 20.86$ ,  $p < 0.001$ ), and likelihood of infection (353.20,  $p < 0.001$ ), which supports a primacy effect of information.

### 3.5. Evaluation by the sensation seeking by type of vignette interaction

In regard to hypothesis 3, we examined whether the type of the vignette (Neg–Neg, Neg–Pos, Pos–Neg, Pos–Pos) interacted with sensation seeking for risk, attractiveness, likelihood of dating, likelihood of having unprotected sex, and likelihood of being infected with an STD/HIV (see Table 3). Significant interactions were found between low and high sensation seekers for attraction ( $F = 12.37$ ,  $p < 0.001$ ), willingness to date ( $F = 12.44$ ,  $p < 0.001$ ), and risk ( $F = 2.89$ ,

$p = 0.035$ ), although the effects were clearest for attraction and willingness to date. No interactions were found for likelihood of STD infection or willingness to have unprotected sex.

Fig. 1a–e graphically display these relationships. With respect to likelihood of having unprotected sex or likelihood of being infected with an STD, high sensation seekers indicated greater willingness to have unprotected sex and a lower likelihood of infection across all vignettes. For the three variables for which there was a type of vignette by sensation seeking interaction (attractiveness, risk, and going on a date), the Neg–Neg, Neg–Pos, and Pos–Neg frames (but not the Pos–Pos frame) showed significant differences between high and low sensation seekers, although the interaction for risk was not as strong as it was for the two measures of attraction.

Specifically, high sensation seekers saw potential partners presented in a Neg–Neg, Neg–Pos, and Pos–Neg vignette as significantly more attractive than did low sensation seekers. They were more willing to go on a date with potential partners described in a Neg–Neg, Neg–Pos, and Pos–Neg vignette than were low sensation seekers. In addition, high sensation seekers tended to see these partners as being less risky in the Neg–Neg, Neg–Pos, and Pos–Neg frames. In the Pos–Pos vignette types, high and low sensation seekers agreed on the romantic partner evaluations.

#### 4. Discussion

This study extends the sensation seeking literature by analyzing potential differences in pre-behavior judgments of risk and attraction of a potential romantic partner by the valence of the information presented. These results provide some insight into how high versus low sensation seekers process information. Our first hypothesis was supported: high sensation seekers viewed potential romantic partners as significantly more attractive and were more willing to go on a date and have unprotected sex with them, but also saw them as less risky and were less likely to believe that they would become infected with an STD or HIV should unprotected sex occur.

The second hypothesis was also supported. Respondents provided different evaluations across valence conditions. Ratings were more positive when the information was more positive and more negative when the information was negative. The results provided further support for the primacy effect, since evaluations for the Neg–Pos vignettes were less positive than evaluations for the Pos–Neg vignettes, despite the fact that the actual content of the messages was the same.

There was only partial support for the third hypothesis. There was an interaction between valence and sensation seeking for attraction and likelihood of dating, although these interactions were not strong in magnitude. Consistent with our predictions, high sensation seekers saw partners described in a Neg–Neg valence as significantly more attractive than did low sensation seekers. This difference narrowed in the Neg–Pos valence, narrowed again in the Pos–Neg valence, and disappeared in the Pos–Pos valence. Although a similar pattern also appeared for the evaluations of risk, the interaction effect was much weaker. However, no interactions were found for evaluations of likelihood of having unprotected sex or for likelihood of infection. It appears that high sensation seekers are more likely to discount negative attributes of potential partners in judging attractiveness and the interaction effect appears to be due to their evaluation of attractiveness, not risky, information.

High sensation seekers did not appear to be irrational in their assessments of risk and attractiveness—attributes that were viewed as positive by a general population were also viewed

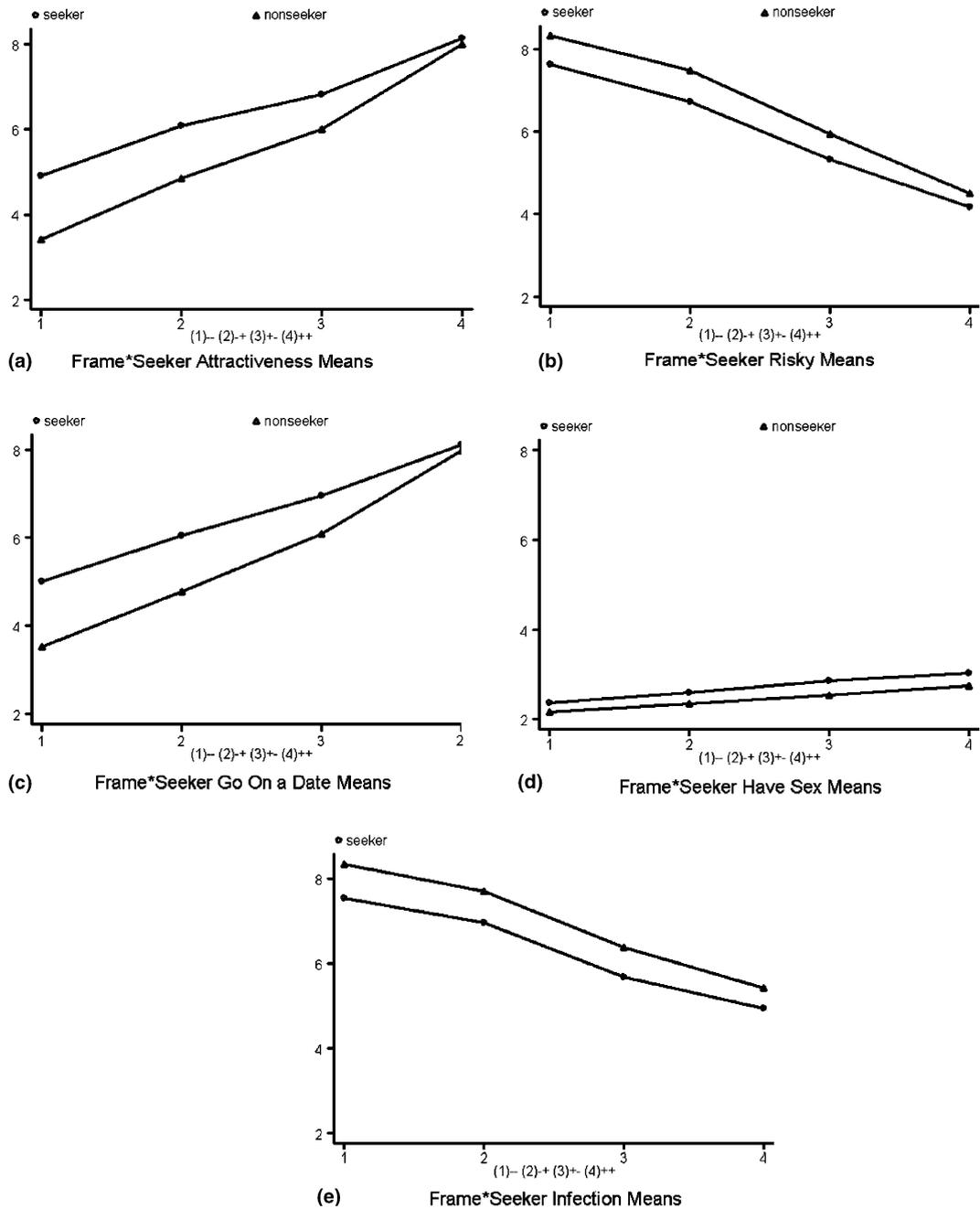


Fig. 1. Sensation seeking means for outcome variables by valence of description: (a) attractiveness assessment, (b) risk assessment, (c) likelihood of going on a date, (d) likelihood of having unprotected sex and (e) likelihood of infection with an STD/HIV should unprotected sex occur.

positively by high sensation seekers. However, high sensation seekers were more accepting of risky behaviors in others and, furthermore, were more likely to be attracted to such behaviors. This was

evidenced by their higher ratings of partners who had some attributes that were rated as high risk or low attractiveness in an earlier study. This difference may be due to a tendency for both high and low sensation seekers to engage in assortative mating; that is, to find an individual attractive if the potential partner is similar to themselves. Since high sensation seekers are more likely themselves to engage in risky behaviors such as illicit drug use or sexual experimentation, it is perhaps not surprising that they would be relatively more accepting of these characteristics in others, or indeed that they might seek out persons who engage in such behaviors. Further, the difference in risk assessment may have been driven by a difference in dating experience. That is, high sensation seekers may have perceived the described partners as less risky because they have had a broader range of romantic and sexual relationships, including relationships with partners who engage in risky behaviors. This experience may have decreased the novelty of both the potential partners themselves and of the assessed behaviors (going on a date, having unprotected sex), and thus diminished their appraisal of risk.

Zuckerman and Kuhlman (2000) assert that high sensation seekers have a higher approach gradient and a lower avoidance gradient, or anticipated anxiety level, than do low sensation seekers. The current study provides further evidence of how this may operate in the context of partner selection: high sensation seekers have a stronger attraction to most potential partners and see them as less risky than do low sensation seekers. In this study, for example, high sensation seekers were attracted to a potential partner when the partner was described as a non-smoker, a high attractiveness attribute (high sensation seekers rated the partner an average of 6.7 on the 11-point attractiveness scale when that attribute was included in the description), but also gave attractiveness ratings very close to the median when the partner was described as a smoker, a low attractiveness attribute (5.8 on the attractiveness scale). In contrast, there was a larger difference in low sensation seekers' ratings of smokers and non-smokers. Low sensation seekers gave partners described as non-smokers an average score of 6.0 on the attractiveness scale, but only 4.2, well below the median, to partners described as smokers.

Although both high and low sensation seekers were not very likely to say that they would engage in unprotected sex with the potential partners presented in the vignettes, high sensation seekers were less likely to believe they would become infected with an STD should they do so. Although published evidence is mixed as to whether high sensation seekers differ in their rate of condom use, their engagement in sex with more partners and earlier sexual debut suggest that they are likely to have more instances of unprotected sex, which may lead to an increased risk of acquiring STDs, including HIV.

These findings have clear implications for public health policy. Although raising perception of risk tends to increase health-preserving behaviors (Rosenstock, 1974), this strategy may not be as effective for high sensation seekers. Indeed, given high sensation seekers' tolerance for risky partners, the findings of the current study suggest that a safe sex public health program that highlights negative characteristics of risky partners may backfire depending on the negative characteristics chosen as part of the message. Because high sensation seekers were also attracted to positive characteristics of potential partners, focusing on positive activities and attributes of a romantic partner may be more effective at minimizing risky sexual behaviors. Couching these themes in messages and media with high excitement and novelty value to capture the attention of high sensation seekers, as suggested by Donohew et al. (2000), may increase the success of such efforts.

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