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## Brief Report

# Implicit motives and sexual motivation and behavior

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### Abstract

Measures of implicit power and affiliation motivation, libido, and sexual intercourse were administered three times to 36 women and 18 men (mean age: 22.17 years,  $SD = 2.25$ ) and then aggregated. Reports of sexual intercourse correlated positively with the power motive ( $r = .28, p < .05$ ) and negatively with the affiliation motive ( $r = -.47, p < .0005$ ). These correlations tended to be stronger in participants engaged in a close relationship than in singles, but were not substantially affected by women's use of oral contraceptives, participants' gender, or social desirability. Although libido was positively correlated with sexual intercourse, it was not significantly associated with implicit motives.

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### 1. Introduction

Research on personality dispositions in humans has identified two basic interpersonal motives: the power motive, defined as an enduring preference for having impact on other people, and the affiliation motive, defined as an enduring preference for close, warm relationships (McClelland, 1987). They are called *implicit* motives because they operate outside of a person's conscious awareness but influence her

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or his free-ranging fantasies and behaviors (McClelland, Koestner, & Weinberger, 1989). The strength of a person's power and affiliation motives can therefore be gauged from the content of fantasies he or she reports in response to picture cues. The Picture Story Exercise (PSE) developed by McClelland and colleagues for the assessment of implicit motives is typically used for this purpose (Smith, 1992).

While the power and the affiliation motives have been found to predict a variety of outcomes, such as aggression within and outside of close relationships (e.g., Mason & Blankenship, 1987), parental investment (e.g., Peterson & Stewart, 1993), nonverbal communication (e.g., McAdams, Jackson, & Kirshnit, 1984; Schultheiss & Brunstein, 2002), and psychophysiological and immunological changes (e.g., McClelland, 1989), so far little is known about their role in sexual motivation and coitus. Winter (1973) found that high-power male college students had their first sexual intercourse at an earlier age than other students, and McClelland (1975) reported that high-power men prefer having several sexual relationships at a time and high-power women prefer open relationships that do not prohibit them to have sexual contact with individuals other than their partner. However, these studies relied on long-term retrospective measures (Winter, 1973) and on assessments of general sexual preferences (McClelland, 1975) and they do therefore not allow to make strong inferences about the relationship between power motivation and concurrent sexual motivation and frequency of coitus. Even less is known about the role of the affiliation motive in sexual motivation and behavior. We would suggest, however, that because the need to establish and maintain a close relationship with another person is at the core of the affiliation motive and because sexual desire and intercourse express such a concern with intimacy and closeness to some extent, the affiliation motive is likely to play a role in human sexuality.

In this study we therefore explored whether the power motive and the affiliation motive are associated with libido and sexual behavior and, if so, in what way. We explored these issues in a predominantly female sample of young adults who had participated in a study of menstrual cycle effects on changes in implicit motivation (Schultheiss, Dargel, & Rohde, in press). All participants were tested three times over the course of one menstrual cycle, and their implicit motives, sexual intercourse during the previous 24 h, and sexual motivation were measured at each assessment. To obtain robust indicators of motivational dispositions, libido, and sexual behavior during that time period, measures were aggregated across all three assessment phases.

## 2. Method

### 2.1. Participants and design

Thirty-six women, half of whom were currently using oral contraceptives, and 18 men participated in the study ( $N = 54$ ; mean age: 22.17 years,  $SD = 2.25$ ). All participants were enrolled as students at the University of Potsdam, Potsdam, Germany. Thirty-five participants reported to be currently engaged in a close relationship.

All participants were tested on three different occasions. Women were tested once each during the menstrual (T1), midcycle (T2), and premenstrual (T3) phase of the menstrual cycle. Men were tested three times corresponding to the intervals in which women were tested. At each assessment, participants were tested in groups of up to four people, but women and men always participated in separate sessions.

At each of the three assessments, participants completed a PSE and filled out questionnaire items assessing their libido and their sexual activity. A social desirability questionnaire was administered at the first assessment. Information about age and relationship status was obtained during the third assessment. After completing all three sessions, they received 60 Deutschemark (~\$30) for their participation.

## 2.2. Implicit motives

Participants' implicit motives were assessed with three parallel forms of a 5-picture PSE constructed specifically for the purposes of the present study (for a description of the picture cues, see Schultheiss et al., in press). Participants had 5 min per picture to write a story. All stories were later coded for power and affiliation motive imagery according to Winter's (1994) *Manual for Scoring Motive Imagery in Running Text* by a trained scorer who had previously attained over 85% agreement with training materials prescored by experts and which are contained in the *Manual*. The scorer was blind with regard to assessment phase and group membership. For each motive category, we created a total score across all three sets. All scores were converted to motive images per 1000 words to adjust for differences in protocol length. Test–retest reliabilities (T1 to T2, T1 to T3, T2 to T3) were .43, .35, and .09 for the power motive, and .02, .26, and .11 for the affiliation motive (see Atkinson, 1981, for a discussion of test reliability in the context of motivation research).

## 2.3. Libido

At each assessment, participants indicated to what extent they had experienced “pleasant sexual thoughts” and “sexual feelings” during the previous week, using five-point rating scales with endpoints labeled *never* (1) and *frequently* (5). This measure was adapted from earlier work by Sanders, Warner, Backstrom, and Bancroft (1983). Responses to the items were highly correlated, both within each assessment phase ( $r_s \geq .66$ ,  $p_s < .0000001$ ) and, after summing items within each assessment phase, across assessment phases ( $r_s \geq .39$ ,  $p_s < .005$ ). We therefore created an overall measure of participants' libido by summing their responses to both items within and across assessment phases.

## 2.4. Sexual intercourse

At each assessment, participants reported whether they had sexual intercourse within the previous 24 h. Because for each assessment phase, a “yes” response was relatively infrequent and did not lend itself to meaningful statistical analyses, we created an overall measure of sexual intercourse by determining whether, across all

three assessments, participants reported a sexual intercourse once or more often (coded 1) or never (coded 0).

### 2.5. Social desirability

To control for individual differences in participants' willingness to reveal information about their sexual motivation and behavior, we measured their tendency to give socially desirable responses by administering the 14-item Unlikely Virtues scale from Tellegen's Multidimensional Personality Questionnaire (MPQ; German version by Angleitner, Langert, Schilling, & Spinath, 1993). The scale consists of items such as "I have always been completely fair to others" and "Sometimes I am a bit lazy" (reverse scored), features a true/false-response format, and has satisfactory stability (test-retest  $r = .73$ ; Tellegen, 1982).

## 3. Results

In the overall sample, sexual intercourse was associated with high levels of power motivation,  $r = .28$ ,  $p < .05$  ( $r_s = .19$ ,  $.27$ , and  $.15$  for disaggregated motive scores at T1, T2, and T3), and low levels of affiliation motivation,  $r = -.47$ ,  $p < .0005$  ( $r_s = -.31$ ,  $-.23$ , and  $-.32$  for T1, T2, and T3). Although social desirability correlated negatively with reporting sexual intercourse,  $r = -.41$ ,  $p < .005$ , controlling for this variable did not substantially alter the relationships between motives and sexual intercourse (partial  $r_s$  were  $.24$  for power motivation,  $p = .08$ , and  $-.43$  for affiliation motivation,  $p = .001$ ). Social desirability was not significantly associated either with power motivation or with affiliation motivation in the overall sample.

As Table 1 shows, the pattern of relationships between implicit motives and sexual intercourse found in the overall sample was similar in women and men. Among women, there was no indication that oral contraceptive use moderated the size or direction of these correlations.

Table 1  
Descriptive statistics and correlations among variables for women (above diagonal) and men (below diagonal)

	Women		Men		1	2	3	4	5
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
1. Power motive	8.21	2.88	8.27	3.11	–	–.09	–.32	–.03	.35*
2. Affiliation motive	9.11	2.54	8.02	3.25	.01	–	.15	.06	–.42*
3. Social desirability	2.75	2.03	1.94	1.39	.29	.31	–	–.02	–.38*
4. Libido	6.78	1.62	6.93	1.21	.28	.27	–.08	–	.24
5. Intercourse	0.25	0.44	0.39	0.50	.17	–.52*	–.47*	.44	–

Note. For women,  $N = 36$ ; for men,  $N = 18$ . Motive scores are expressed as images per 1000 words. Intercourse was coded 1 if a participant reported a previous sexual intercourse for at least one of the assessments and 0 if not.

\*  $p < .05$ .

The correlations tended to be stronger among participants currently engaged in a close relationship (for power:  $r = .39, p < .05$ ; for affiliation:  $r = -.42, p < .05$ ) than among single participants (for power:  $r = .15$ ; for affiliation:  $r = -.36, ps > .10$ ), presumably because there were more opportunities for the former than for the latter to have sexual intercourse (being engaged in a close relationship was associated with a higher likelihood of reporting sexual intercourse,  $r = .39, p < .005$ ). Neither motive variables nor social desirability were significantly correlated with libido in the overall sample.

Libido and sexual intercourse correlated moderately in the overall sample,  $r = .30, p < .05$ . This correlation was not significantly moderated by gender, relationship status, or implicit motives.

#### 4. Discussion

The results of this study indicate that implicit motives are associated with sexual behavior. Aggregating across three separate assessments for each participant, we found that individuals high in power motivation are more likely to report sexual intercourse for the previous 24 h than individuals low in power motivation, whereas individuals high in affiliation motivation were less likely to report sexual intercourse than individuals low in affiliation motivation. This pattern of results was not significantly moderated by social desirability, participant gender, oral contraceptive use, or relationship status, although due to the higher incidence of sexual intercourse in participants engaged in close relationships, the correlations between motives and intercourse were slightly stronger in engaged individuals than in singles. Interestingly, while reports of sexual thoughts and feelings were positively correlated with likelihood of sexual intercourse in the overall sample, our libido measure was not significantly associated with implicit motive measures. This finding resonates with McClelland's (1980) argument that behavioral measures of motivation (e.g., sexual intercourse) should be more strongly associated with implicit motives than subjective ratings of motivation (e.g., libido).

Our findings replicate and extend earlier reports by Winter (1973) and McClelland (1975). The association between the power motive and sexual behavior found by these researchers and by us is reminiscent of the relationship between social dominance and sexual reproduction observed in other species. In mammals living in social groups, dominance rank, either as an inherent feature of social organization or determined ad hoc in courtship fights, strongly predicts reproductive success, with dominant individuals having privileged access to mates and producing more offspring than subordinates (Wilson, 1980). We suggest that in humans, the implicit power motive is a marker of an individual's aspired-to or attained dominance rank and therefore should be related to reproductive success. This notion is further supported by reports that power-motivated individuals show social and endocrine signs of dominance. They frequently work in jobs in which they can wield power over others or at least have a lasting influence on others, like upper-level management, teaching, or journalism (for a summary of the findings, see McClelland, 1987). At the endocrine level,

they are characterized by high baseline levels of testosterone, a hormone associated with sexual motivation in both men and women, and show a stronger testosterone increase upon winning a dominance contest than low-power individuals (Schultheiss, Campbell, & McClelland, 1999; Schultheiss et al., in press; Schultheiss & Rohde, 2002), an endocrine response that marks dominance successes in other primates, too (Sapolsky, 1987).

Due to the cross-sectional nature of our study, however, we cannot draw any firm conclusions about causality issues at this point. Therefore, it is also conceivable that sexual activity leads to increased power motivation on the next day, maybe mediated by a post-coital rise in testosterone (Dabbs & Mohammed, 1992), or that a reciprocal relationship exists between sexual behavior and power motivation.

The correlational nature of our findings makes it particularly difficult to interpret the unexpected negative association between sexual behavior and affiliation motivation. This result may suggest that individuals with a strong need for close, harmonious relationships have little interest in sexual intercourse, but it could also mean that sexual deprivation triggers an increase in concurrent affiliation motivation. In addition, it could be argued that Winter's affiliation scoring system taps into a need to avoid social rejection to a greater extent than it gauges a need to form and maintain a close attachment to a significant other (cf. McAdams & Constantian, 1983; Winter, 1991), and positive correlations with sexual activity should therefore not be expected.

Because our study was cross-sectional and limited to young European adults, these interpretations remain speculative at the moment and need to be further scrutinized in samples differing from ours in terms of age, cultural and educational background, and marital status. Future studies can also help to shed more light on the relationships between implicit motives and sexual behavior by extending the range of days across which sexual behavior is assessed retrospectively, by using diary methods to assess sexual desire and behavior (including masturbation; Sanders et al., 1983), by separating self-initiated from partner-initiated sexual intercourse (Wallen, 2001), and by distinguishing between fear of rejection and hope of intimacy in the measurement of affiliation motivation. Using such procedures in longitudinal designs would allow researchers to study the causal role of implicit motives in sexual motivation and behavior with considerable sophistication. These more naturalistic studies should also be complemented by experimental research in which sexual responses to erotic stimuli are assessed with psychophysiological methods in the laboratory (e.g., Krüger et al., 1998) after measuring or experimentally arousing implicit motives.

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