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Relationships between personal beliefs and treatment acceptability, and preferences for behavioral treatments

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ABSTRACT

Background: The literature on preferences for behavioral interventions is limited in terms of understanding treatment-related factors that underlie treatment choice. The objectives of this study were to examine the direct relationships between personal beliefs about clinical condition, perception of treatment acceptability, and preferences for behavioral interventions for insomnia.

Methods: The data set used in this study was obtained from 431 persons with insomnia who participated in a partially randomized clinical trial and expressed preferences for treatment options. The data were collected at baseline. Logistic regression was used to examine the relationships between personal beliefs and treatment acceptability, and preferences. The relationships between personal beliefs and perception of treatment acceptability were explored with correlational analysis.

Results: Perception of treatment acceptability was associated with preferences. Persons viewing the option as convenient tended to choose that option for managing insomnia. Personal beliefs were not related to preferences. However, beliefs about sleep promoting behaviors were correlated with perceived treatment effectiveness.

Conclusions: Perception of treatment acceptability underlies expressed preferences for behavioral interventions. Personal beliefs about insomnia are not directly associated with preferences. Importance is highlighted for providing information about treatment options and exploring perception of each option's acceptability during the process of treatment selection.

Introduction

The recent emphasis on patient-centered care, defined as the provision of treatment that is consistent with patients' choice, highlights the importance of developing an understanding of patients' preferences for treatment (Givens, Houston, van Voorhees, Ford, & Cooper, 2007). A large number of studies investigated preferences of persons with diverse physical and psychological conditions for medical, surgical, and psychological treatments, and the relationships of socio-demographic and clinical characteristics with expressed treatment preferences. Age, sex, level of education, ethnicity, and perceived severity of the clinical condition were found to be associated with preferences in different patient populations (e.g., Ananian et al., 2004; Gum et al., 2006; Hazlett-Stevens et al., 2002; Heit et al., 2003; Vuorma et al., 2003). Information regarding the relationships of socio-demographic and clinical characteristics with treatment preferences can contribute to the design and/or implementation of targeted interventions. However, such information does not clarify factors that patients take into account when selecting a particular treatment over another.

Personal beliefs about the clinical condition and its treatment, and perceived acceptability of treatment are factors reported to be most important in treatment selection (Burns, Sledge, Fuller, Daggy, & Monahan, 2005). The extent to which these factors are directly

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associated with preferences for behavioral treatments has not been systematically examined. Further, the relationships between personal beliefs and perceived acceptability have not been explored. Understanding the relationships among personal beliefs, perceived acceptability of treatment, and expressed treatment preferences is essential to facilitate counseling persons involved in the process of treatment selection. It may also guide modifications of interventions' components and/or mode of delivery with the goal of enhancing their attractiveness to persons with different preferences.

The overall purpose of this study is to investigate the relationships between personal beliefs about the clinical condition, perceived acceptability of treatment, and preferences for behavioral interventions. The clinical condition of interest was chronic insomnia, defined as the experience of difficulty initiating and/or maintaining sleep, for a minimum of three months. The behavioral interventions included sleep education and hygiene (SEH), stimulus control instructions (SCI), sleep restriction therapy (SRT), and a multi-component intervention (MCI) consisting of SEH, SCI, and SRT. The specific aims are:

1) to examine the direct relationship between personal beliefs about sleep and perceived treatment acceptability, and expressed preferences for the behavioral interventions for managing insomnia, after controlling for socio-demographic and clinical characteristics, and
2) to explore the associations between beliefs about sleep and perceived treatment acceptability.

Related literature

The proposition that personal beliefs about the clinical condition and treatment acceptability influence preferences was derived from a conceptualization of preferences reported in the literature and relevant empirical evidence.

Conceptualization of preferences

Preferences for treatment represent persons' choices, that is, the specific treatment option persons want to receive to manage their presenting clinical condition (Stalmeier et al., 2007). Preferences are shaped by the persons' beliefs about their clinical condition and its treatment, and attitudes toward treatment (Corrigan & Salzer, 2003; TenHave, Coyne, Salzer, & Katz, 2003; Wensig & Elwyn, 2003).

Personal beliefs represent the mental model or the information individuals have about the condition, encompassing its causes and consequences, and expectations of improvement (Horne, 1999; Morin, 1993). The mental model guides the selection of treatment options that are consistent with the beliefs the persons hold and that are viewed as acceptable to address the clinical condition. In this study, personal beliefs about insomnia were measured with the Dysfunctional Beliefs and Attitudes about Sleep Scale (Morin, 1994).

Attitudes toward a treatment refer to a favorable or unfavorable appraisal of the treatment options (van den Berg et al., 2008). Acceptability represents a favorable attitude toward treatment; it is based on a careful consideration of the treatment attributes. The attributes encompass appropriateness, effectiveness, and convenience of the treatment options (Tarrier, Liversidge, & Gregg, 2006). Appropriateness refers to the suitability of the intervention in addressing the clinical condition. Effectiveness is the extent to which the intervention is successful in managing the clinical condition. Convenience refers to ease of implementing and willingness to adhere to treatment (Sidani, Epstein, Bootzin, Moritz, & Miranda, 2009). In this study, acceptability and preferences for the behavioral interventions for managing insomnia were assessed with the Treatment Acceptability and Preferences measure (Sidani et al., 2009).

This conceptualization implies that personal beliefs about the clinical condition and perceived treatment acceptability influence preferences. This proposition is supported by empirical evidence (presented in next section). The conceptualization also suggests that personal beliefs are related to treatment acceptability. No study was located that examined this relationship, which will be explored in this study.

Personal beliefs

The results of four studies indicated that personal beliefs about the clinical condition contributed to patients' preferences for treatment. In women with breast cancer, concerns about recurrence prompted women to choose radical mastectomy over breast conservation surgery (Mandelblatt et al., 2000; Molenaar et al., 2004). Riedel-Heller, Matschinger, and Angermeyer (2005) reported that participants' definition of the condition and its causes affected treatment choice: those viewing work or life stress as contributing to depression rated stress reduction strategies as relevant, while those believing in organic causes rated medication as relevant for the management of depression. Givens et al. (2007) reported that a large number of participants identifying themselves as White than non-White believed in the organic causes of depression and indicated preference for medication.

Treatment acceptability

The relationship between treatment acceptability and preferences was investigated in a few studies. In one study, acceptability was assessed with a multi-item scale capturing the treatment attributes of appropriateness and effectiveness. In the remaining studies, qualitative comments made by participants identified the treatment attributes they take into consideration when choosing a particular intervention. Zoeller, Feeny, Cochran, and Pruitt (2003) used the Personal Reactions to the Rationales scale to operationalize treatment acceptability. The scale requires participants to indicate the extent to which they view the treatment option as logical, effective, and helpful, and they would recommend it to others. Although limited evidence was presented to support the reliability and validity of this scale, the results showed that participants have a preference for the treatment option they rated as acceptable. Patients with cardiac diseases explained that appropriateness of treatment for managing their symptoms and its suitability for maintaining lifestyle were the reasons for selecting medication over surgery (Lambert et al., 2004; Rowe et al., 2005).

The evidence supporting the influence of perceived treatment effectiveness on expressed preferences was obtained from studies investigating preferences for medications, and studies in which reasons underlying expressed preferences were explored. The findings of these studies indicated that effectiveness was an important attribute that participants took into consideration when selecting treatment for erectile dysfunction (Mulhall & Montorsi, 2006), post-traumatic stress disorder (PTSD; Zoeller et al., 2003), asthma (King et al., 2007), angina (Lambert et al., 2004), and breast cancer (Lam, Fielding, Ho, Chan, & Or, 2005).

The qualitative results of three studies showed that participants tended to select interventions appraised as convenient. Lambert et al. (2004) reported that patients with angina preferred medical over surgical treatment because the former is "easy to do" and "convenient". Cochran, Pruitt, Fukuda, and Feeny (2008) found that practical considerations such as time to implement treatment were