

# The importance of sexual self-disclosure and perceived partner responsiveness in sexual intimacy: the proposition of an interpersonal process model.

Paul G.S. van der Sterren and Marjolein J.W. Verheij  
Faculty of social sciences  
Utrecht University

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The current study was conducted to give an explanation of the interpersonal processes in sexual intimacy. This was done by proposing a model which represents the relationship between various intra-and interpersonal aspects in sexual intimacy. Herein, sexual self-disclosure and perceived partner responsiveness were key components because of their interpersonal nature. The main purpose of the current research was to assess if the suggested model provided evidence for the interpersonal processes of sexual intimacy within dyadic intimate relationships. The relationship between intrapersonal sexuality aspects, sexual self-disclosure and perceived partner responsiveness was therefore investigated. The second purpose was to examine if there was an association between perceived partner responsiveness (PPR) and sexual satisfaction. Participants (N = 198) completed a questionnaire that measured the intrapersonal factors sexual beliefs, fears, motivation and satisfaction and the interpersonal factors sexual self-disclosure and PPR. In general, the results provided evidence for the proposed interpersonal processes in sexual intimacy. More specifically, significant predictive values in the relation between sexual beliefs and fears on the one hand and sexual self-disclosure on the other hand were found. Furthermore, sexual self-disclosure partially predicted PPR. PPR in turn predicted sexual fears, beliefs and motivation. Finally, a significant predictive relation between PPR and sexual satisfaction was found. To conclude, the results generally supported the hypotheses and provided evidence regarding the associations between intrapersonal sexuality factors, sexual-self disclosure and PPR and therefore supported the model as proposed in this study.

Most theorists and researchers agree that both emotional and sexual intimacy are essential aspects of intimate romantic relationships and relationship satisfaction (e.g. Bartholomew, 1990; Clark & Reis, 1988; Reis & Shaver, 1988; Prager, 1995). The interpersonal nature of emotional as well as sexual intimacy may be defined as the quality of interactions in which a continual reciprocal influence of both partners exists. In accordance with this definition, Reis and Shaver (1988) described emotional intimacy as the product of a transactional, interpersonal process in which the interactive components self-disclosure and partner responsiveness have a central role. Sexual intimacy, in contrast, has for the most part discussed in existing research as if it is a unitary phenomenon without, like emotional intimacy, considering its interpersonal nature. As far as the authors are aware of, no comprehensive theory exists that describes sexual intimacy as an interpersonal process.

Given this limit in contemporary psychology, a clear description of the interpersonal processes of sexual intimacy is an important addition to the existing literature in this field. Therefore, a model was proposed which emphasises the interpersonal

aspects in sexual intimacy. This model was based on an already existing interpersonal model of emotional intimacy, developed by Reis and Shaver (1988). The latter gives a clear and simple explanation in the interaction processes of emotional intimacy between two partners within a relationship. More specifically, it describes the development of intimacy through a dynamic process in which an individual discloses personal information, thoughts and feelings to a partner. Subsequently, the individual will receive a response from the partner. This response can then be interpreted by the individual as understanding, validating and caring. These emotional based components were translated into sexual terms, like the intrapersonal aspects sexual beliefs, fears and motivation and sexual self-disclosure.

The main purpose of the current research was to examine whether the suggested model provides an explanation for the interpersonal processes of sexual intimacy within a dyadic sexual interaction. The second purpose considered the relationship between sexual satisfaction and perceived partner responsiveness. Suggested was, that during sexual intimacy, feeling understood, validated and cared

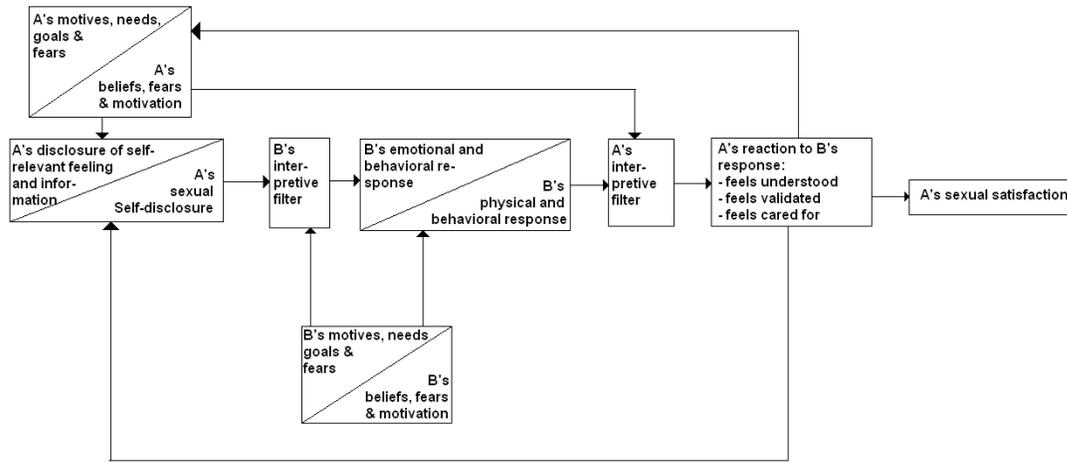


Figure 1. Anatomy of the proposed process model of emotional and sexual intimacy. Per cube, the left side represents the process model of emotional intimacy as designed by Reis & Shaver (1988), the right side represents the process model of sexual intimacy. In addition sexual satisfaction is viewed here as a result of A's reaction to B's response (perceived partner responsiveness).

for could have a substantial impact on sexual satisfaction. In the following section, the model of emotional intimacy by Reis and Shaver as well as the proposed model of sexual intimacy will be discussed. Furthermore, both forms of intimacy will be explored, emphasising the main concepts; self disclosure and perceived partner responsiveness.

*A comparison of emotional and sexual intimacy in an interpersonal model*

As mentioned before, intimacy can be defined according to Reis and Shaver (1988) as an interpersonal transactional process between two or more people. The accompanying model developed by these authors (see figure 1) emphasises the emotional aspect of intimacy. In this model, emotional intimacy starts with self-disclosure; one person unfolding personal information, thoughts and feelings to another person (e.g. 'I feel sad'). These expressions may be verbal or nonverbal, amplifying statements or standing as messages in their own right (e.g. 'opening arms for a hug'). The intimacy process continues when the receiver or listener emits signs of responsiveness which addresses the specific content and expresses understanding, validation and caring for the disclosing person. These signs are in the form of, but not limited to, emotional and behavioural expressions, verbal acknowledgement and acceptance (e.g. 'What do you feel sad about?' or stepping up to engage in a hug). Only when the receiver successfully emitted these signs and the disclosing persons perceived them in that way, will the disclosing person theoretically feel understood, accepted and cared for.

Subsequently experiencing the interaction as intimate. Likewise, the interpersonal model of sexual intimacy as proposed in this study, contains comparable processes in which self-disclosure and partner responsiveness with the same prominent role. As shown in figure 1, sexual intimacy starts out with disclosing sexual themes, which is therefore named sexual self-disclosure. This sexual self-disclosure is influenced and directed by intrapersonal sexual aspects like sexual beliefs, fears and motivation. Subsequently the receiver can, similar to emotional intimacy, continue the process by emitting signs of responsiveness. Different to emotional intimacy in this step is however, that the responses are limited to sexual expressions and behaviour. When the partners reactions are successfully adjusted and received by the self-disclosing person, sexual intimacy could be gained. Because of the emphasis of (sexual) self-disclosure and perceived partner responsiveness in both models, a more detailed investigation follows.

*Self-disclosure and sexual intimacy*

Self-disclosure is the verbal communication of personally relevant information, thoughts and feelings to another and plays a major role in the development of feelings of closeness (Jourard, 1971; Derlega, Mets, Pertonio, & Margulis, 1993). Furthermore, nonverbal behaviours such as gaze, touch and body orientation (i.e. body language) can interact with verbal self-disclosure to enhance the intimacy process (Patterson, 1984). It is not surprising that in sexual intimacy, self-disclosure has the same prominent role as in emotional intimacy, similarly marked by the expression of personal rele-

vant information, thoughts and feelings to another. Self-disclosure in sexual intimacy, however, is limited to a more specific range of topics than in emotional intimacy. These topics are, but not limited to, sexual morality, sexual thoughts, sexual problems, sexual techniques, contraception (Herold & Way, 1988) and sexual wishes and preferences. Although it may seem hard discussing these sexual topics with an intimate partner, it is warrant for a satisfying sex life (Chesney, Blakeney, Cole, & Chan, 1981; in Byers & Demmons, 1999; Fisher, Miller, Byrne, & White, 1980; in Byers & Demmons, 1999). As noted earlier, the extent of self-disclosure in both sexual and emotional intimacy depends on certain intrapersonal aspects such as (sexual) motives, needs and goals, which in turn are subject to differences within partners, time and situation. In other words, these intrapersonal aspects can stimulate or dampen the willingness to self-disclose or the willingness to receive a partner's self-disclosure in both forms of intimacy. Given the purpose of this research, a deeper understanding in sexual motivation, beliefs and fears and their role in sexual intimacy will be discussed below.

Motivation is a state of increased interest in a particular goal (Buck, 1988; Heckhausen, 1991). Sexual motivation involves interest in attaining a class of incentives with the general purpose to get sexually satisfied (Hill & Preston, 1996). This is further highlighted by numerous studies, which found a variety of reasons to engage in sexual behaviour. Next to the obvious reproductive properties, people can engage in sexual behaviour with the following but not exclusive reasons: to experience pleasure, to express emotional closeness, to please one's partner, to experience a sense of quest and to relieve sexual tension (e.g. Carroll, Volk, & Hyde, 1995; in Byers & Demmons, 1999; Denney, Field, & Quadago, 1984).

Further, the study mentions sexual beliefs as an intrapersonal component that affects self-disclosure. Beliefs are ideas that we have about ourselves, others, or the world, that guide the way we interpret events, influencing our behaviour and emotions (Nobre, Gouveia, & Gomes, 2003). Similarly, sexual beliefs are ideas people have concerning sexuality, which are gained by experience and various information sources (e.g. *'I should always have an orgasm when I have sex', 'If I have sex I should always protect myself'*). These kinds of sexual information sources lead to different types of sexual beliefs concerning, for example, behaviour and control, which in turn result in different ways of dealing with sexuality (Bleakley, Hennessy, Fishbein, & Jordan, 2009).

Finally the current research included fears as an underlying factor directing sexual self-disclosure. Fears and anxiety both have a functional basis in

human existence (Barlow, 2004). These fears and their existence in detrimental cognitions about sex or sexuality can limit one's sexuality (e.g. *'I don't want to be touched there because I am afraid it might hurt'*). Moreover, they can limit a person to self-disclose (e.g. *'I am afraid of what he or she might think if I tell him/her that I like to be touched there'*). Furthermore, sexual fears can limit a person in his or hers sexual behaviour (e.g. *I am a sinner if I have sex before marriage*).

### *Perceived partner responsiveness and perceptual filters*

Stepping further in the model of sexual intimacy, the second key component is perceived partner responsiveness. Miller & Berg, 1984 stated that responsiveness can be viewed as the extent to which and the way in which one participant's actions address the previous actions, communications, needs, or wishes of another participant during that interaction. In the model of emotional intimacy by Reis & Shaver, perceived partner responsiveness means that the message which is being conveyed is largely dependent on the sender's perception of the quality of the partner's response (Reis & Shaver, 1988; Laurenceau, Barrett, & Pietromonaco, 1998). That means, in developing a feeling of closeness and thereby intimacy, the receiver of the self-disclosed information has to be able to demonstrate concern for the disclosing person, be sincere and immediate, capture the content of the original communication and meet the need of the disclosing person (Berg, 1987). Additionally, the model of emotional intimacy by Reis & Shaver, 1988 emphasizes validation, understanding and caring towards the disclosing partner. Herein understanding refers to accurately capturing the self-disclosed needs, feelings and situation. Caring is defined as showing affection and concern for the self-disclosing person and last, validation refers to the confirmation that the self-disclosing person is a valued and accepted individual. The current model of sexual intimacy adopted the perceived partner responsiveness in its original sense with the same tripod basis, since in sexual intimacy this component is comparable in its role with respect to emotional intimacy.

As shown in figure 1, the receiver's as well as the sender's signals are submitted to perceptual filters. That is, the message being send is interpreted by the perceptions of the receiver before a response is generated. In turn, this response is interpreted by the perceptions of the sender, which affects his or her response. In the original model of emotional intimacy, these perceptual filters are therefore placed between the self-disclosure of person A and the response on this by person

B, and between the response by person B and the reaction of person A on this response. Furthermore, the interpretative filters are affected by the intrapersonal aspects of both persons, as also presented in figure 1. One might argue that during sexual interaction, perceived partner responsiveness is less submitted to perceptual filters than during emotional interaction, due to the transparency of sexual behavioural responses. Nevertheless, Reis and Shaver (1988) state that the self-disclosing person's interpretation of the receiver's response is more important than the actual act. In addition, Laurenceau et al. (1998) state that even a genuine response of the receiver may be misinterpreted by the self-disclosing partner. Moreover, the transparency of behaviour at large can be doubted due to differences between partners and their interpretation of different behaviours, which results into a large variability within and between partner relationships (Reis & Shaver, 1988). The proposed model adopted the perceptual filters as described above, in their original sense. The connections of the various intrapersonal and interpersonal components as mentioned above have been examined in this study. The expectation was that these connections in the way they have been represented in the proposed model, give an explanation of the processes in sexual intimacy. In doing this, the following hypotheses have been formulated and divided in two sections, a forward route and backward routes. The forward route takes up the effect of the intrapersonal sexuality aspects on sexual self-disclosure followed by the effect of sexual self-disclosure on perceived partner responsiveness. The backward routes describe perceived partner responsiveness in relation with sexual self-disclosure as well as with the intrapersonal sexuality aspects.

#### Forward route

- (A) *Sexual beliefs is expected to negatively predict sexual self-disclosure.*
- (B) *Sexual fears is expected to positively predict sexual self-disclosure.*
- (C) *Sexual motivation is expected to positively predict sexual self-disclosure.*
- (D) *Sexual self-disclosure is expected to positively predict perceived partner responsiveness.*

#### Backward routes

- (E) *perceived partner responsiveness is expected to positively predict sexual beliefs.*
- (F) *perceived partner responsiveness is expected to positively predict sexual fears.*
- (G) *perceived partner responsiveness is expected to negatively predict sexual motivation.*
- (H) *perceived partner responsiveness is expected to positively predict sexual self disclosure.*

### *Perceived partner responsiveness and sexual satisfaction*

Returning to the model as showed in figure 1, one component has been added by the authors which has not been discussed yet, namely sexual satisfaction. Satisfaction can be viewed as an essential aspect of sexual intimacy, for it influences one's sexual beliefs, extent of self-disclosure and behaviour during sexual interaction (McNeil & Byers, 1997; Thibaut & Kelley, 1959; Impett & Tolman, 2006; Byers & Demmons, 1999). Therefore, it is the view of the authors that sexual satisfaction affects the interpersonal sexual intimacy process on a higher level. Sexual satisfaction has been added at the end of the model, because it is expected that this factor will be influenced by perceived partner responsiveness via the following process: after one's partner responded on one's self-disclosure, the self-disclosing person evaluates his or her interpretation on his or her partner's response. During this evaluation, the level of experienced sexual rewards given by one's partner seems to be of importance in generating sexual satisfaction. Byers and Demmons (1999) found that individuals who reported more experienced sexual rewards by their sexual partner also reported greater sexual satisfaction. An explanation for this could be that experiencing sexual rewards by one's partner contributes to feeling validated, understood and cared for. These satisfying feelings could lead to engaging in sexual behaviour that is more pleasing to the individual and to a greater extent of sexual self-disclosure, which in turn leads to a better partner's understanding of one's sexual likes and dislikes. Subsequently, this leads to a sexual script that maximizes positive sexual interactions (rewards) and minimizes negative sexual interactions (costs) for the self. A more favourable balance of rewards and costs will bring a mutually agreed upon and enjoyable sexual script and thus to higher sexual satisfaction for the individual (McNeil & Byers, 1997). Hence, it seemed plausible that a link could be found between perceived partner responsiveness as mentioned in the proposed model of sexual intimacy, and sexual satisfaction. For this reason, the final hypothesis was formulated:

- (I) *perceived partner responsiveness is expected to positively predict sexual satisfaction.*

## Methods

### *Participants*

A total of 198 participants filled out a questionnaire, of whom including 25,5 % men and 74,5 %

women. The age in the sample ranged from 18 to 63 with a mean of 24,9 with a standard deviation of 6.98. At the time of the study, 147 participants were involved in a sexual relationship and 51 were not. Most participants (64,4 %) were in the age between 20 and 24. In the sample, 38.1% had some kind of religion, 61.9% was not religious. All participants had completed a college or graduate degree.

Participants were selected from the authors personal social environments and from a popular Dutch social network site on the Internet, on which the authors placed an advertisement to participate in the study by filling in a questionnaire (of which a link was placed). Participants that were younger than 18 years and participants that never had sexual intercourse were removed from the survey. This because most items in the questionnaire were concerning current or earlier sexual relationships.

### *Procedure*

The questionnaire was posted on the Internet with the title "Sexuality and Interaction". The introduction of the questionnaire told potential participants what kind of questions would be asked. Also was mentioned that all data obtained in the survey was aimed for scientific research and would be processed anonymously and carefully. Participants with a relationship were asked to let their partner also fill in the questionnaire. Participants that were currently involved in a sexual relationship were asked to answer subsequent questions with respect to their sexual partner; the others were asked to report on their sexual partners they had in the past. Under all participants, a cinema ticket was raffled.

The questionnaire used in the current study was composed of scales and subscales from seven validated and reliable questionnaires which measure the various aspects of the model as proposed in this study, in the following sequence: perceived partner responsiveness, sexual beliefs, sexual motivation, sexual perfectionism, sexual satisfaction and sexual self-disclosure. Preceding, some demographic questions were asked, namely day of birth, sex, education level, religion and, if applied to, in what kind of relationship one was during that moment. Participants with a partner were asked since how long they were involved in the given relationship. All of the items and instructions were translated into Dutch. Access to every next section and to complete the questionnaire, all questions had to be answered. Filling in the questionnaire took about ten to fifteen minutes. After completion, participants were thanked for their participation and were asked to send the link to other people in their environment.

To test the hypotheses, a structural method of analysis was constructed to avoid statistical mishaps and to come to a clear roadmap of falsification. The data gathered by the automated questionnaire was edited and if needed rescored in SPSS version 16.0 (statistical package for the social sciences). Also, visual checks were performed for normal errors and homogenous groups. Next, the main constructs were tested if there were significant differences with respect to demographic variables (gender, age, time in relationship, education and religion). These demographic variables weren't normally distributed. After transformation into groups of two, divided in high and low scores, normality was approached. Furthermore, two subscales of the MSSCQ (Snell, 1995) beliefs construct, namely the power-other sexual control subscale and the internal-sexual control, were inversed to make the scale unilateral positive.

All hypothesis were tested with a step and block wise regression analysis. Furthermore, the regression coefficients were tested for multi-collinearity via VIF scores (variance intolerance factor). VIF scores approaching 2 were further investigated. The blocks of the regressions analysis consisted of first demographic variables and second the hypothesised independent variables. After testing the scales of the various constructs in relation to the independent values, all scales were broken down to subscales and tested again.

### *Measurements*

*MSSCQ.* The Multidimensional Sexual Self-Concept Questionnaire (MSSCQ: (Snell, 1995)) was used to measure sexual beliefs, sexual fears, sexual motivation and sexual satisfaction. All included subscales consist out of 5 items and can be answered by a 5 point rating scale from (0) not at all characteristic of me to (4) very characteristic of me. Sexual beliefs was measured by the subscales sexual self efficacy, chance/luck sexual control, power-other sexual control, internal sexual control and sexual optimism. The sexual self efficacy scale assesses the belief that one has the ability to deal effectively with the sexual aspects of oneself (*e.g.* 'I have the ability to take care of any sexual needs and desires that I may have'). The chance/luck sexual control scale assesses the belief that the sexual aspects of one's life are determined by chance and luck considerations (*e.g.* 'The sexual aspects of my life are determined mostly by chance happenings'). The power-other sexual control scale assesses the belief that the sexual aspects of one's life are controlled by others who are more powerful and influential than oneself (*e.g.* 'My sexual behavior is mostly determined by people who have influence and control over me'). The internal sexual control scale assesses the belief that the

sexual aspects of one's life are determined by one's own personal control (e.g. *'My sexuality is something that I myself am in charge of'*). The sexual optimism scale assesses the expectation that the sexual aspects of one's life will be positive and rewarding in the future (e.g. *'I anticipate that in the future the sexual aspects of my life will be frustrating'*). The subscales have a sufficiently high reliability that ranges from  $\alpha = .80$  to  $\alpha = .87$ . In the current study the subscales reliability ranged from  $\alpha = .78$  till  $\alpha = .83$ .

Sexual fears was measured by the subscales fear-of-sex and sexual fears. The fear-of-sex subscale assesses the fear of engaging in sexual relations with another individual (e.g., *'I am afraid of becoming sexual involved with another person'*). The sexual-fears subscale assesses the tendency to feel tension, discomfort, and anxiety about the sexual aspects of one's life (e.g. *'I feel anxious when I think about the sexual aspects of my life'*). Each subscale has a sufficiently high reliability ( $\alpha = .82$ , respectively  $\alpha = .83$ ). The current research showed similar high reliability scores ( $\alpha = .86$  respectively  $\alpha = .76$ ). Sexual motivation was measured by the subscale sexual motivation. This subscale assesses the motivation and desire to be involved in a sexual relationship (e.g. *'I'm motivated to be sexually active'*). The reliability of the subscale was sufficiently high ( $\alpha = .91$  compared to  $\alpha = .88$ ) in the current study.

Sexual satisfaction was measured by the subscale sexual satisfaction. This subscale assesses the tendency to be highly satisfied with the sexual aspects of one's life (e.g. *'I am satisfied with the way my sexual needs are currently being met'*). The sexual satisfaction subscale is internally consistent  $\alpha = .90$ , likewise the current study found a high reliability  $\alpha = .92$ .

*SSDS-R.* To measure sexual self-disclosure, the Revised Sexual Self-Disclosure Scale (SSDS-R; Snell, 1989), was used. This scale gives an indication of the extent to which people would be willing to discuss several sexual topics with an intimate partner. The included subscales are: sexual behaviours (e.g. *'The types of sexual behaviors I have engaged in'*) sexual sensations (e.g. *'The kinds of touching that sexually arouse me'*) sexual fantasies (e.g. *'My private sexual fantasies'*) sexual preferences (e.g. *'The sexual preferences that I have'*) meaning of sex (e.g. *'What sex in an intimate relationship means to me'*) distressing sex (e.g. *'The aspects of sex that bother me'*) and sexual delay preferences (e.g. *'The times when I might not want to have sex'*). Answers will be given on a 5 point rating scale from (0) I would not be willing to discuss this topic with an intimate partner to (4) I would be completely willing to discuss this topic

with an intimate partner. Reliability of each of the subscales ranges from  $\alpha = .59$  to  $\alpha = .91$  (average  $\alpha = .81$ ). The current research however found higher alpha's, ranging from  $\alpha = .75$  till  $\alpha = .91$ . The overall reliability of the SSDS-R was found at  $\alpha = .96$ .

*Perceived Partner Responsiveness.* Single question items were used to measure perceived partner responsiveness. Due to the pilot characteristic of this study, a thorough measurement of perceived partner responsiveness as measured by an adapted version of the Interaction Record Form for Intimacy (IRF-I; Prager & Buhrmester, 1998) was beyond the scope of the current study. For each aspect of perceived partner responsiveness (feeling understood, feeling validated and feeling cared for) a single item was constructed which can be answered on a 5 point likert-scale ranging from (0) never to (4) always. Laurenceau, Barrett, and Rovine (2005) reported a high reliability at day 1 for husbands and wives ( $\alpha = .86$  and  $\alpha = .88$  respectively) for their single item measured concerning perceived partner responsiveness. The current research has split perceived partner responsiveness in to 2 categories; sexual and emotional perceived partner responsiveness. For both subscales high reliability scores were found ( $\alpha = .88$  respectively,  $\alpha = .94$  respectively,  $\alpha = .93$ ).

## Results

### Descriptives

The grouped demographic variables were analysed using student's t-tests. Results for gender yielded no significant difference between the means of the major constructs, including their respective subscales. Age however, had a significant effect on Fears and its subscale Fear-of-sex [ $t(196) = -1.99, p < .05$ , respectively  $t(196) = -2.98, p < .05$ ]. This result implies that, being younger results in a lower score on the Fears construct and the fear-of-sex subscale. In addition, age had a significant influence on the internal sexual control subscale of beliefs [ $t(196) = 2.33, p < .05$ ]. A higher average score for internal sexual control can be found within the older group than within the younger group. As presented in table 1, being religious or not showed a difference in means with respect to sexual self-disclosure and five of its subscales, namely; Sexual fantasies, Sexual accountability, Distressing sex, Sexual Dishonesty and Sexual delay preferences. These results indicate that a higher average mean can be found for religious participants, exclusively on sexual self-disclosure and the before mentioned subscales.

With respect to education, the results indicated that a having a low education leads to a lower score

Table 1

*Independent students t-tests comparing means between religious and non religious subjects on various sexual self-disclosure measurements, specified in mean difference (Mean Dif.), standard deviation (SD) and T-score.*

	Religion		
	Mean dif.	SD	T-score
Sexual self-disclosure	-.27*	.11	-2.43
Sexual fantasies	-.34*	.15	-2.23
Sexual accountability	-.39*	.14	-2.76
Distressing sex	-.44*	.14	-3.04
Sexual Dishonesty	-.32*	.15	-2.13
Sexual delay preferences	-.32*	.15	-2.17

\*p<.05

Table 2

*Independent student's t-tests comparing means between long and short relationships (rel. length) on various sexual self-disclosure measurements, specified in mean difference (Mean dif.), standard deviation (SD) and T-score.*

	Rel. length		
	Mean dif.	SD	T-score
Sexual self-disclosure	-.29*	-2.26	.13
Behaviors	-.40*	-2.39	.17
Sexual fantasies	-.38*	-2.14	.18
Meaning of sex	-.34*	-2.38	.14
Distressing sex	-.33*	-2.01	.16

\*p<.05

on sexual beliefs and sexual motivation [ $t(196) = -2.91$ ,  $p < .01$  respectively  $t(196) = -2.19$ ,  $p < .05$ ]. Relationship length showed that the high length group lead to a higher score on sexual motivation as well as sexual satisfaction. [ $t(147) = 2.37$ ,  $p < .05$ , respectively  $t(147) = 2.41$ ,  $p < .05$ ]. As shown in table 2, the reverse was found for sexual self-disclosure and four of its subscales.

### Foreward Route

The main route as shown in figure 1 included the effects of intrapersonal sexuality aspects on sexual self-disclosure and sexual self-disclosure on perceived partner responsiveness. Table 3 shows the Beta (standardized in parentheses), SD, T-score, and VIF (variation inflation factor) for sexual beliefs, fears and motivation predicting sexual self-disclosure. The overall model fitted significantly [ $F(5,146) = 12.08$ ,  $p < .01$ ] and had an adjusted  $R^2$  of .28. The constant of the equation was not significant. This has implication for the results of religion and relationship length. Both factors are dummy variables, meaning that either a one or a zero is filled into the regression analysis. Since the results yielded a non-significant result for the constant of the model, there is no known point of origin for the regression line. When for relationship length and

religion a zero is placed in the equation, no score can be established and therefore their respective influences cannot determined in the model. With regard to the other factors in the regression model, hypothesis A can be accepted; beliefs is a positive predictor of sexual self-disclosure [ $\beta(.76) = 3.53$ ,  $p < .01$ ]. This implies that a higher score on the Beliefs subscale predicts a higher score on sexual self-disclosure. Likewise the second hypothesis B, can be accepted [ $\beta(-.31) = -2.81$ ,  $p < .01$ ] which means that a higher score on sexual fears predicts a lower score on sexual self-disclosure. Sexual motivation however, was not a significant predictor of sexual self-disclosure, thereby rejecting hypothesis C [ $\beta(-.14) = -.02$ ,  $p < .05$ ].

Next, the predictive qualities of sexual self-disclosure on perceived partner responsiveness were examined. The results yielded a significant model fit [ $F(1,146) = 22.02$ ,  $p > .01$ ] which accounted for 13 percent of the found variance in perceived partner responsiveness. The model described sexual self-disclosure and the constant as significant predictors, thereby accepting hypothesis D [ $\beta(.31) = 4.69$ ,  $p < .01$  respectively,  $\beta(3.07) = 12.97$ ,  $p < .01$ ]. The above mentioned results indicate that the foreward route of the model has some validity according to these data. The intrapersonal sex-

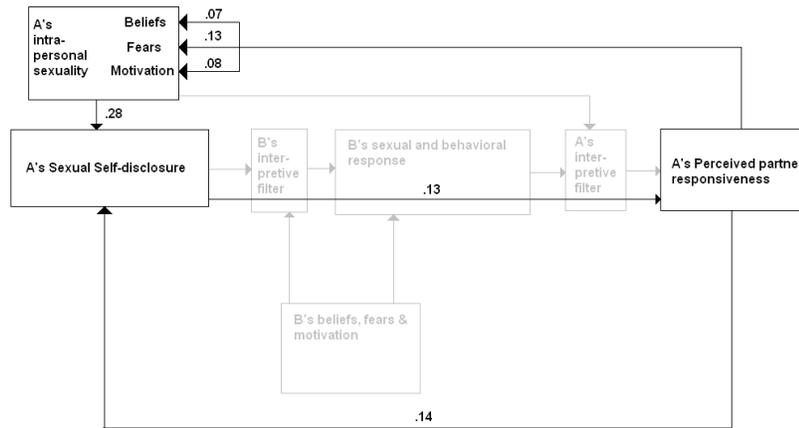


Figure 2. Forward and backward routes, grey areas have been excluded from the current study.

Table 3  
Beta (standardized in parentheses), Standard deviation (SD), T-score, and VIF for beliefs, fears and perceived partner responsiveness predicting sexual self-disclosure.

	Sexual self-disclosure			
	Beta	SD	T-score	VIF
Constant	.28	.72	.39	
Religion	.32(.20)*	.11	2.78	1.02
Relationship length	.30(.19)*	.11	2.74	1.01
PPR	.29(.25)*	.09	3.24	1.19
Beliefs	.76(.25)*	.21	3.53	1.05
Fears	-.31(-.21)*	.11	-2.81	1.17

\* p<.05

ual aspects have a predictive effect on sexual self-disclosure, which in turn has a predictive effect on perceived partner responsiveness. Interestingly, the sub-constructs of the various factors yielded different results. In a regression which included the sub-constructs of the sexual beliefs, fears, motivation and the PPR scale, the overall model fit was found to be significant [F(5,146)=10.93, p<.01] and accounted for 25 percent of the found variance in sexual self-disclosure. As seen in table 4, perceived partner responsiveness and sexual self-efficacy, which is part of the sexual beliefs scale, were both found significant. Also, religion and relation length are considered to be significant indicators, but are excluded from the model. This exclusion was made, due to a non significant constant, thereby rendering their input meaningless. Higher sexual self-disclosure can hence be predicted by a higher score on sexual self-efficacy and on perceived partner responsiveness. Following the same method as above, the sub-constructs of sexual self-disclosure were also entered into a regression. Surprising was that the significant model [F=(2,146)=21.67, p<.01] was composed out of only sexual preferences, distress-

ing sex and the model's constant [ $\beta(.48)=6.17$ ,  $p<.01$  respectively,  $\beta(-.14)=-2.15$ ,  $p<.05$  respectively,  $\beta(2.72)=11.64$ ,  $p<.01$ ]. Results showed that these three factors accounted for 22 percent of the variance found in perceived partner responsiveness, which is more than the original sexual self-disclosure regression model. Judging from the beta, the constant had the greatest impact. One might argue that there is a significant strong linear predictive correlation between sexual self-disclosure and perceived partner responsiveness.

### Backward routes

As seen in figure 2, tests were performed for the predictive effect of PPR on the intrapersonal sexuality aspects and on sexual self-disclosure. Table 5 shows the beta, standardized beta in parentheses, standard deviation, t-score and VIF scores of PPR on sexual beliefs, fears and motivation. The model which described the predictive effect of PPR on beliefs was found to have an overall significant fit [F(2,146)=5.72, p<.01] and accounted for 7 percent of the variance found in beliefs. In the model (as seen in table 5) the constant, education

Table 4

*Beta (standardized in parentheses), Standard deviation (SD), T-score, and VIF for the sub-constructs of beliefs and the perceived partner responsiveness scale predicting sexual self-disclosure.*

	Sexual self-disclosure			
	Beta	SD	T-score	VIF
constant	1.12	.60	1.85	
Religion	.35(.22)*	.12	3.00	1.03
Relation length	.29(.19)*	.11	2.59	1.01
PPR	.31(.22)*	.12	2.64	1.30
Sexual self efficacy	.29(.25)*	.09	3.11	1.22

\*p<.01

Table 5

*Beta (standardized in parentheses), Standard deviation (SD), T-score and VIF scores of PPR models predicting beliefs, fears and sexual motivation.*

		PPR models			
		Beta	SD	T-score	VIF
Beliefs	Constant	2.51*	.14	17.84	
	Education	.14(.20)*	.06	2.47	1.00
	PPR	.07(.19)*	.03	2.35	1.00
Fears	Constant	2.84*	.27	10.58	
	Age	.23(.13)	.14	1.67	1.01
	PPR	-.27(-.34)*	.06	-4.33	1.01
Motivation	Constant	3.07*	.33	9.27	
	Relationship length	-.24(-.18)*	.10	-2.32	1.00
	PPR	.23(.24)*	.08	3.01	1.00

\*p<.05

and beliefs were found of significant predictive value. These results lead to the acceptance of hypothesis E, indicating that being in the high education group and having a higher score on PPR predicts a higher score on sexual beliefs.

Similar to sexual beliefs, a significant model fit was found for sexual fears, which accounted for 13 percent of its variance [ $F(2,146)=11.69$ ,  $p<.01$ ]. Furthermore, PPR combined with a constant were significant in the model [ $\beta(-.27)=-4.33$ ,  $p<.01$  respectively,  $\beta(=2.84)=10.58$ ,  $p<.01$ ]. This means that a higher score on PPR predicts a lower score on sexual fears, concurrent with hypothesis F. In addition, age was found to be of predictive value, although not significant.

Sexual motivation showed the same results as sexual fears. The model fitted with PPR, as a unitary construct, showed a result with a 8 percent explanation for the variance in sexual motivation [ $F(2,146)=2.90$ ,  $p<.01$ ]. As seen in table 6, the constant, PPR and relationship length were all significant predictors [ $\beta(3.07)=9.27$ ,  $p<.01$  respectively,  $\beta(.23)=3.01$ ,  $p<.01$  respectively,  $\beta(-.24)=-2.32$ ,  $p<.05$ ]. This means that a higher score on sexual motivation can be predicted by a higher score on PPR and being in a short relationship,

resulting in the acceptance of hypothesis G.

With respect to hypothesis H, indicating PPR as a predictive variable on sexual self-disclosure, results acquired from the first 3 hypothesis were used to diminish statistical overlap. PPR was found a significant predictor as seen in table 3, and contributed for 14 out of the 28 percent total explained variance, resulting in the acceptance of hypothesis H [ $\beta(.29)=3.24$ ,  $p<.01$ ].

### *Sexual satisfaction*

As stated before in hypothesis I, PPR was suggested to have a predictive function on sexual satisfaction. The data showed a significant fit of the model [ $F(2,146)=40.00$ ,  $p<.01$ ] which accounted for 35 percent of the found variance in sexual satisfaction, after adjusting for error. The model found a significant constant as well as a significant prediction by PPR and relationship length [ $\beta(1.17)=3.36$ ,  $p<.01$  respectively,  $\beta(.69)=8.45$ ,  $p<.01$  respectively,  $\beta(-.29)=-2.64$ ,  $p<.01$ ]. These results show that a higher score on sexual satisfaction is predicted by a higher score on PPR and being in a relationship for less than two years, coherent with hypothesis I.

## Discussion

Existing research has described sexual intimacy mainly from an unidimensional perspective, without involving its interpersonal nature. In attempting to get a deeper understanding in the interpersonal processes of sexual intimacy, the current study proposed a model in which several intrapersonal sexual aspects were related to the interpersonal aspects sexual self-disclosure and perceived partner responsiveness. Finding evidence for these relationships was the primary purpose of this study. In addition, the connection of sexual satisfaction with perceived partner responsiveness was examined, which was the secondary purpose.

### *Foreward route*

As showed in figure 1, the model proposed in the current study was composed of a 'foreward route' and a 'backward route'. The hypotheses concerning the foreward route stated that the intrapersonal aspects, sexual fears, beliefs and motivation as having a predictive value on sexual self-disclosure. Also, it was hypothesized that in turn sexual self-disclosure predicted perceived partner responsiveness. With respect to these expectations, both sexual beliefs and sexual fears as a whole were found to have a small predictive effect on sexual self-disclosure. Sexual motivation however, did not. A reason for this unexpected finding could be that sexual motivation as a concept might be dependent on time and situation, which the current study did not take into account. Instead, sexual motivation was measured as a concept in general. Furthermore, of both constructs sexual beliefs and sexual fears the predictive effects of the individual sub-constructs were examined. These results showed that only the sub-construct sexual self efficacy, which was part of the sexual beliefs construct, was found to be of predictive value for sexual self-disclosure. According to these results, the ability to deal effectively with one's personal sexual aspects predicted the extent of discussing sexual topics with a sexual partner. It was however inconsistent with the expectations that it was only this factor out of the other sub-constructs of sexual beliefs and sexual fears that predicted sexual self-disclosure when tested individually. An explanation for these results could lie in a flawed construct; it might be that the sub-constructs were not in proportion when counting for the main construct. Unfortunately, the weights per sub-construct were unknown, what made it difficult to do a valuable pronunciation in this matter. Besides the hypothesised associations as described above, relationship length and religion were also

found to be predictive of sexual self-disclosure. A possible explanation for the predictive role of relationship length, is that being a couple for a longer time, the more likely the couple will feel secure and comfortable in eachothers presence. Subsequently, these feelings of security and comfort could contribute to a higher level of sexual self-disclosure. Furthermore, the results showed that being religious positively predicted sexual self-disclosure. A possible explanation for this relation, however tangible, might be that religious people practice sexual abstinence in the beginning of their relationship. This could, similar to the relationship length argument, result in a longer time to get secure and comfortable with eachother, resulting in a greater willingness to discuss sexual topics.

In conclusion of the first hypotheses, intrapersonal sexuality aspects do have, although slightly, a predictive effect on sexual self-disclosure. These findings are in line with the first step of the proposed model. It should be noted however, that relationship length and religion were entangled in these effects. The second step in the model, denoting that sexual self-disclosure had a predictive effect on perceived partner responsiveness, was also confirmed. The same problem however occurred as with the previous step. The second model, using only the sexual preferences sub-construct, yielded a higher predictive value with regard to the explained variance. Apparently, of the construct sexual self-disclosure only the sub-construct sexual preferences was of predictive value when tested individually. This significant difference with respect to the other sub-construct might be explained as follows: If partner A discusses his or her sexual preferences with partner B, this will probably lead to a better understanding in partner B of A's sexual likes and dislikes, what turns out in adequate sexual reactions of B. Subsequently this will lead to A's interpretation of being understood, validated and cared for.

In conclusion, one might argue that the found results are inconsistent with the proposed model of sexual intimacy. This because the model states that the relation of sexual self-disclosure with perceived partner responsiveness is mediated by the actions of person B (see figure 1). Nonetheless, the found predictive function indicates that there is a link between both factors, enabling a mediation in itself and thereby sustaining the proposed model of sexual intimacy.

### *Backward routes*

With respect to the backward routes of the model, the hypotheses stated a predictive effect of perceived partner responsiveness on each of the

three intrapersonal sexuality aspects. The findings supported this expectation. More specifically, perceived partner responsiveness positively predicted sexual beliefs and motivation, whereas a negative coefficient was found for sexual fears. That is, the way one interpretes his or her partners expressions and acts in reaction on one's sexual self-disclosure, influences the beliefs and fears he or she has about sex and even so one's sexual motivation. When the partner's expressions and actions are interpreted as understanding, validating and caring, these interpretations will positively affect one's sexual beliefs, reduce sexual fears and increase his or her sexual motivation.

Additionally, sexual beliefs as being predicted by perceived partner responsiveness, included the factor high education. In sexual motivation however, the length of relationship was included in the regression. That is, the longer the length of relationship, the more sexual motivation was predicted by perceived partner responsiveness. Even though these results were found, a regression analysis as a statistical tool should only be used when a clear theory is presented. The lack of a theoretical basis for the findings concerning education level and relationship length are optional for consideration at best.

Furthermore, perceived partner responsiveness turned out to be of predictive value for sexual self-disclosure. The interpretation of being validated, cared for and understood leads to a greater extent of discussing sexual topics with a sexual partner. This outcome strenghtens the plausibility of the interpersonal nature of the model, which results into emphasis on these interpersonal aspects.

### *Sexual satisfaction*

The second purpose in the study was to determine if perceived partner responsiveness predicted sexual satisfaction. The results showed evidence for this hypothesis. Perceived partner responsiveness predicted 32 percent of the variance in sexual satisfaction. This finding suggests that one's interpretation of feeling cared for, validated and understood by his or her partner, partially leads to a higher sexual satisfaction. Presumably, sexual satisfaction in turn is associated with sexual self-disclosure and the intrapersonal sexuality aspects. The examination of these assumptions however, was beyond the scope of this research.

### *Methodological limitations*

Although the sample was of sufficient size, some methodological issues were found. Problematic was the not equally matched sample, which consisted of a strong majority of women and participants in the age between 20 and 24. This distri-

bution made the results less representative with respect to men and people beneath the age of 20 and above the age of 24. Additionally, the main part of the sample was involved in a sexual relationship at the moment of the study. Being involved in a relationship may or may not have affected the results, since no comparison was made with participants without having a relationship. Furthermore, the current sample may have been influenced by participant bias. Specifically, a methodological review by Catania et al. (1990; in Seal, 1997) notes that volunteer participants versus non-participants in sex research tend to hold significantly more favorable attitudes toward sexuality and sex research and indicate greater willingness to talk about their sexual behavior. The assessment of both partners may also have influenced participation. Typically, one partner of the sexual relationship received credit toward fulfillment of his or her research requirement. Thus, the other partners willingness to participate may have been rejective of positive relationship characteristics such as cooperation, trust, openness and altruism (Seal, 1997). Furthermore, the question is if there are demographic, attitudinal and or behavioural differences between couples and individuals who volunteer to participate in sexual research versus non-volunteers. Therefore, in future research possible participation biases in the dyadic level should be examined.

### *Future directions*

Although several likely routes of the interpersonal processes of sexual intimacy are identified, not all of them have been examined in the current study. For example, the component "B's physical and behavioural response" standing in the centre of the model (see figure 1) have not been assessed. The main reasons for this exclusion is that B's response to A's sexual self-disclosure is strongly context dependent and cannot be measured by the instruments used in this research. The suggested relation of B's physical and behavioral response with his or hers intrapersonal sexuality aspects (see figure 1) is therefore also not further investigated. It would be worthwhile in future studies to examine these connections by using, for example, sex-diaries in combination with a questionnaire that participants fill out every time they had sexual interaction,(IRF-I; Prager, 1995). In doing so, the relationship of behavioral and physical partner responses with the other aspects of sexual intimacy can be explored. Nevertheless, for now this is beyond the scope of this study.

### *Conclusion*

this research project has laid a basic outlining describing the interpersonal processes of sexual in-

timacy. The associations found between various intra- and interpersonal aspects make the model a usable tool in further research to increase the overall insight in the subject. Also it provides a starting-point for investigating intrapersonal sexuality aspects more deeply as well as their role in sexual relationships. Ideally would be to combine this model of sexual intimacy with the emotional process model of intimacy, further expanding the understanding of the human sexual psyche, behaviour and tendencies in intimate relationships.

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