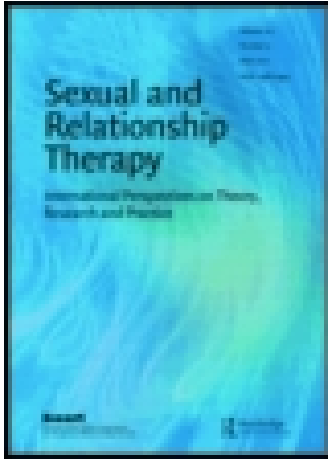


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Mindfulness skills are associated with female orgasm?

Françoise Adam^a, Marie Géonet^b, James Day^a & Pascal de Sutter^a

^a Psychological Sciences Research Institute, Université catholique de Louvain, Louvain-la-Neuve, Belgium

^b Centre Hospitalier Chrétien, Liège, Belgium

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Mindfulness skills are associated with female orgasm?

Françoise Adam^{a*}, Marie Géonet^b, James Day^a and Pascal de Sutter^a

^a*Psychological Sciences Research Institute, Université catholique de Louvain, Louvain-la-Neuve, Belgium;* ^b*Centre Hospitalier Chrétien, Liège, Belgium*

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Mindfulness was studied in relation to sexual distress and the ability to achieve orgasm. The initial hypotheses were that mindfulness abilities would predict women's level of sexual distress and that orgasmic women would possess greater mindfulness skills. In total, 251 women (176 orgasmic women and 75 anorgasmic women) responded to several questionnaires online: the Female Sexual Distress Scale – Revised (FSDS-R), the Five-Facet Mindfulness Questionnaire (FFMQ), and the Sexual Five-Facet Mindfulness Questionnaire (FFMQ-S). According to our results, mindfulness during dyadic sexual activities (FFMQ-S) explained 54% of the variability in sexual distress (FSDS-R). Overall, orgasmic women reported more mindfulness than anorgasmic women, both in daily life (FFMQ) and significantly more during dyadic sexual activities (FFMQ-S). In conclusion, our results support the evaluation of women's level of mindfulness during dyadic sexual activities and the integration of mindfulness training in future sex therapy treatments.

Keywords: mindfulness skills; anorgasmia; sexual five-facets mindfulness questionnaire; sexual dysfunction; sexual distress

Introduction

Since the research of Kabat-Zinn (1982), a growing number of studies have explored the use of mindfulness training in the treatment of psychopathological problems, including, more recently, female sexual dysfunctions (Brotto, Basson, & Luria, 2008; Brotto & Heiman, 2007; Brotto et al. 2012). Mindfulness is a core part of Buddhist meditation practice, though the concept of mindfulness in psychological research is free of any esoteric or religious orientation. Given that attentional capacity is limited and difficult to control, mindfulness techniques allow an individual to escape from automatic thought processes and to experience the present moment more consciously (Kabat-Zinn, André, & Maskens, 2009).

Mindfulness is defined as “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). In more concrete terms, the state of mindfulness results from the maintenance of one's attention on the present experience, such as bodily sensations, thoughts, and emotions that may spontaneously appear in one's consciousness. This curious and benevolent observation is accompanied by a non-judgmental attitude for all aspects of the experience, whether they are pleasant or unpleasant (Hayes, Strosahl, & Wilson, 1999). Mindfulness thus trains one's attention not to be captured by the automatic associations of a given experience (Heeren & Philippot, 2010).

*Corresponding author. Email: francoise.adam@uclouvain.be

Many researchers consider it to be a psychological skill that can be trained (Kabat-Zinn, 2003; Shapiro, Carlson, Astin, & Freedman, 2006).

In Bishop et al.'s (2004) model, mindfulness is a metacognitive ability composed of two principal parts: attentional regulation and attentional orientation towards experience. Attentional regulation allows an individual to realize that he or she is distracted and then to disengage their attention from the distractor and reorient it toward the desired stimulus. Mindfulness involves modulating one's attention by directing it from one stimulus to another, also called "attentional flexibility" (Posner, 1980).

Attentional orientation toward an experience involves an awareness of the automatic attentional pull of certain thoughts, emotions, and bodily sensations and an observational attitude of these stimuli, without the desire to change or avoid the experience. This permits a voluntary re-engagement of attention on the experiential and specific aspects of the experience (Bishop et al., 2004). This phenomenon could be perceived as a form of active acceptance of the present moment (Roemer & Orsillo, 2003).

Currently, two interventions based on the concept of mindfulness are widely used: mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982) and mindfulness-based cognitive therapy (MBCT; Teasdale, Segal, & Williams, 1995). Multiple studies have shown that mindfulness training improves attentional control (Chambers, Lo, & Allen, 2008; Jha, Krompinger, & Baime, 2007; Valentine & Sweet, 1999) and diminishes symptoms of depression and anxiety (Grossman, Niemann, Schmidt, & Walach, 2004; Kabat-Zinn et al., 1992; Shapiro, Schwartz, & Bonner, 1998; Specia, Carlson, Goodey, & Angen, 2000). These changes are also associated with a decrease in self-judgment and with the development of acceptance and compassion towards oneself (Jain et al., 2007; Kuyken et al., 2010; Ramel, Goldin, Carmona, & McQuaid, 2004; Van Dam, Sheppard, Forsyth, & Earleywine, 2011).

Three psychological barriers have the potential to impede an individual's capacity to perceive physical sensations, or their interoceptive awareness: inattention (De Jong, 2009), negative self-judgment (Graham, Sanders, Milhausen, & McBride, 2004), and symptoms of depression and anxiety (Lykins, Janssen, & Graham, 2006). According to Silverstein, Brown, Roth, and Britton (2011), these barriers could distract a woman from her interoceptive awareness and thus cause her to be less immersed in her corporal sensations, potentially negatively impacting her sexual functioning. Indeed, the authors observed that orgasmic women had better interoceptive awareness, in that they were quicker to perceive their bodily sensations when sexually aroused. However, despite the possible links between mindfulness and difficulty achieving orgasm, no study has yet examined this topic.

Orgasmic disorders or anorgasmia represent the second most frequent sexual problem encountered by women. According to Laumann et al. (2005), 3.5%–18% of women in Northern Europe (Austria, Belgium, Germany, Sweden, and UK) experience persistent orgasmic inhibition (primary anorgasmia) or temporary orgasmic inhibition (secondary anorgasmia), and as many as 20%–30% report this problem during sexual intercourse (Harris, Cherkas, Kato, Heiman, & Spector, 2008). Orgasmic disorders are defined "as a persistent or recurrent delay in or absence of, orgasm following a normal sexual excitement phase" (American Psychiatric Association, 2000). Clinical evaluation of the normal sexual excitement phase should take into account the large variability between women in the type and intensity of stimulation necessary to cause an orgasm. Difficulty achieving orgasm must be evaluated while taking into account the age of the individual, the stimulations received, and her sexual experience (Wright, Lussier, & Sabourin, 2006). This sexual difficulty could have a negative impact on women's quality of life, particularly on

personal distress and tension in their relationship (IsHak, Bokarius, Jeffrey, Davis, & Bakhta, 2010).

Multiple studies have established a significant link between anorgasmia and cognitive distraction (Cuntim & Nobre, 2011; Dove & Wiederman, 2000). Cognitive distraction resulting from intrusive thoughts may prevent a woman from focusing on sexual stimuli. Anorgasmia might also be caused by negative emotions related to sexuality, such as shame, guilt, anxiety, emotional distress, detachment, and fear of abandonment (Birnbaum, 2003). Negative thoughts and their accompanying emotions monopolize an individual's cognitive resources, turning her away from the present moment and thus interfering with her interoceptive awareness (Basson, 2002; Janssen, Everaerd, Spiering, & Janssen, 2000).

As the origin of orgasmic disorders is generally multifactorial, clinical interviews generally focus not only on the diagnostic criteria, but also on the patient's emotions and the cognitive, behavioral, and relational evolutions and repercussions. Cognitive behavioral therapies employ different therapeutic strategies depending on each individual's etiological factors (Donahy, 2010). For this reason, Strub (2013) underlines the interest of studying mindfulness in sexology, due to the multimodal aspects of MBCT programs (Teasdale et al., 1995) and for their focus on cognitive, behavioral, and emotional factors.

Recently, researchers have explored the use of mindfulness training in sex therapy. For example, one research team administered a multiple-session mindfulness-based intervention to women complaining of decreased libido and sexual arousal after undergoing treatment for gynecologic cancer (Brotto et al., 2008; Brotto & Heiman, 2007). Another study (Brotto et al., 2012) proposed three 90-minute sessions of mindfulness training to women who had received a radical hysterectomy in treatment for gynecologic cancer. The women in this latter study reported a significant improvement in sexual functioning (desire, excitation, lubrication, orgasm, and satisfaction), as well as a decrease in sexual distress.

It is important to note that programs essentially based on mindfulness practices (MBSR and MBCT) constitute psychological interventions aimed at prevention (Grossman et al., 2004; Philippot, 2007; Teasdale et al., 1995). Though there are no criteria for formally excluding participants, it is essential that those involved be able to engage in mindfulness exercises for at least 30 minutes per day (Astin, 1997). It is thus ill-advised for people with attentional deficits related, for example, to severe depression, who would not be able to adequately sustain their attention. Based on clinical observations, one might conclude that mindfulness practice is not recommended for people who suffer from dissociation or from interoceptive phobias; however, no empirical studies have determined that there are contraindications for participation in mindfulness practices and related interventions (Heeren & Philippot, 2010).

According to the literature, anorgasmic women seem to experience more cognitive distraction and to have less interoceptive awareness. Moreover, difficulty achieving orgasm appears to be more frequent during partnered, or dyadic, sexual activity than during solitary sexual activity, or self-stimulation (Heiman, 2000; Heiman & LoPiccolo, 1988).

The objective of this study was to determine the impact of mindfulness on female orgasm in comparing the mindfulness skills between orgasmic women and anorgasmic women. We believed that it is important to distinguish between mindfulness during everyday activities (walking, eating, and other mundane behaviors) and mindfulness during dyadic sexual activities. Our first hypothesis was that mindfulness during dyadic sexual activities would predict the level of sexual distress better than mindfulness in

everyday life. Our second hypothesis was that orgasmic women would be more mindful than anorgasmic women.

Method

Participants

Two hundred and fifty-one French-speaking female volunteers from Belgium anonymously completed questionnaires as part of the “orgasm and present moment” study between 15 July 2012 and 31 August 2012. All participants were assured, and understood, from signed consent forms, that confidentiality was fully protected. They were recruited from the Catholic University of Louvain community (Louvain-la-Neuve and Brussels, Belgium). The first step involved sending emails to potential participants (e.g., acquaintances and French-speaking international colleagues) requesting participation in a study on a voluntary basis. Participants were also invited to circulate this invitational email to others (i.e., snowball principle emailing). This study was approved by the Ethics Committee of the Psychological Sciences Research Institute before the questionnaire was posted on the Internet.

Measures

Orgasmic and sexual autobiography

A multimodal scale measuring the orgasm does not exist. Thus, we developed a questionnaire to assess environmental, emotional, cognitive, and behavioral factors of the orgasm. Based on the literature, 31 items were identified as being the most pertinent in achieving orgasm. Each item consisted of either a dichotomous choice (yes or no) or a Likert scale (“never” to “always” or “very satisfied” to “not at all satisfied”).

Female Sexual Distress Scale – Revised, FSDS-R

The Female Sexual Distress Scale – Revised (FSDS-R; Derogatis, Clayton, Lewis-D’agostino, Wunderlich, & Fu, 2008) was developed to provide a standardized, quantitative measure of personal distress linked to sexuality in women. This questionnaire is composed of 13 items which are rated on a 5-point Likert scale (0 = never, 1 = rarely, 2 = often, 3 = very often, 4 = always). A score of 11 or greater indicates the presence of sexual distress. This scale has demonstrated a good internal consistency, with a Cronbach’s alpha of .86. Our sample had a Cronbach’s alpha of .94. This tool is thus a reliable measure for discriminating sexually functional and dysfunctional women.

This scale was translated into French by the authors, one of whom is a native speaker of English and works in French, through back translation. One individual translated the original English scale into French, and then another person translated this French version back into English. This translation was compared to the original FSDS-R, and any differences in meaning were discussed, in order to limit translation errors.

The Five-Facet Mindfulness Questionnaire, FFMQ

The Five-Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) is the most frequently used measure in studies of mindfulness and is composed of 39 items divided into five facets: Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience. Each item is rated on a 5-point Likert scale, from 1

(never true) to 5 (always true). We used the French version of the scale for our study (Heeren, Douilliez, Peschard, Debrauwere, & Philippot, 2011), which has demonstrated a good internal consistency, with a Cronbach's alpha of .88. Both the global score of mindfulness and the scores of each of the five facets can be used in interpreting an individual's results. Before adding up the responses, items followed by "R" must be reverse scored.

The Sexual Five-Facet Mindfulness Questionnaire, FFMQ-S

The FFMQ-S (Adam, Heeren, Day, & De Sutter, 2014) is an adaptation of the FFMQ, specifically created to evaluate women's mindfulness skills during dyadic sexual activities. It is composed of 19 items divided into five facets: Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience. Each item is rated on a 5-point Likert scale, from 1 (never true) to 5 (always true). This scale has demonstrated good internal consistency, with a Cronbach's alpha of .87. Both the global score of sexual mindfulness and the scores of each of the five facets can be used in interpreting an individual's results. Items followed by "R" are reverse scored.

Results

Descriptive analyses

Participants were 18–67 years of age ($M = 31.81$, $SD = 11.60$). They are predominantly university graduates (48%, $n = 121$). Of the remaining sample, 33.3% ($n = 84$) of the participants had an undergraduate degree, 10.3% ($n = 26$) a high school degree, 3.2% ($n = 8$) a middle school degree, and .4% ($n = 1$) an elementary school degree. Regarding their sexual functioning, their number of sexual activities per month (alone or with their partner(s)) ranged from 2 to 90 ($M = 14.45$, $SD = 8.81$). The majority of participants had heterosexual relations (88.5%, $n = 223$). Of the remaining sample, 2% ($n = 5$) of the participants had homosexual relations and 9.1% ($n = 23$) had bisexual relations.

Of the total participants, 176 considered themselves, on the basis of responses to questions on the "Orgasmic and Sexual Autobiography" questionnaire, generally "orgasmic" and 75 generally "not orgasmic".

Descriptive analyses revealed a significant between-group difference in the age of participants ($t(188.62) = -2.836$, $p < .01$). Orgasmic women were significantly older ($M = 33.06$) than anorgasmic women ($M = 29.12$). This difference might be explained by the fact that a happy and fulfilling sexual life is more likely to be achieved with increasing years of sexual experience. Many studies support the hypothesis that achieving orgasm depends on the woman's age and sexual experience (Hoon & Hoon, 1978; Sholty et al., 1984). Orgasmic women also reported less sexual distress compared to anorgasmic women ($t(249) = 6.486$, $p < .001$). Previous studies have considered sexual distress as a good scale to discriminate between sexually functional and dysfunctional women (Bancroft, Loftus, & Long, 2003), which justifies the division of our participants into two groups: orgasmic vs. anorgasmic. There was no significant difference as a function of educational attainment ($t(249) = -1,286$, $p = ns$).

H1: "Mindfulness during dyadic sexual activities will predict the level of sexual distress better than mindfulness in everyday life."

We used the statistical package SPSS (version 20) to test if mindfulness during dyadic sexual activities (FFMQ-S) explained sexual distress (FSDS-R) better than mindfulness in

Table 1. Results of multiple regressions: analysis with facets/global score (FFMQ/FFMQ-S) as predictors of sexual distress (FSDS-R).

Predictors	Observing experience	Describing experience	Acting consciously	Non-judgment	Non-reactivity	Score global PC
FFMQ						
Std β	.070	-.11	-.077	-.141*	.062	.069
FFMQ-S						
Std β	-.479***	-.610***	-.653***	-.423***	-.494***	-.756***
R^2	.21	.37	.46	.24	.21	.51

*** $p < .001$ = very strong presumption; ** $p < .01$ = strong presumption; * $p < .05$ = low presumption. The significance of bold values is they are statistically significant.

everyday life (FFMQ). First, six multiple regressions were performed, each time using two predictors (facet and global score) to explain sexual distress: (1) Observing experience FFMQ/FFMQ-S; (2) Describing experience FFMQ/FFMQ-S; (3) Acting with awareness FFMQ/FFMQ-S; (4) Non-judging FFMQ/FFMQ-S; (5) Non-reactivity FFMQ/FFMQ-S; and (6) Global score FFMQ/FFMQ-S (Table 1). According to our results, FFMQ and FFMQ-S global scores explain 51% of the variability of sexual distress. The facets “Acting with awareness” (FFMQ/FFMQ-S) explained 46% of the variability of sexual distress. All five facets of the FFMQ-S, as well as the global score, significantly and negatively explained sexual distress ($p < .001$), while only the “Non-judging” facet of the FFMQ showed significant results ($p < .05$).

Next, two multiple regressions used the facets of each questionnaire (FFMQ/FFMQ-S) as predictive factors of sexual distress (Table 2). The first regression was concerned with the facets of mindfulness as described by the FFMQ as predictors of sexual distress (Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience). The second regression considered the five facets of

Table 2. Results of multiple regressions: analysis of the five factors (FFMQ/FFMQ-S) as predictors of sexual distress (FSDS-R).

Predictors	FFMQ	FFMQ-S
Observing experience		
Std β	.044	-.009
Describing experience		
Std β	-.112	-.231***
Acting consciously		
Std β	-.226**	-.418***
Non-judgment		
Std β	-.195**	-.068
Non-reactivity		
Std β	-.084	-.181**
R^2	.15	.54

*** $p < .001$ = very strong presumption; ** $p < .01$ = strong presumption; * $p < .05$ = low presumption.

mindfulness as described by the FFMQ-S as predictors of sexual distress (Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience).

According to our analyses, mindfulness during everyday activities explains 15% of the variability of sexual distress. Of note, the facets “Acting with awareness” and “Non-judging” significantly and negatively explain sexual distress ($p < .01$). In dyadic sexual situations, mindfulness skills alone predict 54% of the variability of sexual distress. The facets “Describing” and “Acting with awareness” significantly and negatively explain sexual distress ($p < .001$). The facet “Non-reactivity” is also significantly and negatively linked to sexual distress ($p < .01$). Overall, mindfulness skills during sexual activities (FFMQ-S) seem to better explain sexual distress than mindfulness during everyday activities.

H2: “Orgasmic women will be more mindful than anorgasmic women.”

We used the statistical package SPSS (version 20) to test if Orgasmic women will be more mindful than anorgasmic women. One t test was performed to compare the scores during everyday activities (FFMQ) and Dyadic sexual activity score (FFMQ-S) between orgasmic women and anorgasmic women (Table 3).

During everyday activities, orgasmic women reported significantly more mindfulness than anorgasmic women ($t(249) = -2.825, p < .01$). Orgasmic women also had higher scores on all the subscales of the FFMQ, with a significant difference for the facet “Non-judging.” Thus, orgasmic women judge themselves less, compared to anorgasmic women ($t(249) = -2.303, p < .05$).

Table 3. Everyday activities scores, FFMQ Dyadic sexual activity scores, FFMQ-S.

	Anorgasmic ($n = 75$)	Orgasmic ($n = 176$)	$t(249)$	Anorgasmic ($n = 75$)	Orgasmic ($n = 176$)	$t(249)$
Observing experience			-1.591			-2.961**
<i>M</i>	25.16	26.39		15.44	16.49	
<i>DS</i>	5.425	5.692		3.032	2.366	
Describing experience			-1.732			-6.141***
<i>M</i>	26.01	27.45		13.12	15.53	
<i>DS</i>	6.155	5.982		2.986	2.792	
Acting consciously			-1.508			-5.749***
<i>M</i>	26.61	27.79		14.15	16.86	
<i>DS</i>	5.666	5.652		3.664	2.765	
Non-judgment			-2.303*			-6.306***
<i>M</i>	27.01	28.89		13.13	15.68	
<i>DS</i>	6.461	5.645		3.042	2.883	
Non-reactivity			-1.321			-4.722***
<i>M</i>	18.23	19.02		8.59	10.16	
<i>DS</i>	4.206	4.394		2.521	2.381	
Global score			-2.825**			-6.663***
<i>M</i>	123.03	129.54		64.43	74.73	
<i>DS</i>	16.075	16.982		11.921	9.360	

*** $p < .001$ = very strong presumption; ** $p < .01$ = strong presumption; * $p < .05$ = low presumption.

The significance of bold values is they are statistically significant.

During dyadic sexual activities, orgasmic women reported significantly more mindfulness than anorgasmic women ($t(249) = -6.663, p < .001$). On all subscales of the FFMQ-S, orgasmic women scored significantly higher than anorgasmic women, with the facet “Non-judging” the most significant.

Discussion

This study had two objectives. First, we were interested in the links between mindfulness (FFMQ/FFMQ-S) and sexual distress (FSDS-R). Our initial hypothesis was that mindfulness during dyadic sexual activities would predict sexual distress better than mindfulness during everyday activities. Our second hypothesis was that orgasmic women would report greater levels of mindfulness (FFMQ and FFMQ-S) than anorgasmic women.

In our sample, orgasmic women reported experiencing significantly less sexual distress than anorgasmic women. Thus, we performed analyses to determine if sexual distress was better explained by mindfulness during everyday activities (FFMQ) or during dyadic sexual activities (FFMQ-S).

Our results show that both the global and the facet scores of the FFMQ-S predicted sexual distress better than the FFMQ. In other words, the more that mindfulness skills during sexual activity increases, the more sexual distress decreases. Also, the facets “Acting with awareness”, “Describing experience”, and “Non-reactivity” during dyadic sexual activities seem significantly and negatively linked to sexual distress. The facet “Acting with awareness” refers to an individual’s attentional capacity that is available during a given activity. In the context of sexual activity, these facets are both involved in whether an individual is capable of being fully immersed in the sexual activity or if instead they are acting automatically and are distracted by other stimuli. “Describing” refers to an individual’s ability to put into words what she is feeling in the present moment (e.g., emotions and bodily sensations) and also her ability to express them to her partner. Moreover, “Non-reactivity” refers to an individual’s ability to not to react immediately and impulsively to a stimulus, and to, instead, actively make conscious choices.

Our results lead us to believe that in dyadic sexual situations, women who are less present mentally during the experience will have a greater tendency to suffer from sexual distress. Also, we postulated that these women would have greater difficulty putting their emotions and corporal sensations into words and an even greater difficulty communicating them to their partner. This inability to act with awareness and to describe the experience could contribute considerably to sexual distress. Our analyses showed that mindfulness during sexual activities better describes the level of sexual distress experienced. Future studies should focus on achieving more detailed understanding of psychological processes that could explain our results.

To explore our second hypothesis, we performed analyses to determine if orgasmic women were more mindful than anorgasmic women. In daily activities (FFMQ), orgasmic women’s global score of mindfulness was significantly higher than that of anorgasmic women. In addition, anorgasmic women scored higher on all subscales than did orgasmic women but only the factor “judging themselves” proved significant. In dyadic sexual situations (FFMQ-S), both the global and the subscale scores of orgasmic women were significantly higher than those of anorgasmic women. The two groups display differences in mindfulness during daily functioning, but this difference is much more pronounced during dyadic sexual relations. Anorgasmic women seem to be less immersed in the present moment during their everyday lives than do orgasmic women, and this tendency appears to be much stronger during dyadic sexual activities.

A study by Silverstein et al. (2011) might explain this observed difference. The authors suggest that a happy and fulfilled sex life requires good interoceptive awareness. Interoceptive awareness is impeded by three psychological barriers: inattention, self-judgement, and symptoms of depression and anxiety. We also know that anorgasmic women experience more cognitive distraction. They are also more easily distracted by non-sexual stimuli (thoughts, emotions, and sensations) and have greater difficulty directing their attention away from distractors and reorienting it to sexual stimuli (Cuntim & Nobre, 2011; Dove & Wiederman, 2000). Our results show similar differences. Indeed, anorgasmic women tend to be less mindful, which prevents them from being fully immersed in sexual activity. According to our results, anorgasmic women judge themselves significantly more than orgasmic women and they have more sexual distress. This result could be explained by the fact that women with sexual problems also experience negative psychological states like depression and anxiety (Lykins et al., 2006). It thus follows that they are more likely to judge themselves negatively.

Based on the current literature, our initial hypothesis was that orgasmic women would be more mindful than anorgasmic women, both in their daily lives and during their sexual relations. Anorgasmic women would thus be predicted to report less mindfulness, regardless of the situation. In light of our results, it seems that this hypothesis must be qualified somewhat. Indeed, in their daily lives, the two groups differed relatively little in their mindfulness skills, except for the total score and the facet "Non-judging." It is only in dyadic sexual situations that differences become apparent.

This study suffers from several limitations. First, our sample only comprises non-clinical participants. Future studies should assess the mindfulness skills among a clinical sample of women (e.g., hypoactive sexual desire disorder and orgasmic disorder). Second, we only assessed the questionnaires with self-report measures. Future studies should examine the correlation between mindfulness skills and behavioral as well as psychophysiological (e.g., skin conductance, vaginal dilation, and hormonal release) responses to stimuli, such as erotic films. Third, we did not investigate the factors that might distract women from sexual stimuli like sexual stimuli of the partner and quality of the relationship. These factors are important in the context of women's sexual problems and should be taken into account in forthcoming studies of mindfulness skills. Moreover, there are some clear limitations associated with the measures, particularly the FSDS-R. In fact, this instrument, using a Likert scale, is not sufficiently specific in the formulation of items, which leaves a lot of room for participants' interpretations of the questions. Sexual distress is a broad concept that seems difficult to rate in only 13 items. This research represents a preliminary study on mindfulness skills during intercourse and other studies should investigate this question. Finally, this study developed only correlation analyses. This did not establish a causal relationship between mindfulness skills and sexual distress. Future studies should investigate whether it is possible to establish causal relationships between features of mindfulness and elements of sexual distress.

From a clinical perspective, we believe that MBCT should be adapted with a focus on sexuality, as sexually dysfunctional women would likely benefit more from an adapted treatment plan than from a classic one that does not focus on sexual situations. According to Bishop et al.'s (2004) model, this type of training would help anorgasmic women become aware of their cognitive distraction and help them learn how to disengage their attention from non-sexual stimuli and reorient it to sexual stimuli (attentional regulation). They would also be trained how to experience dyadic sexual relations in a mindful manner, by voluntarily orienting their attention to the present moment (orientation of attention toward experience).

In conclusion, this study underlines the importance of evaluating the role of mindfulness in sexual dysfunction. The use of the FFMQ-S is recommended as a more specific method to measure mindfulness in dyadic sexual relations. In the future, the integration of mindfulness training into therapy for sexual dysfunctions is likely to significantly improve their treatments.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Françoise Adam is a doctoral student at the Catholic University of Louvain in the Psychological Sciences Research Institute in Belgium. Since 2010 she has had an active clinical practice as a sexologist and works as a sex therapist at Sexopositive in Brussels, Belgium. Her clinical interests focus on sexual difficulties and specifically on using mindfulness-based methods in the treatment of anorgasmia. Françoise is also an invited professor at UCL of the certificate program in clinical sexology.

Marie Géonet is a PhD and psycho-sexotherapist. Her clinical practice focuses on difficulties linked to intimacy or marital relationship. She proposes to use mindfulness in treatment of sexual problems. She is also interested in women sexuality, following a breast cancer treatment. Marie Géonet is an invited professor at UCL of the certificate program in clinical sexology.

James Day, PhD, is a developmental and clinical psychologist, and professor in the Human Development Laboratory, Center for Research in Psychology of Religion, and the Psychological Sciences Research Institute at the Catholic University of Louvain, Belgium.

Pascal De Sutter is a professor at Catholic University of Louvain in the department of Psychological Sciences Research Institute in Belgium. He teaches sex therapy at the University of Lille and the University of Nancy in France. He is the director of the certificate program in clinical sexology.

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