

Original Article

# Sexual exploitability: observable cues and their link to sexual attraction

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## Abstract

Although antiexploitation adaptations, such as cheater-detection mechanisms, have been well explored, comparatively little research has focused on identifying adaptations for exploitation. The present study had two purposes: (1) to identify observable cues that afford information about which women are sexually exploitable and (2) to test the hypothesis that men find cues to sexual exploitability sexually attractive, an adaptation that functions to motivate pursuit of accessible women. Male participants rated photographs of women who displayed varying levels of hypothesized cues to exploitability. We identified 22 cues indicative of sexual exploitability. Nineteen of these cues were correlated significantly with sexual attractiveness, supporting the central hypothesis. Results suggest that sexual attraction to exploitability cues functions to motivate men to employ exploitative strategies towards accessible targets, and contribute foundational knowledge to the diverse classes of cues that afford information about which women are and are not sexually exploitable.

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## 1. Introduction

Exploitative resource acquisition strategies are a class of strategies designed to facilitate resource accrual by taking advantage of other organisms through deception, coercion, or force (Buss & Duntley, 2008). Much of the work examining the domain of exploitability focuses on antiexploitation adaptations, such as cheater-detection mechanisms and mechanisms devoted to reactions to being exploited (e.g., Cosmides & Tooby, 2005; Fehr, Fischbacher, & Gächter, 2002; Price, Cosmides, & Tooby, 2002), rather than on the design of adaptations that produce exploitative strategies. Ancestrally, mate acquisition was one domain in which exploitative strategies could have been an effective means to achieve successful mating outcomes, particularly if the desired outcome was a short-term sexual relationship. Cues of ease of exploitability are one source of information to which mechanisms for exploitation should be sensitive (Buss & Duntley, 2008). We examined three classes of cues that, if detectable by men, could have enabled them to assess a woman's vulnerability to sexual exploitation. In addition to examining cues diagnostic of sexual exploitability, we

investigated the hypothesis that men would find women displaying cues of sexual exploitability to be sexually attractive, but not attractive as long-term mates, which provides motivational impetus for pursuing women with an increased probability of sexual access.

### 1.1. Sexual exploitability

Short-term mate acquisition is one domain in which exploitative strategies would have been adaptive for males. Because ancestral males and females differed in their minimum obligatory parental investment (Trivers, 1972), the calculus for determining whether to engage in a sexual relationship and how much investment to place in a relationship differs between the sexes. The sexual conflict fueled by these differences in mating goals and preferences would have created two general contexts in which an exploitative strategy, rather than a cooperative one, could have been adaptive. First, in situations in which a female did not want to have sex but a man did, a strategy using some form of exploitation could have been a way to achieve his goal. Second, a man might adopt an exploitative strategy when he sought casual sex, but the woman sought a high-investment relationship (Buss, 2003).

Research on forms of sexual exploitation such as rape and sexual coercion suggests that selection could have favored

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rape in contexts that lowered the potential costs associated with using these strategies. Circumstances such as warfare or when women were separated from protective kin could have resulted in lower costs of engaging in exploitative strategies (Figueredo et al., 2001; Gottschall, 2004; Lalumière, Harris, Quincey, & Rice, 2005; Thornhill & Palmer, 2000). This suggests that the assessment of a woman's immediate vulnerability may be central to the activation of psychological mechanisms related to sexual exploitation.

We have thus far broadly referred to “exploitative strategies” without differentiating between potential types of exploitation. We propose that tactics for sexual exploitation fall under four somewhat distinct, although perhaps overlapping, classes: sexual seduction, verbal or nonverbal pressure, deception, and sexual assault. Sexual seduction is the act of charming or convincing someone into having sex. Seduction differs from courtship, which may include long-term commitment and investment as goals. Pressure involves relentless persistence, threats, or coercion to induce an individual into having sex. Deception is dishonesty about intentions, likelihood of further commitment, or personal characteristics such as those sought by members of the opposite sex—a phenomenon well documented in human mating (Haselton, Buss, Oubaid, & Angleitner, 2005). Sexual assault involves using physical force, or the threat of physical force, to force sexual intercourse. Although some cues to sexual exploitability may be uniquely diagnostic of susceptibility to one type of exploitation (e.g., cues to being less physically formidable might make a woman more vulnerable to sexual assault but not deception), others may be indicative of multiple types of sexual exploitability (e.g., lower intelligence may make a woman more susceptible to seduction and deception). Assessing these strategies discretely enabled us to determine cues associated with vulnerability to different types of exploitative strategies that vary in their nature (e.g., psychologically exploitative vs. physically exploitative) and severity (e.g., sexual seduction vs. sexual assault). Although each exploitative strategy may have distinct characteristics, during any given attempt to exploit a woman, a man may employ multiple tactics from different classes of strategies (e.g., an attempt at sexual seduction may also involve the use of deception). Thus, we included all four in the current study to capture a wide array of cues and to better understand which cues are indicative of vulnerability to which strategies.

## 1.2. Cues to sexual exploitability

### 1.2.1. Psychological cues

Male adaptations to detect cues to sexual exploitability may be designed to pick up on several classes of cues. First, men may be sensitive to different psychological traits indicating that a woman is sexually exploitable. One category of psychological cues is traits that suggest that a woman is mentally or emotionally manipulable and could

potentially be persuaded to engage in sexual intercourse. Low self-esteem and low assertiveness are associated with having experienced sexual coercion (Greene & Navarro, 1998; Testa & Dermen, 1999). Women low in assertiveness and self-esteem may be particular targets of exploitation because they will be less likely to resist exploitative tactics. Cues indicative of immaturity and naiveté also fall into this category. They suggest that a woman has less experience interacting with men, making her more susceptible to exploitation. Low cognitive ability is another cue indicating greater exploitability because it signals ease of manipulability or deceivability. Thus, sensitivity to such cues may be one design feature of male tactics for sexual exploitation.

Another category of psychological cues are those that indicate flirtatiousness, promiscuity, and more permissive sexual attitudes. These characteristics may indicate greater ease of sexual exploitation by (1) causing women to put themselves in situations where they are at a greater risk of sexual exploitation and (2) providing men with opportunities to approach women under the guise of responding to the women's flirtatiousness, thereby facilitating a later attempt at exploitation. Women with unrestricted sociosexuality (indicating a positive orientation towards short-term mating) report a greater likelihood of being approached by a male with sexual intentions (Sakaguchi & Hasegawa, 2006b). Furthermore, more promiscuous women and women with multiple sexual partners report being more likely to have been sexually victimized (Greene & Navarro, 1998; Testa & Dermen, 1999). Research suggests that men can identify women's sociosexual orientation through brief interactions (Stillman & Maner, 2009), and other work has identified a variety of nonverbal cues indicative of flirtatiousness (Moore, 1985, 2002). Being able to identify these traits could serve a dual purpose. These traits may signal that a woman is more prone to engaging in sexual behavior by choice, and by indicating greater ease of sexual access, they also may inadvertently signal greater sexual exploitability.

A third category of psychological traits consists of cues that indicate recklessness or risk taking. This includes personality characteristics such as impulsivity, attention seeking, and being prone to take risks. Although displaying these characteristics may not indicate a woman is currently exploitable, they indicate a greater likelihood she will eventually be in dangerous situations, such as being alone or intoxicated. Drinking alcohol, one form of risky behavior, is positively correlated with sexual victimization (e.g., Testa & Dermen, 1999). In the modern environment, drinking alcohol and engaging in party culture may result in being perceived as reckless and exploitable.

### 1.2.2. Incapacitation cues

Cues suggesting current incapacitation represent another set of cues to sexual exploitability. Intoxication, fatigue, or other forms of cognitive impairment could make a woman less able to resist tactics of sexual exploitation. Other conditions related

to her current level of physical protection, such as being alone or isolated, compared to being with “bodyguards” such as friends, family members, or a mate, may also provide information about her current sexual exploitability.

### 1.2.3. Physical cues

Finally, physical traits may indicate a lack of formidability to resist sexual exploitation. Characteristics such as a shorter gait, slower walking speed, and low energy are associated with being rated as easier to attack (Gunns, Johnston, & Hudson, 2002). Women with a shorter gait and slower walking speed are also rated as more likely to be targets of sexual advances (Sakaguchi & Hasegawa, 2006a). Static cues, such as being short or small, may also indicate exploitability.

In sum, cues to sexual exploitability are conceptualized into three broad classes: (1) psychological cues indicating a woman is mentally or emotionally manipulable or is flirtatious or promiscuous, or revealing a risk-taking proclivity; (2) incapacitation cues indicating a woman is temporarily or currently in a state in which she could be exploited; and (3) physical cues indicating a lack of formidability to resist sexually exploitative tactics.

### 1.3. Sexual attraction to exploitability

Exploitative tactics typically require motivational impetus to fuel their enactment. We hypothesized that the emotion of sexual attraction functions as one such mechanism. Furthermore, we hypothesized that cues in the classes described above would render a woman attractive as a short-term mate, motivating an exploitative strategy. Traditionally, researchers have characterized signs of fertility, health, and other markers of mate quality as indicators of attractiveness (e.g., Fink & Penton-Voak, 2002; Gangestad & Scheyd, 2005; Singh, 1993; Sugiyama, 2005). Recognition of cues to exploitability serves a different function. They are hypothesized to be associated with *sexual attractiveness* because they indicate a woman could be exploited for a short-term sexual opportunity. By making a woman more exploitable, these characteristics might also make her *less* attractive as a long-term mate because a man would be risking investment in a mate who could be sexually exploited by other men. We hypothesized that cues to exploitability would be uniquely related to short-term mate attractiveness and inversely correlated with long-term mate attractiveness.

Although the hypothesized link between sexual exploitability cues and sexual attractiveness has yet to be explored directly, some circumstantial evidence exists. When asked to rate women’s facial attractiveness (without differentiating between long-term and short-term mate attractiveness), both men and women found faces with cues to unrestricted sociosexuality more attractive (Boothroyd, Jones, Burt, DeBruine, & Perrett, 2008). However, when asked specifically about long-term mate attractiveness, men found women with facial cues related to unrestricted sociosexuality less desirable as long-term mates (Campbell

et al., 2009). This suggests that more permissive attitudes towards short-term mating enhance women’s attractiveness in short-term mating contexts. These cues may be seen as more attractive because they signal that a woman is more likely to voluntarily engage in sexual behavior and hence be more sexually accessible, or because they indicate ease of sexual exploitability.

Previous research also suggests that cues to emotional and psychological manipulability may be linked with sexual attractiveness. Cross-culturally, men prefer younger women as mates because they are higher in reproductive value and fertility than older women (Buss, 1989). Youth may also enhance sexual attractiveness because it is a cue to immaturity and naiveté, suggesting a higher probability of payoff for an exploitative strategy. Intelligence is another trait valued in long-term mates; however, men’s preference for intelligent mates is relaxed when men are asked about strictly sexual relationships (Kenrick, Groth, Trost, & Sadalla, 1993; Kenrick, Sadalla, Groth, & Trost, 1990). Rather than simply lowering their standards for intelligence in short-term mates, men may prefer (consciously or unconsciously) less intelligent mates in this context because they are more exploitable and therefore more sexually attractive. We suggest that this logic applies to other cues to sexual exploitability—any recurrently observable cue that indicates a man will be more successful when attempting to implement an exploitative sexual strategy will increase perceptions of a woman’s sexual attractiveness to motivate him to attempt to use that strategy.

### 1.4. Current study

We conducted the present study in four steps to identify cues to sexual exploitability and to test the hypothesis that cues to sexual exploitability are indicators of sexual attractiveness. First, we used an act nomination procedure to generate previously undocumented potential cues to sexual exploitability. The research team then assembled digital photographs of women displaying varying levels of these cues. The photographs were coded to identify which, and to what degree, cues were displayed in each image. Finally, male participants rated the attractiveness and exploitability of the women in the photographs.

## 2. Method

### 2.1. Participants

Participants were students enrolled in an introductory psychology course and received partial course credit for their participation. Seventy-six males participated, ranging in age from 18 to 47 ( $M=19.59\pm 3.76$ ). To avoid fatigue effects, participants were randomly assigned to one of three groups. One group viewed a randomized set of 36 photographed women (out of the total of 110), and the other two groups

Table 1  
Correlations between hypothesized cues to sexual exploitability and mate attractiveness

Positively correlated cues	Seduce	Pressure	Deceive	Assault	Overall
“Easy”	.81***	.73***	.72***	.48***	.75***
Immature	.69***	.63***	.68***	.56***	.69***
Intoxicated	.69***	.66***	.62***	.51***	.67***
Reckless	.70***	.59***	.63***	.38***	.62***
Promiscuous	.72***	.58***	.62***	.33***	.61***
Partying	.68***	.56***	.54***	.35***	.58***
Flirty	.60***	.52***	.48***	.30**	.52***
Promiscuous friends	.53***	.43***	.47***	.18	.44***
Attention seeking	.52***	.33***	.41***	.17	.39***
Young	.17	.31**	.31**	.36***	.31**
Sleepy	.25***	.32***	.27***	.29***	.30***
Come hither look	.35***	.23*	.27**	.09	.26**
Revealing clothing	.35***	.25*	.29**	.07	.26**
Touching breast	.15	.26**	.14	.38***	.24*
Open posture	.38***	.22**	.22**	-.02	.22**
Alone	.18	.17	.11	.13	.16
Ring (wedding/engagement)	.23*	.14	.14	.09	.16
Tight clothing	.27**	.14	.18	-.04	.15
Friendly	.11	.20*	.11	.11	.14
Punk	.17	.11	.21*	.01	.14
Materialistic	.24*	.09	.15	-.04	.13
Touching body	.09	.11	.07	.16	.11
Tattoos	.06	.08	.12	.13	.11
Tucking hair	.13	.10	.05	.10	.10
At a wedding	.15	.04	.00	.15	.09
Over-shoulder look	.06	.06	.05	.09	.07
Fat	.08	.10	.09	-.09	.06
Touching face/hair	.11	.09	.09	-.08	.06
Short	-.06	.06	.01	.15	.04
Lip lick/bite	.02	.04	.01	.01	.02
Touching thigh	.02	-.01	.03	.01	.01
Touching knee	.03	.05	-.04	-.02	.01
Lying back	.03	.00	.02	-.04	.01
Laughing	-.01	-.04	.03	.03	.00
Negatively correlated cues	Seduce	Pressure	Deceive	Assault	Overall
Intelligent	-.63***	-.54***	-.59***	-.31***	-.56***
Shy	-.53***	-.35***	-.42***	-.11	-.39***
Age	-.23*	-.39***	-.36***	-.39***	-.36***
Old	-.18	-.34***	-.32**	-.39***	-.33**
Passed out	-.26**	-.25**	-.24*	-.24*	-.27**
Flushed face	-.30**	-.28**	-.26*	-.14	-.26**
Anxious	-.30**	-.28**	-.23*	-.03	-.23*
Sucking on a straw	-.21*	-.17	-.19	-.22*	-.21*
Being touched	-.21*	-.20*	-.21*	-.10	-.20*
Standing near men	-.16	-.19*	-.11	-.11	-.15
Sad	-.18	-.19	-.11	-.03	-.14
Prostitute	-.12	-.11	-.11	-.12	-.12
Piercings	-.15	-.07	-.16	-.02	-.11
Skinny	-.12	-.15	-.13	.04	-.10
Tall	.01	-.11	-.07	-.22	-.10
Canted neck	-.12	-.08	-.16	-.01	-.10
Flushed neck	-.13	-.08	-.10	-.05	-.10
Dancing	-.11	-.09	-.13	-.01	-.09
Touching others	-.15	-.09	-.14	.05	-.09
Distressed	-.13	-.13	-.06	.04	-.08
Open legs	-.10	-.09	-.09	-.02	-.08
Asleep	.00	-.10	-.08	-.09	-.07
Crying	.00	-.01	-.11	-.06	-.05
Raised arms	-.01	-.05	-.04	-.09	-.05
Mostly with men	.00	-.07	.00	-.05	-.03
Ear piercing	-.11	.03	-.04	.07	-.02

Table 1 (continued)

Negatively correlated cues	Seduce	Pressure	Deceive	Assault	Overall
Confident	.12	.02	.02	-.22*	-.01
Smiling	.01	-.05	.02	-.01	-.01
Finger on lips	.00	.00	.04	-.05	.00

Note. Of the 315 correlations presented in Table 1, 66 correlations were significant beyond the .001 level, where <1 would be expected by chance alone; 89 were significant beyond the .01 level, where 4 would be expected by chance alone; and 111 were significant beyond the .05 level, where 16 would be expected by chance alone.

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ .

each viewed a randomized set of 37. Each group constituted approximately one third of the total participant sample.

## 2.2. Materials

### 2.2.1. Cue Selection

We determined hypothesized cues based on a literature search and an act nomination procedure (Buss & Craik, 1983). The act nomination procedure is useful because it can provide novel information by pooling the collective insights of large samples of observers—insights that may not yet have been explored in the literature and that researchers may not have been able to theoretically generate themselves a priori. An initial set of 194 (103 male, 91 female, age range 18–52,  $M = 21.63 \pm 5.96$ ) participants nominated specific actions, cues, body postures, attitudes, and personality characteristics in three categories: indicators of sexual exploitability, indicators of sexual interest toward one person, and indicators of general sexual availability or openness to sexual activity. Because the study's goals included examining aspects of sexual attractiveness other than just sexual exploitability, we retained cues from all categories in the final list. After combining similar cues and eliminating cues not assessable from a photograph (e.g., feminine voice), these cues were added to a list of cues generated via literature search. This list totaled 88 cues.

### 2.2.2. Photograph selection

Researchers collected photographs from publically available sources on the Internet (i.e., sites that did not require a password or login). We used a search engine to find images of women displaying varying levels of the hypothesized cues. The researchers independently gathered photos and together selected images of 110 women displaying varying levels of the cues of interest. Photographs were coded to determine the degree to which each woman displayed each of the 88 cues. Two of the researchers independently coded cues that could be objectively observed as present or absent (e.g., tattoos, being touched by others). There were no discrepancies between the two researchers' judgments of these 33 cues. Four raters blind to the study's hypotheses rated the other 55 cues. The raters were asked, "How much do each of the following characteristics describe the individual in the picture?" Raters responded using a 1 (*not at all*) to 7 (*extremely*) rating scale. Following a procedure similar to Vazire and colleagues' (2008) for eliminating cues with low

reliability, we calculated the average intraclass correlation coefficient (ICC) for each cue to ensure agreement among the raters. Twenty-five cues had an average measures ICC less than .70 and were eliminated, leaving 30 cues with an average measures ICC ranging from .70 to .90 (mean = .79). To calculate the rating means, rater's responses were averaged for each of these 30 traits. If one rater indicated he or she could not provide a rating for a particular photograph, the average was computed from the three other raters. If two or more raters could not provide a rating, that photograph was excluded from analyses for that particular trait. These 30 cues, along with the 33 cues coded as present or absent by the researchers, resulted in the final assessment of 63 cues in our set of images.

### 2.2.3. Participant measures

Participants ( $N = 76$ ) responded to seven questions assessing each woman's perceived mate attractiveness and exploitability. The three mate attractiveness questions assessed the women's overall attractiveness ("How attractive is this woman *overall*?"), short-term mate attractiveness ["How attractive would this woman be to a man as a *short-term mate* (e.g., one-night stand, casual sex, etc.)?"], and long-term mate attractiveness ["How attractive would this woman be to a man as a *long-term mate* (e.g., committed romantic relationship, wife, etc.)?"]. The four exploitability questions asked about the four proposed sexual exploitation tactics. Participants were first asked, "How easy would it be for a man to seduce this woman into engaging into sexual intercourse?" The next two questions used the same verbiage, but the word "seduce" was replaced with "pressure" in the second exploitability question and with "deceive" in the third. The fourth question read, "How easy would it be for a man to sexually assault this woman?" Participants responded to all questions using a 1 (*not at all*) to 5 (*extremely*) rating scale. We phrased questions in the third person rather than first person to avoid underreporting due to the sensitive and taboo nature of the questions being asked. Participants also completed a brief demographics questionnaire.

## 2.3. Procedure

A research assistant assigned the participant to a computer terminal with a prepared slideshow of the photographs. The research assistant instructed the participant on how to advance through the slideshow of images and record his responses on a

Table 2

Correlations between hypothesized cues to sexual exploitability and mate attractiveness

Positively correlated cues	Short-term mate	Long-term mate
“Easy”	.65***	-.60***
Immature	.62***	-.62***
Intoxicated	.49***	-.40***
Reckless	.58***	-.69***
Promiscuous	.63***	-.64***
Partying	.51***	-.46***
Flirty	.54***	-.37***
Promiscuous friends	.54***	-.49***
Attention seeking	.49***	-.56***
Young	.25**	-.12
Sleepy	.24*	-.17
Come hither look	.29**	-.26**
Revealing clothing	.47***	-.48***
Touching breast	.00	.06
Open body posture	.39***	-.29**
Alone	.09	-.07
Ring (wedding/engagement)	.10	.01
Tight clothing	.36***	-.33**
Friendly	.08	.30**
Punk	.19*	-.45***
Materialistic	.24*	-.30**
Touching body	-.05	.15
Tattoos	-.01	.02
Tucking hair	.14	-.13
At a wedding	.15	-.07
Over-shoulder look	.15	-.09
Fat	-.11	.02
Touching face/hair	.06	-.03
Short	.07	.07
Lip lick/bite	-.02	-.09
Touching thigh	-.07	.08
Touching knee	.07	.18
Lying back	-.07	-.06
Laughing	.14	-.24*
Negatively correlated cues	Short-term mate	Long-term mate
Intelligent	-.60***	.67***
Shy	-.48***	.51***
Age	-.27**	.12
Old	-.22**	.11
Passed out	-.12	.20*
Flushed face	-.15	.06
Anxious	-.18	-.05
Sucking on a straw	-.26**	.07
Being touched	-.21*	.03
Standing near men	.00	-.05
Sad	-.17	-.14
Prostitute	-.10	.18
Piercings	-.18	.26**
Skinny	.10	-.10
Tall	-.08	.00
Canted neck	-.18	.12
Flushed neck	-.16	.10
Dancing	-.04	.12
Touching others	-.12	-.09
Distressed	-.05	-.23*
Open legs	-.12	.16
Asleep	.00	-.07
Crying	.14	.01
Raised arms	-.07	.02
Mostly with men	.08	-.10

Table 2 (continued)

Negatively correlated cues	Short-term mate	Long-term mate
Ear piercings	-.02	.01
Confident	.17	-.04
Smiling	.12	-.23
Finger on lips	-.01	-.02

Note. Of the 126 correlations presented in Table 2, 27 correlations were significant beyond the .001 level, where <1 would be expected by chance alone; 38 were significant beyond the .01 level, where 2 would be expected by chance alone; and 45 were significant beyond the .05 level, where 7 would be expected by chance alone.

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$ .

provided grid, and then left the room to allow the participant to privately record his responses. To avoid fatigue effects, after 25 min, the research assistant reentered the room with the demographics questionnaire and instructed the participant to complete it before viewing the remaining images. Participants were thanked and debriefed upon completion.

### 3. Results

To ensure that there were no systematic differences in attractiveness or exploitability ratings based on which of the three groups of pictures was viewed, we conducted a one-way analysis of variance to compare means between the three groups for each measure of mate attractiveness and exploitability. There were no significant group differences for any of the dependent measures except for the questions about seducing (Group 1:  $M = 3.09 \pm .46$ ; Group 2:  $M = 3.18 \pm .39$ ; Group 3:  $M = 2.89 \pm .38$ ;  $F_{2,109} = 4.73$ ,  $p < .05$ ) and pressuring into sex (Group 1:  $M = 2.95 \pm .46$ ; Group 2:  $M = 2.87 \pm .39$ ; Group 3:  $M = 2.66 \pm .43$ ,  $F_{2,109} = 4.49$ ,  $p < .05$ ). Because there was no reason to believe that these differences would affect interpretation of the study's results and because the majority of our measures were void of between-group differences, we proceeded with analyses as planned.

To determine which cues were diagnostic of exploitability, Pearson correlation coefficients were calculated between the rating means for each cue and the mean of participant responses for each exploitability measure for each picture (Table 1). Because the exploitability measures were highly correlated with one another ( $M = .90$ , range: .79–.97), a measure of overall exploitability was calculated by averaging the means of the four exploitability measures for each picture and correlating those averages with the cue ratings means. The participant means were also correlated with the dichotomous cues coded by the researchers. Overall attractiveness was strongly correlated with long-term mate attractiveness [ $r(108) = .91$ ,  $p < .01$ ] and short-term mate attractiveness [ $r(108) = .95$ ,  $p < .01$ ], but not with most measures of exploitability [seduce:  $r(108) = .15$ ,  $p = .12$ ; pressure:  $r(108) = .09$ ,  $p = .36$ ; deceive:  $r(108) = .09$ ,  $p = .36$ ; assault:  $r(108) = .41$ ,  $p < .01$ ]. Because the goal was to independently isolate each cue's relationship with

exploitability and mate attractiveness, we partialled out participants' ratings of overall attractiveness when calculating the correlations. Because each correlation between the specific cues and the exploitability and attractiveness ratings represents a test of an independent prediction and because the number of significant correlations far exceeds what would be expected by chance alone (see Notes, Tables 1 and 2) and were predicted a priori, we report the data without applying a statistical correction.

Fourteen cues were significantly positively correlated with at least three of the four measures of exploitability and with overall exploitability: attention seeking, come hither

look, "easy," flirty, immature, intoxicated, open body posture, partying, promiscuous, promiscuous friends, reckless, revealing clothing, sleepy, and young. To test the prediction that cues positively correlated with exploitability would be positively correlated with short-term mate attractiveness but not correlated with, or negatively correlated with, long-term mate attractiveness, we correlated each cue with participants' measures of mate attractiveness.

All 14 of these cues conformed to the pattern of also being positively correlated with short-term mate attractiveness while being either negatively or not significantly correlated with long-term mate attractiveness (Table 2). The following cues

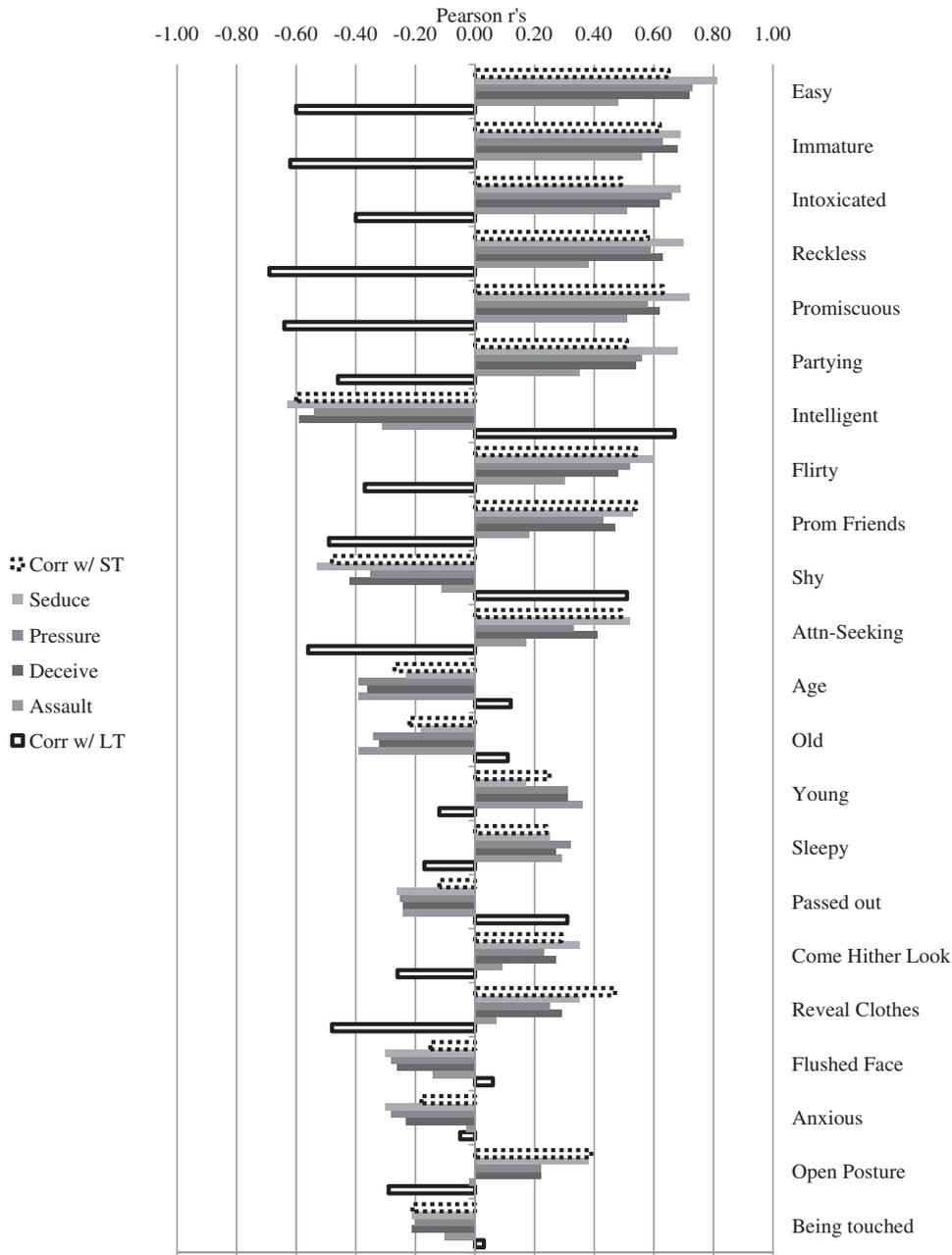


Fig. 1. Cues significantly correlated with exploitability.

were significantly negatively correlated with at least three of the four measures of exploitability and with overall exploitability: age, anxious, being touched, flushed face, intelligent, old, passed out, and shy. Only three of these did not conform to the predicted pattern: flushed face and anxious were not significantly correlated with either short-term or long-term mate attractiveness, and passed out was not significantly correlated with short-term mate attractiveness but was positively correlated with long-term mate attractiveness.

In summary, 22 cues were significantly correlated with three of the four measures of exploitability as well as overall exploitability. Nineteen of these 22 cues also supported the central hypothesis: that cues correlated with exploitability would be linked with perceptions of sexual attractiveness (Fig. 1).

#### 4. Discussion

We investigated cues from three broad categories to determine which were diagnostic of sexual exploitability. Cues from two of these categories, psychological traits and cues to incapacitation, were strongly correlated with sexual exploitability. Specifically, psychological traits indicative of ease of mental or emotional manipulation (e.g., intelligence, immaturity), flirtatiousness and promiscuity (e.g., promiscuous, flirty, having promiscuous friends, wearing revealing clothing), and recklessness (e.g., reckless, partying) were significantly linked with perceptions of exploitability. Cues to currently being incapacitated, such as sleepy and intoxicated, were also correlated with perceptions of sexual exploitability. These findings suggest that men are sensitive to cues in a variety of domains when assessing the sexual exploitability of women. Past research on the psychology of male sexual aggressors has focused on the effect of individual differences and situational contexts on likelihood of committing sexual aggression (e.g., Abbey, Jaques-Tiura, LeBreton, 2011; Malamuth, 1996). This research instead expands our knowledge of victim-related cues that may activate mechanisms for exploitation. Focusing on the *function* of exploitative tactics reveals new cues in several domains that predict perceptions of sexual exploitability. Our results highlight the utility of examining cues that, from a man's perspective, suggest an exploitative strategy may be successful.

Although cues indicating physical weakness were predicted to indicate sexual exploitability, none of those cues were significantly correlated with the measures of exploitability. It is possible that the strength difference between men and women is so large (Lassek & Gaulin, 2009) that size and strength differences among women are irrelevant when assessing their exploitability. Gunns et al. (2002) found that weight was a predictor of ease-of-attack for male targets, but not for female targets, suggesting that female size, contrary to our initial expectation, may not be a cue to exploitability. It is also possible that the current methodology did not present or ask about cues related to physical formidability in a way that

effectively captured their importance. Video or in-person interactions may be required for men to perceive these cues and relate them to exploitability. In-person interactions may be particularly important if it is relative difference in formidability that matters. Additionally, we only included the physical cues of tall, short, skinny, and fat. Other cues, such as low levels of muscularity, athleticism, and physical formidability, may be more strongly associated with perceptions of sexual exploitability.

The second purpose of this study was to test the hypothesis that cues to exploitability represent previously unexamined indicators of sexual attractiveness. Nineteen of the 22 cues correlated with sexual exploitability were also correlated with women's sexual attractiveness, strongly supporting this hypothesis. Furthermore, many of the cues that were not correlated with exploitability also did not correlate with short-term mate attractiveness. This suggests that the correlations with short-term mate attractiveness were not driven by men simply relaxing their preferences when evaluating women as short-term mates. The present findings contribute novel insights to the burgeoning literature on the science of attraction and attractiveness (Sugiyama, 2005; Swami & Furnham, 2008). In addition, these findings provide circumstantial support for one hypothesized function of the emotion of sexual attraction—to motivate men to pursue women for exploitative, short-term mating opportunities when there are cues suggesting that exploitative strategies are likely to be effective.

##### 4.1. Limitations and future directions

Although our sample was limited to university students, we expect the ability to detect cues to sexual exploitability to be universally present. Future research should include men from different age groups and socioeconomic backgrounds. One benefit from using a young, university-attending sample is that these men may be particularly sensitive to cues to exploitability because (1) they are frequently in contact with younger women who exhibit more of these cues because of their youthful appearance and (2) they have lower status and fewer resources and may experience more difficulty attracting a high-quality mate through nonexploitative means.

The use of photographs provided consistent stimuli to examine cues to exploitability; however, some cues may not be assessable in a photograph. This may explain why some of our hypothesized cues to exploitability were not correlated with measures of sexual exploitability. Many behavioral cues (e.g., touching body, touching others, crying) may be more salient in *in vivo* social interactions. Future research could profit from using dynamic stimuli or live interactions to further expand knowledge about exploitability cues and to assess their relationship with sexual attractiveness.

Also needed is research that directly examines sexual attraction as a motivator for pursuing exploitable women. Investigating men's approach likelihood or arousal level when exposed to women displaying cues to exploitability will shed

light on the behavioral output that results from this attraction. Furthermore, it is possible that the experience of sexual attraction overrides the guilt or remorse men would feel from using a set of tactics that, while beneficial from a fitness perspective, are morally reprehensible, some of which are criminal (e.g., rape). Future work also could profitably examine men's conscious awareness of the relationship between perception of cues to exploitability and the sexual attraction they experience, as well as the potentially conflicting emotions they experience when presented with the opportunity to engage in a sexually exploitative strategy.

Generally, a cue's correlations with the four measures of exploitability were very similar. However, for some cues, the correlations with perceptions of ease of sexual assault differed from the other three exploitability measures—most were weaker than correlations with the other three measures. Perhaps cues to sexual exploitability are better characterized dichotomously—cues that suggest that a woman can be sexually assaulted versus cues that suggest that she could be sexually exploited in another way. This distinction may be driven by individual differences in men's likelihood of implementing these strategies. Only certain men may be motivated to implement strategies that require violence, such as sexual assault (Lalumière et al., 2005; Malamuth, 1996). Future research could fruitfully examine which men in which social circumstances adopt which exploitative tactics. Indeed, some tactics might be deployed in a hierarchical fashion, with increasingly cost-inflicting tactics being used only if milder forms of sexual exploitation fail.

This study provides a first step towards understanding the psychological mechanisms underlying men's sexually exploitative strategies. By examining the specific design features of mechanisms for sexual exploitation, this research reveals particular cues that activate these mechanisms, allowing the prediction of which cues put women at risk for sexual exploitation. The link between cues to exploitability and sexual attractiveness paves the way for future studies of sexual attraction as a mechanism motivating men's tactics of sexual exploitation.

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