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The use of sexually explicit material by Belgian sexologists

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ABSTRACT

This study applied the theory of planned behavior (TPB) to investigate the psychological determinants of using sexually explicit material (SEM) in sex therapy. Self-report data regarding perceived advantages/disadvantages, injunctive and descriptive norms, motivation to comply, self-efficacy, facilitators/obstacles, and intention to using SEM were measured among 59 Belgian sexologists using an online survey. Multiple linear regression analyses showed that 51% of the variance in intention and 41% in SEM use were explained by the model, with perceived advantages and descriptive norms representing the main determinants. The results highlight the need to consider various types of SEM for treating different clinical cases.

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Introduction

Clear illustrations of sexuality and sexual activity are frequently needed for information and instruction in sex therapy (Brewster & Wylie, 2002, 2008; Watson & Smith, 2012). However, the use of sexually explicit material (SEM) appears to be subject to controversy (Brewster & Wylie, 2008). This is probably due to the existing divergences in the nature and aim of the different types of SEM. In fact, SEM comes in many forms, as it refers to "all kinds of visual depictions of nudity, which may include the genitals, and depiction of sexual acts involving the genitals, such as anal, oral and vaginal sex" (Rhoades, 2007, p. 6). SEM thus refers to material developed for educational use with the main objectives of delivering knowledge about sexual behaviors and developing comfort and know-how in sexuality issues, as well as to material primarily conceived for sexual arousal such as pornography and erotica (Rhoades, 2007).

SEM has been used by mental health professionals and sexologists to reduce ignorance and confusion (Robinson, Manthei, Scheltema, Rich, & Koznar, 1999; Sexuality Information and Education Council of The United States [SIECUS], cited in Rhoades, 2007), to inform patients about the appearance and functioning of the sex organs and mechanics of sexual intercourse (Bancroft, 1983; Brewster & Wylie, 2008), to improve

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body image (Schoen, 2010), to illustrate new behaviors (Cooper, 1970; Masters & Johnson, 1970), and to expand the repertoire of sexual techniques (Prause & Pfaus, 2015). Bjorksten (1976) states that SEM transmits information much more promptly and in a more accurate manner than verbal explanations. Furthermore, therapists have used SEM to give permission regarding sexuality in general (Annon & Robinson, 2012) or, more specifically, to reduce guilt and shame (Robinson et al., 1999; Watson & Smith, 2012), to improve communication between partners (Darnell, 2015; Robinson et al., 1999; Schoen, 2010), to facilitate and encourage an open discussion about desire and different sexual needs within a couple (Robinson et al., 1999), and to reduce anxiety (Bjorksten, 1976; Robinson et al., 1999). With regard to sex anxiety reduction in women, studies have shown that the presentation of sexually explicit stimuli resulted in a significant reduction of anxiety (Nemetz, Craig, & Gunther, 1978; Wincze & Caird, 1976; Wishnoff, 1978). Similarly, Morrison, Bearden, Harriman, Morrison, and Ellis (2004) found a negative correlation between SEM exposure and sex anxiety in women and men.

Robinson et al. (1999) found that therapists consider SEM as useful for the treatment of sexual dysfunctions. SEM consisting of representations of intercourse and female masturbation has been found to help anorgasmic women achieve orgasm (Hahn, cited in Lankveld, 2009; Jankovich & Miller, 1978; Kilmann et al., 1983; McMullen & Rosen, 1979). In a more recent study, nonclinical women with inconsistent coital orgasm who were exposed to explicit models of clitoral self-stimulation reported engaging in significantly more frequent clitoral self-stimulation (Kohut & Fisher, 2013), although consistency of orgasm did not change after treatment exposure.

It should be noted that most of the above mentioned studies used mixed methods (e.g. videos, written information, etc.) (Hahn, cited in Lankveld, 2009; Kilmann et al., 1983; McMullen & Rosen, 1979), which makes it difficult to evaluate the exclusive impact of SEM. Hahn (cited in Lankveld, 2009) and McMullen and Rosen (1979) who compared treatments with and without SEM to treat anorgasmia found that treatment groups were equally effective. Jankovich and Miller (1978) measured the exclusive impact of SEM by only using video treatment and found it to be effective in achieving orgasm. However, this does not imply that SEM is the most effective treatment, as no comparison was made with other treatment groups.

On the other hand, exposure to SEM can be used to trigger sexual desire and arousal (Byrne & Lamberth, 1971; Chivers, Seto, & Blanchard, 2007; Fisher & Byrne, 1978; Karama et al., 2002; Prause & Pfaus, 2015; Striar & Bartlik, 1999; Watson & Smith, 2012), and has more specifically been used successfully to overcome erectile problems (Kalra et al., 2013; Tan et al., 2007). Janssen, Everaerd, van Lunsen, and Oerlemans (1994) found that for psychogenic erectile dysfunction, showing erotic films combined with vibration enhanced the penile response compared to vibration only. In a comparative study by Julien and Over (1988), the highest level of physiological and subjective sexual arousal in men was generated by SEM compared to slides, spoken- and written-text, and fantasy. Other specific uses of SEM concern for instance the improvement of sexual adjustment to spinal cord injury (Tepper, 1997), or showing sexually exciting material in forms of explicit videos and instructions to

promote the adoption of safer sex behaviors (Kyes, 1990; Scott-Sheldon & Johnson, 2006).

Aside from the positive effects of SEM on sexual functioning, using SEM in sex therapy might also involve certain risks. Although porn as a subtype of SEM can be of use in sex therapy, it is especially with this type of SEM that potential negative outcomes have been reported. A number of studies have for instance linked the consumption of porn to "risky" sexual behaviors in young heterosexual men and women (Bulot, Leurent, & Collier, 2015; Štulhofer, Buško, & Landripet, 2010; Tydén & Rogala, 2004), to aggressive views toward women (Hald, Malamuth, & Yuen, 2010), to increased acceptance of rape myths (Paolucci, Genuis, & Violato, 1997), to experiencing difficulties in intimate relationships (Paolucci et al., 1997), to unrealistic expectations concerning partnered sexual interactions (Park et al., 2016), to a decrease of satisfaction with one's sexual life and sexual partner (Morgan, 2011; Poulsen, Busby, & Galovan, 2013), to a decrease of genital and sexual esteem (Morrison, Ellis, Morrison, Bearden, & Harriman, 2006; Stewart & Szymanski, 2012), and to a potential addiction to the content (Griffiths, 2001; Young, 2008). Other studies have also shown a correlation between pornography viewing and sexual dysfunctions such as difficulties to reach orgasm and diminished libido or erectile function in men (Bronner & Ben-Zion, 2014; Carvalheira, Traeen, & Stulhofer, 2015; Poulin, 2011; Sutton, Stratton, Pytyck, Kolla, & Cantor, 2015; Wéry & Billieux, 2016). Potential negative effects are often linked to the messages transmitted by mainstream pornography (Marzano, 2006) and to the habituation effect (Bronner & Ben-Zion, 2014; Mann, Berkowitz, Sidman, Starr, & West, 1974). However, it should be underlined that research findings have been incongruent and that, besides the type of interaction shown, effects also depend on numerous person- and context-related factors (Maddox, Rhoades, & Markman, 2011; Montgomery-Graham, Kohut, Fisher, & Campbell, 2015; Watson & Smith, 2012). Moreover, most of the studies elucidating these negative effects are of a correlational nature and do not allow for causal interpretations of the relationship between sexual behavior and pornography viewing (Watson & Smith, 2012).

Thus, while there are potential benefits to the use of different kinds of SEM in sex therapy, clinicians also perceive risks of SEM for sexual health. As SEM refers to all kinds of SEMs, studies can come to different conclusions depending on what is being portrayed. Accordingly, SEM can have beneficial, neutral or harmful effects on sexual behavior (Kohut & Fisher, 2013). For example, "mainstream" pornographic SEM has been linked to risky sex behaviors such as not wearing a condom (Bulot et al., 2015). On the other hand, a meta-analysis by Scott-Sheldon and Johnson (2006) revealed that sexually explicit pornographic videos in which the use of a condom is eroticized result in more positive attitudes toward condom use. It thus appears essential to clearly specify what type of SEM was used in studies and to outline the actual content. Furthermore, literature review suggests that there are numerous and more recent studies concerning pornography and its consequences on the viewer compared to the relative scarcity of studies regarding other types of SEM used in a sex therapeutic setting.

To our knowledge, apart from the study by Robinson et al. (1999) mentioned above, no other studies have investigated the perspective of sexologists regarding SEM use. While this study looked at the sexologists' attitudes regarding the use of

SEM, it was mainly a-theoretical and did not consider other potential determinants of using SEM. To address this issue, the present study drew on the theory of planned behavior (TBP) to investigate the factors that determine the use of SEM by Belgian sexologists in sex therapy. The TPB (Ajzen, 1991) is one of the most often used models when it comes to explaining behavior. It stipulates that performing a behavior depends on the intention to perform the behavior, modified by the Perceived Behavioral Control (PBC), that is, the extent to which the individual feels in control of the behavior. Behavioral intention, in turn, depends on three factors: (1) attitudes (i.e. whether one expects positive or negative outcomes of the behavior), (2) subjective norms (i.e. the perception of social normative pressures to engage in the behavior), and (3) PBC. PBC is based on beliefs about the presence of factors that may be obstacles or facilitators in performing the behavior.

Methodology

Participants

An anonymous online survey was sent out to 299 Belgian sexologists, 176 of whom registered in the "Société des Sexologues Universitaires de Belgique" (SSUB) and 123 in the "Vlaamse Vereniging voor Seksuologie" (VVS). To reward participation, participants were given access to a list of SEM for sex therapeutic setting after completing the survey. A reminder email was sent approximately one week after the first mail. A total of 59 sexologists answered all questions. The sample was composed of 67.8% women and 28.8% men, with 3.4% not revealing their gender. The mean age was 45.56 years ($SD = 13.12$). 79.7% of the participants were registered in the SSUB and 20.3% in the VVS. In terms of religious affiliation, the sample was composed of 62.7% atheistic/agnostic persons, 30.5% Catholics, 3.4% Buddhists, and 3.4% laic persons. Participants had different professional backgrounds (30.5% psychologists, 16.9% social assistants, 8.5% doctors, 8.5% education scientists, and 3.4% nurses), all of them having at least a master's degree (57.6%) or a certificate (54.2%) in sexology. The respondents' patients mainly consisted of "general population" (94.9%), but also of sexual abuse victims (30.5%), sex offenders (16.9%), and patients with mental and physical disabilities (10.2%) (answers not being mutually exclusive).

Measures

To assess the determinants of the use of SEM, an online questionnaire was used. The first part of the questionnaire consisted of socio-demographic questions (5), questions concerning the practice of the sexologists (5), and questions concerning the use of SEM in general (7). The items assessing the different types of SEM used in sex therapy (photos/depictions, erotic comics, sex education/erotic/pornographic videos) were measured on a 5-point Likert scale from "never" to "very often." The patients' and sexologists' own reactions to SEM were assessed on a 5-point Likert scale ranging from "very negative" to "very positive."

The second part of the questionnaire consisted of 43 statements measuring the four dimensions of the TPB: (1) Attitudes were measured by 19 items assessing

perceived advantages and disadvantages of SEM use in sex therapy (e.g. "The use of SEM can promote communication about sexuality and intimacy within the couple," "The use of SEM can cause an exacerbation of body image problems"); (2) Subjective norms were assessed using seven items measuring perceived social pressure to use SEM in sex therapy (e.g. "My colleagues use SEM in sex therapy"), and the motivation to comply with these perceived norms ("Acting like other sexologists is important to me"); (3) PBC was assessed by 14 items measuring perceived facilitators and obstacles in the use of SEM (e.g. "Easy access to materials on websites makes it easier to use SEM," "The absence of adequate material makes it difficult to use SEM"), as well as perceived self-efficacy ("I am confident that I could use SEM if I wanted to") and controllability ("Whether or not to use SEM depends only on me"); (4) Intention to use SEM was measured on the basis of one item ("If you use SEM as part of sex therapy, do you intend to continue using it?"/ "If you are not using SEM yet, do you intend to use it in the future?"). All items had to be answered on a 5-point Likert scale (1 = disagree, 2 = somewhat disagree, 3 = no opinion, 4 = somewhat agree, 5 = agree). Perceived advantages and disadvantages as well as perceived facilitators and obstacles were mixed up in order to minimize response bias.

Statistical analyses

Data exploration and statistical analyses were performed with SPSS Statistics version 24. First, data were explored for missing values and outliers. Subjects who had not completed the entire survey ($N = 27$) were excluded from the study. Principal component analyses (PCA) with a Varimax rotation were performed on the items measuring the same underlying factor of the TPB to establish the construct validity of the scales, using Kaiser-Meyer-Olkin and Bartlett's sphericity tests to determine the suitability of the analyses. Using the Eigenvalue > 1 and scree plot criteria, PCA revealed two factors for attitudes (i.e. perceived advantages and perceived disadvantages); three factors for social norms (i.e. injunctive social norms or what persons think other significant persons think, descriptive social norms or what persons think other significant persons do (Aronson, Akert, & Wilson, 2010), and the motivation to comply to these norms); and four factors for the PBC scale (i.e. self-efficacy, obstacles/facilitators related to therapeutic setting, obstacles/facilitators related to the patient, and access to relevant SEM). Items that did not adequately fit the dimensions (i.e. low factor loading or small differences between loadings on two or more components) were eliminated. Table 1 resumes the resulting scales, their corresponding Chronbach's alpha for internal consistency, as well as the correlations between scales.

In line with the TPB, multiple regression analyses were used to test whether the attitudes, social norms and PBC scales predicted intention, and if the PBC constructs and intention predicted behavior (SEM use). R^2 were used to indicate the proportion of variance explained by the model, while beta coefficients with related F-tests and corresponding p values were used to assess the extent to which each factor contributed to the prediction.

Table 1. Validated subscales with number of items, internal consistency, and intercorrelations.

	Number of items	Chronbach's alpha	1	2	3	4	5	6	7	8	9
1. Perceived advantages	6	.86	1	−.67**	.22	.41**	−.05	.51**	.36**	−.26*	.18
2. Perceived disadvantages	6	.88	−.67**	1	−.14	−.43**	.14	−.33*	−.34**	.41**	.02
3. Social norms_injunctive	2	.89	.22	−.14	1	.32*	−.02	.27*	.33*	−.20	.14
4. Social norms_descriptive	2	.60	.41**	−.43**	.32*	1	.16	.26*	.32*	−.24	.00
5. Social norms_motivation to comply	3	.70	−.05	.14	−.02	.16	1	−.06	.15	.15	.02
6. Self-efficacy	1	/	.51**	−.33*	.27*	.26*	−.06	1	.31*	−.43**	.16
7. Facilitators/obstacles_setting	3	.70	.36**	−.34*	.33*	.32*	.15	.31*	1	−.08	.22
8. Facilitators/obstacles_patient	3	.66	−.26*	−.41**	−.20	−.24	.15	−.43**	.08	1	−.07
9. Facilitators/obstacles_material	2	.65	.18.	.02	.14	.00	.02	.16	.22	−.07	1

*$p < .05$.
**$p < .01$.

Results

Descriptive analyses

With regard to SEM use, 28.8% of sexologists reported never having used SEM in sex therapy setting, thus 71.2% having already used it (16.9% rarely, 28.8% sometimes, 18.6% often, and 6.8% very often). The most often used types of SEM are pictures/representations ($M = 3.02$, $SD = 1.00$), followed by videos conceived for educational purpose ($M = 2.21$, $SD = 1.12$), erotic comics ($M = 2.00$, $SD = 1.15$), erotic movies ($M = 1.95$, $SD = 1.15$), and pornography ($M = 1.83$, $SD = 1.08$). Therapists more often recommended SEM as a reference to watch/use at home ($M = 3.64$, $SD = 1.19$) than they used it during consultation ($M = 2.79$, $SD = .98$). Sexologists most often used SEM during interventions aiming sexual education (64.4%), followed by interventions later on in the therapeutic process (52.5%), during early therapeutic interventions (28.8%), and less frequently for diagnostic measures (5.1%) and during anamnesis (1.7%). Regarding the patients' reaction toward SEM, 5.1% of the sexologists observed a very negative to negative reaction, 18.6% observed a neutral reaction in the patient, and 47.5% a positive to very positive reaction (28.8% not having fulfilled the condition of having used SEM with a patient). Concerning sexologists' own feelings toward SEM, 5.1% reported very negative to negative feelings, 33.9% neutral feelings, and 40.6% positive to very positive feelings.

The relationships between demographic variables and the scales measuring the determinants and intention to use SEM were tested using MANOVAs after testing for the assumptions regarding the covariance matrices. There was no statistically significant difference between (1) men and women with regard to the different scales, $F(22,92) = 1.13$, $p = .33$; Wilk's $\Lambda = .62$, partial $\eta^2 = .21$; (2) psychologists and social assistants, $F(11,14) = .83$, $p = .62$; Wilk's $\Lambda = .61$, partial $\eta^2 = .39$; (3) catholic and agnostic/atheist persons, $F(22,92) = 1.06$, $p = .41$; Wilk's $\Lambda = .64$, partial $\eta^2 = .20$, and (4) French-speaking and Dutch-speaking sexologists $F(11,47) = .78$, $p = .66$; Wilk's $\Lambda = .85$, partial $\eta^2 = .15$. Due to the low representation of respondents in the negative categories, participants had to be regrouped on the variable measuring the sexologists' own feelings regarding SEM by collapsing the scores on the 5-point Likert scale into respondents who had very negative to neutral feelings toward SEM and those with positive to very positive feelings. A MANOVA comparing these two groups revealed a statistically significant difference ($F(11,47) = 7.46$, $p < .001$; Wilk's $\Lambda = .36$, partial $\eta^2 = .63$). Subsequent univariate ANOVAs show a significant difference between the two groups concerning the intention to use SEM ($F(1,57) = 70.43$, $p < .001$), the actual use of SEM ($F(1,57) = .34.03$, $p < .001$), perceived disadvantages ($F(1,57) = 31.61$, $p < .001$), perceived advantages ($F(1,57) = 30.02$, $p < .001$), descriptive social norms ($F(1,57) = 22.64$, $p < .001$), self-confidence for the use of SEM ($F(1,57) = 5.79$, $p = .02$), perceived obstacles/facilitators related to patient characteristics ($F(1,57) = 4.76$, $p = .03$), and concerning injunctive social norms ($F(1,57) = 4.17$, $p = .046$). Differences in the determinants and intentions to use SEM according to the type of patients the sexologists work with were tested by t-tests with Bonferroni corrections to counteract the problem of multiple comparisons. No significant differences according to the type of patient were found.

Table 2. Multiple linear regression predicting the intention to use SEM.

Intention to use SEM	R^2	*adj.* R^2	β	*p* value
Model	.59	.51		
Perceived advantages			.32	.03
Perceived disadvantages			−.28	.05
Social norms_injunctive			.19	.07
Social norms_descriptive			.25	.03
Social norms_motivation to comply			−.00	.99
Self-efficacy			.02	.89
Facilitators/obstacles_setting			.05	.69
Facilitators/obstacles_patient			.06	.57
Facilitators/obstacles_material			−.15	.15

β = standardized coefficient; R^2 = proportion of explained variance.

Table 3. Mutliple linear regression analysis predicting the use of SEM (behavior).

Use of SEM	R^2	*adj.* R^2	β	*p* value
Model	.46	.41		
Intention to use SEM			.65	.00
Self-efficacy			.16	.19
Facilitators/obstacles_setting			−.14	.22
Facilitators/obstacles_patient			.01	.92
Facilitators/obstacles_material			.04	.70

β = standardized coefficient; R^2 = proportion of explained variance.

To test the relationship between quantitative variables, that is, age and frequency of use of different types of SEM, and the different subscales, correlation analyses were conducted. No significant correlations were found between age and the different scales or between frequency of use of different types of SEM and the different scales.

Predicting the use of SEM in sex therapy

After checking for normality of residuals and for the absence of multi-collinearity, multiple linear regression analyses were used to predict (1) the intention to use SEM in sex therapy and (2) the actual use of SEM (behavior).

For the first regression analysis, with the scales identified by PCA entered as independent variables and intention to use SEM as dependent variable, a significant regression equation was found ($F(9,49) = 7.76$, $p < .001$) with an R^2 of .59 (*adj.* $R^2 = .51$). Perceived advantages and descriptive social norms were significant predictors of the intention to use SEM, with perceived disadvantages and injunctive norms almost reaching statistical significance (Table 2).

For the second regression model, whereby use of SEM was the dependent variable and the intention to use SEM, self-efficacy, and the items measuring perceived facilitators and obstacles were explanatory variables, a significant regression equation was also found ($F(5,53) = 10.51$, $p < .001$) with an R^2 of .46 (*adj.* $R^2 = .41$). The intention to use SEM was the only significant predictor for using SEM (Table 3).

Discussion

This study aimed to test the predictive validity of the TPB for the use of SEM in sex therapy. Multiple linear regression analyses revealed that the determinants identified

by the TPB (attitudes, subjective norms and PBC) regrouped into nine scales as a result of a principal component analysis, explained 51% of the variance of the intention to use SEM. Attitudes, especially perceived advantages related to SEM use, and descriptive social norms were shown to be the main predictors of the intentions to use this kind of material in sex therapy, with perceived disadvantages and injunctive norms contributing to a lesser extent. Furthermore, our findings revealed that 41% of the behavior to use SEM is predicted by the intention to use SEM. While these findings confirm the validity of the TPB as a predictive model, the expectation that PBC also contributes to the intention to use SEM in sex therapy or to the actual use was not confirmed by our data.

As such, these results provide insight into the practices of Belgian sexologists with regard to SEM. Specifically, they show that the more sexologists perceive that the use of SEM has beneficial outcomes, the higher their intention to use SEM. On the other hand, the perception of disadvantages is related to lower intentions to use SEM, yet this influence is not significant. Normative beliefs, and more specifically perceived descriptive social norms, also contribute to the intention to use SEM. Thus, the greater the perception that other sexologists use SEM and that patients expect the use of SEM in sex therapy, the higher the intention to use SEM. In contrast, PBC does not significantly predict the intention to use SEM. In fact, in our sample, facilitators/obstacles regarding the person of the patient, such as gender, age, or relationship status of the patient, did not predict the intention to use SEM. This is at odds with the TPB and contradicts the literature which suggests, in general, a higher likelihood of SEM to be used with male compared to female persons, with younger compared to older persons and with singles compared to persons in a relationship (Robinson et al., 1999). Also, the access to adequate material and factors related to the therapeutic setting such as the centers' disapproval of SEM use, do not seem to constitute significant predictors for the intention to use SEM or for actual SEM use. This could be due to the fact that sexologists seldom work in teams/centers that are apprehensive about SEM, contrary to other professionals such as sex educators, who are more constricted when it comes to showing SEM in school settings.

Our descriptive analyses indicate that the majority of sexologists use SEM for sex therapy. The most used type of SEM consists of sexually explicit pictures and representations; the least used refers to pornography. This may be due to the controversial effects of this type of material outlined in the introduction. Reactions toward SEM were mainly positive, both with regard to observed reactions from patients who are confronted with SEM and with regard to the sexologists' own feelings toward this material. Further analyses showed strong relations between the sexologists' own feelings concerning SEM and the scales measuring the determinants of SEM use. Thus, more positive feelings toward SEM are related to a higher intention to use SEM and more use of SEM in sex therapy, more perceived advantages regarding the use of SEM, less perceived disadvantages, more perceived descriptive social norms, greater self-confidence to use SEM, more perceived obstacles/facilitators related to patient characteristics, and more perceived injunctive social norms (i.e. the perception that other sexologists think that it is acceptable/good to use SEM in sex therapy). However, contrary to the study by Robinson et al. (1999), no differences were found

on the determinants of SEM use according to gender, age or religious affiliation of the sexologist. Moreover, no differences were found between sexologists who do and those who do not work with sexual abuse victims, sex offenders, and patients with physical or mental disabilities.

Several limitations of the study should be pointed out. First, the sample size was quite small ($N = 59$, 20% response rate), and below the sample size of 80 participants considered as adequate (Francis et al., 2004). The low participation by Dutch-speaking sexologists in particular might be due to the fact that the questionnaire was only available in English and French. Secondly, the scales used did not perfectly represent the dimensions of the TPB and several scales had a small number of items. A third limitation concerns the fact that the construction of the survey aiming the prediction of intentions to use SEM in sex therapy was based on literature review. However, several aspects were not taken into account, such as specific uses of SEM for the diagnosis and treatment of paraphilias (Golde, Strassberg, & Turner, 2000), dyspareunia and vaginismus, (Huijding, Borg, Weijmar-Schultz, & de Jong, 2011), or for the assessment of sexual functioning (Wylie, 1996). The intention to use SEM also seems to depend on the interaction between the individual patient and different types of material. As a matter of fact, studies have shown that there are individual differences (Bogaert, 2001; Koukounas & McCabe, 2001), and more generally differences between men and women regarding reaction to different types of SEM (Chivers & Bailey, 2005; Chivers, Rieger, Latty, & Bailey, 2004; Hamann, Herman, Nolan, & Wallen, 2004; Malamuth, 1996; Murnen & Stockton, 1997; Rupp & Wallen, 2008). Furthermore, there may also be counter-indications for the use of SEM when the patient suffers from, for example, psychosis or severe depression, or strongly repels public exhibition of SEM (Bjorksten, 1976). This might further influence the intention to use SEM or not with a specific patient. This point was also suggested by one participant as a free comment in the section "other obstacles for the use of SEM."

Future research needs to assess the relative influence of the different elements of sex education packages by comparing the therapy outcome of audio-visual formats versus written information. In addition, it would be important to determine what type of SEM is beneficial in what kind of clinical cases and the circumstances under which SEM is most/least effective, so that attitudes related to SEM would not only be based on the therapists' feelings toward SEM and its perceived or believed consequences, but could be based on empirical research indicating the actual effects of SEM in specific situations. Indeed, even if clinicians can sense which patient is more likely to benefit from SEM exposure (Striar & Bartlik, 1999), currently they cannot rely on empirical data concerning the predictors of response to this material (Staley & Prause, 2013). This kind of research seems particularly indicated considering the potential downside of SEM (Neidigh & Kinder, 1987). It should also be noted that in order to interpret the effects of SEM, information about the type of SEM used during the study as well as the specific content is essential, as it appears that studies often used mixed methods in treatment packages without specifically mentioning the fact whether and what kind of SEM was included. Moreover, future research should analyze the contribution of SEM in therapy outcomes for other sexual dysfunctions in both men and women. For example, masturbation troubles and premature ejaculation

in men can, among others, be treated with SEM (Hingsburger, 1995; Robinson et al., 1999), but research in the effectiveness of the specific effects of SEM to treatment outcomes seems to be lacking.

Lastly, having studied the subject from the therapists' perspective it would also appear relevant to analyze the patients' point of view considering the existing demand for SEM (Cooper, Morahan-Martin, Mathy, & Maheu, 2002). For example, examining consumers' interest in "educational" sex videos, Kleinplatz (1997) attributed the popularity of these materials to the fact that patients perceive sex videos as a safe and easy way to satisfy curiosity and to get easy-to-follow instructions. Rosser et al. (1995) found that the majority of participants in seminars for adult sex education estimated sexually explicit media (including films on masturbation and various scenes of sexual intercourse) to be the most helpful tool of the seminar. This is interesting information, especially as we found that the intention to use SEM of the sexologists having participated in the study is related to perceived social norms including patients' expectations of sex therapy regarding the use of SEM.

Conclusion

Given that according to most literature review SEM can be used in sex therapeutic setting, the purpose of the present study was to investigate the determinants of the use of SEM in sex therapy offered by Belgian sexologists, drawing on the TPB. Our findings indicate that attitudes related to SEM as well as the perception that other sexologists use SEM and that patients expect them to be used increases the intention to use such material. Intention to use SEM was in turn related to the actual use of SEM. The results thereby confirm that the TPB is a valid model for the prediction of intention and use of SEM in sex therapy. Future studies should further assess the usefulness of various types of SEM in the treatment of different clinical cases.

Disclosure statement

No potential conflict of interest was reported by the authors.

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