Cognitive Attentional Syndrome and Metacognitive Beliefs in Male Sexual Dysfunctions: an exploratory study

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Introduction

The present study investigated two male sexual dysfunctions: male erectile disorder (ED) and premature ejaculation (PE), respectively defined as "persistent or recurrent inability to attain, or to maintain an adequate erection until completion of the sexual activity" and "persistent or recurrent ejaculation with minimal sexual stimulation before, on, or shortly after penetration and before the person wishes it" or within two minutes of penetration.

The metacognitive model is based on the idea that "it is not merely what a person thinks but how he or she thinks, that determines emotions and the control one has over them." (Wells, 2008). In the metacognitive theory of psychological dysfunction, Wells and Matthews (1994) propose that a set of metacognitive beliefs are responsible for psychological disturbance by maintaining maladaptive attentive and cognitive coping strategies. This array of factors constitutes a Cognitive Attentional Syndrome (CAS; Wells, 2000), sustained by the presence of some metacognitive plans and beliefs that control the use of thought and attention.

Some of the CAS components have been investigated in relation to male sexual dysfunctions, even if they have not been conceptualized in a specific metacognitive frame. For example, Hartmann and colleagues (2005) reported that, if compared to normal controls, "during sexual intercourse PE patients were totally preoccupied with thoughts about controlling their orgasm, while this was not a strong cognitive factor for the functional men. Other prevailing cognitions in PE patients referred to the anticipation of a possible failure and the embarrassing situation following a rapid ejaculation".

Objectives

To our knowledge, no study has investigated the presence of CAS and metacognitive beliefs in the maintenance of Sexual Dysfunctions. The central aim of this study was to explore the specific role of CAS components and related metacognitive beliefs in affecting sexual performances of men with PE and ED. In line with a metacognitive conceptualization, it was hypothesized that ED and PE could be triggered, maintained or even worsened by CAS. In addition, it was hypothesized that this mode of processing would be roamed by specific positive and negative metacognitive beliefs.

Sample

A purposive convenience sample consisted of 11 ED and 10 PE participants. The diagnosis was done in accordance with the DSM-IV (APA, 1994). For the purpose of the present study, only primary diagnosis was considered, defined as the first and more impairing disease for which men had asked an andrology consulting. The mean age of the sample was 40 years (SD=7.4) and age ranged from 27 to 49 years. The sample was entirely Caucasian.

Materials

All participants were interviewed using the metacognitive profiling template adapted to specifically focus on cognitive aspects of sexual dysfunctional experiences. The interview schedule attempted to elicit data from four main preordained categories (1) The cognitive style during a negative sexual experience: participants were asked to describe a recent episode of sexual negative experience and to identify what triggered their perception of failure (2) Attentional focus during sexual approach: participants were asked about the focus of their attention while approaching sexual activity, and to explain the advantages and disadvantages they found in using their attention in that way (3) Pursued goal: participants were asked about the purpose of their cognitive and attentional response, whether they reached it, how they knew when their goal had been achieved and when the process of achieving the goal was interrupted (4) Metacognitive beliefs: in order to examine positive and negative metacognitive beliefs, participants were asked to identify advantages and disadvantages they perceived in their cognitive-attentional response or in giving up the process

Procedure

All participants were enrolled among those who had asked for an andrology counselling and none of them presented a lifelong disease.

The data were collected over a period of six months. Interviews were audio recorded, transcribed, and anonymized. A top-down thematic content analysis, using a deductive method of analysis was carried-out to screen the interviews. Specifically, the developing analysis was influenced by both primary material (the transcripts of the patients) and secondary sources related to theory and therapeutic approaches (Metacognitive Theory).

Transcripts were preliminarily analysed by an independent researcher who was not trained to the metacognitive protocol using a descriptive thematic approach (Braun & Clarke, 2006), which involves identifying codes and themes inductively (data driven approach) from the raw data. Once the initial descriptive thematic analysis was performed, it emerged that there was a strong relation between the categories derived from the raw data and the four categories belonging to the metacognitive profile template. Subsequently, the analytical process was extended and the emerging themes were grouped according with the metacognitive profile template categories. Triangulation strategies (Morse, Barrett, Mayan, Olson, and Spiers, 2002) were employed to ensure methodological coherence, appropriateness of the sampling procedures, and negative case analysis. A number of five debriefing sessions between the first author and the wider research team were set-out in order to discuss data collection procedures, analytical steps, and interpretations issues.

Results

Cognitive style during a negative sexual experience

Participants, regardless of the type of dysfunction, identified two types of trigger: negative bodily sensations (18) and negative anticipatory thoughts about their sexual performance (14).

For what concerns the cognitive style, it is possible to identify 4 different strategies that participants reported to use when trigger occurred: (1) they ruminated about the trigger and its consequences; (2) they worried about negative outcomes; (3) they tried to motivate themselves through self-imposed statements; (4) they tried to suppress and to distract from negative thoughts or bodily sensations.

Attentional focus during sexual approach

Participants reported that their attentive focus during sexual approach was mostly focused on monitoring (1) their partner's reactions and sensations or (2) their own thoughts and bodily sensations.

Pursued goal

Participants reported using their strategy with the aim of achieving a better sexual performance or understand the causes of their problem.

Metacognitive beliefs

Participants identified positive metacognitive beliefs about the usefulness of their cognitive-attentional response in: (1) enhancing sexual performance, (2) controlling negative thoughts and emotions, (3) understanding the causes of their sexual problem. Participants identified negative metacognitive beliefs that concerned: (1) the direct damage on sexual functioning, (2) increase in negative thoughts and emotions, (3) uncontrollability of their cognitive-attentional response.

Table 1: Categorization of participants' answers (n=21).

	10 PE	11 ED
Cognitive style	Self-imposed statements - 1 Suppression and distraction - 9 Rumination - 0 Worry - 0	Self-imposed statements - 3 Suppression and distraction - 2 Rumination - 3 Worry - 3
Attentional focus	Partner - 6 Own thought and sensations - 4	Partner - 6 Own thought and sensations - 5
Goal	Better performance – 10 Better understanding - 0 No goal - 0	Better performance - 7 Better understanding - 2 No goal - 2
Positive metacognitive beliefs	Enhancing performance - 8 Controlling negative thoughts and emotions – 2 Better understanding - 0	Enhancing performance - 5 Controlling negative thoughts and emotions - 3 Better understanding - 3
Negative metacognitive beliefs	Worsening performance - 8 Increasing negative thoughts and emotions – 3 Uncontrollability - 0	Worsening performance- 6 Increasing negative thoughts and emotions - 5 Uncontrollability - 6

Discussion

The findings of this study suggest that metacognitive beliefs and CAS components may play a role in the maintenance of sexual dysfunctions and in the exacerbation of negative emotional states. Findings show both similarities and differences in CAS among individuals with ED and PE.

Similarities refer to triggers, goals and attentional focus:

- All individuals activated CAS components in response to negative sensations or thoughts associated with their sexual functioning, aiming most of all to improve their sexual performance or, only few men with ED, to better understand their sexual dysfunction.
- Attentional focus is almost equally distributed between internal bodily sensations and external partner reactions. Both of these attentional strategies may have been applied in order to monitor what individuals considered signals of (1) threat and (2) goal progress.
- The goal seems partially related to cognitive style: all the men with PE referred to aim at reaching a better performance, and consistently with this aim, none of them engaged in deeper and perseverative thinking styles such as worry or rumination. On the other hand, few men with ED were committed to reach a better understanding of their dysfunction, and it is possible that they tried to reach this goal by worrying or ruminating, as indicated by six of them.

Differences between ED and PE refer mainly to cognitive styles.

- ED mostly activated a perserverative thinking style in the form of self-imposed statements, rumination or worry. PE showed higher negative appraisal associated with triggers, and reported the activation of thought control strategies (e.g. distraction) in order to suppress them: this aligns PE patients with patients with a body dysmorphic disorder (Cooper & Osman, 2007).
- PE also showed a greater proportion of partial goal achievement compared with ED, despite admitting that they are unable to solve their problem. This could suggest that even if in the short-term period thought control strategies may lead to a reduction in excitement and anxiety, in the longer term they may become a coping strategy employed to achieve cognitive and emotional avoidance, that may also interfere with emotional processes and increase the number of target-related intrusive thoughts through the well-established rebound effect (Davies & Clark, 1998).

Positive metacognitive beliefs concern the usefulness of CAS response to improve sexual functioning and to understand and control negative sensations and thoughts. Such beliefs may be involved in the activation of perseverative thinking and thought control strategies and are coherent with what was identified about chronic fatigue syndrome (Maher-Edwards et al., 2012). Negative metacognitive beliefs concern the uncontrollability of perseverative thinking styles and the negative impact of CAS components on emotional states and sexual functioning. These beliefs may play a role in propagating negative affect and loss of excitement that may lead to an escalation of CAS process. Consistently with this hypothesis, men with ED, that referred more negative metacognitive beliefs about uncontrollability, were also more inclined to use perseverative thinking styles such as worry and rumination. On the other hand, no men with PE reported negative metacognitive beliefs about uncontrollability, and none of them used to worry or ruminate in front of a trigger. This is consistent with the metacognitive formulation of GAD (Wells, 2008).

This research has some limitations, with respect to the small size of the sample and the possibility that participants present simultaneously different aspects of sexual disease.

Even considering these limitations, from a therapeutic perspective the findings suggest that techniques and principles of metacognitive therapy (e.g. Attentional Training; Wells, 2008) might be beneficial with some patients suffering from ED or PE. In particular, men with ED should gain a more flexible control over their perseverative thinking style, while men with PE should reduce their need to control negative thoughts and to monitor the negative implications of their sexual functioning they usually associate with them.

Future studies investigating the role of CAS components and related metacognitive beliefs will require the use of specific psychometric measures of all variables to support preliminary findings and should enroll a major number of participants in order to confirm or disconfirm the trend that has been identified.

Despite the small sample of individuals and the retrospective nature of the measures employed, present findings provide preliminary evidence that CAS and metacognitive beliefs may play a key role in sexual dysfunctions, coherently with previous research about body dysmorphic disorder (Cooper & Osman, 2007), primary insomnia (Waine, Broomfield, Banham, & Espie, 2009), desire thinking (Caselli & Spada, 2010), smoking (Nikčević & Spada, 2010), chronic fatigue syndrome (Maher-Edwards et al., 2012) and gambling disorder (Spada et al., 2015).

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