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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.

Keywords

treatment preference; treatment acceptability; treatment attributes; beliefs about condition; chronic insomnia; behavioral treatment

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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 et al., 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 et al., 2005). The extent to which these factors are directly 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 der 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, In Press). 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., In Press).

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 (Mandleblatt Hadley, Kerner et al., 2000; Molenaar et al., 2004). Riedel-Heller and colleagues (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 and colleagues (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 et al. (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 and colleagues (2004) reported that patients with angina preferred medical over surgical treatment because the former is “easy to do” and “convenient”. Cochran et al. (2008) found that practical considerations such as time to implement treatment were associated with preference for medication to manage PTSD. Persons with chronic insomnia commented that the extent to which they would be able to adhere to behavioral intervention affected their preferences (Miranda, 2004).

In summary, there is emerging empirical evidence indicating that personal beliefs about the clinical condition and the perceived treatment acceptability shape preferences for treatment. The available literature has two limitations. First, most studies reviewed lacked a clear and explicit conceptualization of treatment preferences. Therefore, they did not investigate the simultaneous influence of personal beliefs and treatment acceptability on preferences, nor did they explore the relationship between personal beliefs and treatment attributes. Yet, understanding the associations among these variables and preferences would clarify the specific factors participants take into consideration when selecting treatment options. This knowledge would guide the design of interventions to be responsive to preferences as well as counseling of patients involved in treatment selection. Second, the reports of most previous studies did not provide clear description of the instruments measuring the variables of interest. In particular, the method followed to assess preferences was not detailed. Specifically, the information given about treatment options was not delineated, raising questions about the extent to which expressed preferences were well informed (Bowling & Rowe, 2005). These limitations were addressed in this study by 1) examining the simultaneous influence of personal beliefs about the clinical condition and perception of treatment acceptability on preferences, 2) exploring the association between personal beliefs and preferences, and 3) using validated instruments to measure the variables of interest.

Methods

Design

The data set used in this study was obtained from two sites that implemented the partially randomized clinical trial. In this design, participants are informed of the treatment options under investigation and are requested to indicate their preferences. Participants expressing a preference for a particular treatment option are allocated to the option of their choice, whereas those with no preference are randomly assigned to treatment (Bradley, 1993). The data set for this study was comprised of participants who expressed a preference for the behavioral interventions offered within the sites. At baseline, participants attended a data collection session during which they 1) completed the instruments measuring the socio-demographic and clinical characteristics, and personal beliefs about sleep, 2) were informed of the treatment options offered at the respective site, 3) rated the acceptability of the options, and 4) indicated the option of their preference. Participants were then allocated to the option of their choice, and participants with no preference were randomly assigned to treatment.

The treatment options offered in site 1 were sleep education and hygiene (SEH) and multi-component intervention (MCI) to manage chronic insomnia. The SEH consisted of providing

information about sleep processes and functions, and about supportive strategies to promote sleep such as avoiding caffeine in the afternoon and nicotine before bedtime and during the night when awake. The SEH option was given in a booklet format. Participants could read the booklet at their convenience and apply any of the supportive strategies. The MCI included SEH, stimulus control instructions (SCI) and sleep restriction therapy (SRT). SCI entails specific instructions to strengthen the bed and bedroom as cues for sleep (Bootzin, Engle-Friedman & Hazelwood, 1983). SRT focuses on consolidating sleep by establishing a consistent sleep-wake schedule (Spielman, Saskin & Thorpy, 1987). The treatment options offered in site 2 were the SCI and SRT. The MCI, SCI and SRT were delivered in four group and two individual telephone sessions. The sessions were scheduled once a week, over a 6-week period. The SEH was found to be minimally effective, while the SCI, SRT and MCI have demonstrated effectiveness in managing insomnia (Morin, Culbert & Schwartz, 1994).

Sample

The sample across the two sites consisted of 431 persons with chronic insomnia who met the following eligibility criteria: 1) community-dwelling, non-institutionalized adults of at least 21 years of age, 2) ability to read and write English, and 3) complaint of insomnia of at least 3-month duration, as indicated by sleep onset latency and/or time awake after sleep onset of 30 minutes or more per night, for a minimum of 3 nights per week, as ascertained by a daily sleep diary maintained for 14 days at baseline. Persons were ineligible if they had a diagnosis of sleep apnea (self-reported), cognitive impairment evidenced by a score < 27 on the Mini-Mental State Exam (MMSE; Folstein, Folstein & McHugh, 1975), or psychological impairment indicated by a Global Severity Index T score > 50 on the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983).

Persons with insomnia were recruited through advertisements in local newspapers and newsletters, and by distributing flyers and brochures to community health centers and clinics. Persons interested in the study underwent screening for eligibility after obtaining consent but prior to completing the instruments measuring the variables of interest.

The number of participants was 198 in site 1 and 233 in site 2. The sample size within each site was adequate to examine the relationships between personal beliefs (5 subscales), perception of treatment attributes (4 attributes), and expressed preferences for either of the two treatment options, based on the rule of having 10 cases per predictor (Munro, 2001).

Variables and Measures

Socio-demographic and clinical characteristics were considered as potential confounds influencing expressed preferences for treatment as reported in the literature. They were controlled for in the regression analysis. Age, sex, educational level, and ethnicity were assessed with standard questions. Perceived severity of insomnia, a clinical characteristic, was measured with the Insomnia Severity Index (ISI; Bastien, Vallières & Morin, 2001).

Personal beliefs about sleep were measured with the Dysfunctional Beliefs and Attitudes about Sleep (DBAS) scale (Morin, 1993;1994). The DBAS contains 30 items divided into five subscales capturing: misconceptions about the causes of insomnia (e.g., insomnia is a result of aging); misattribution about the consequences of insomnia (e.g., effects of insomnia on daytime function); unrealistic expectations about sleep (e.g., need for 8 hours of sleep); perception of control and predictability of sleep (e.g., inability to predict good or poor night's sleep, and perception that no one can help); and mistaken beliefs about sleep promoting behaviors (e.g., spending more time in bed to get more sleep). The original visual analogue scale was modified to a 10-point numeric rating scale for ease of use; however, the original anchors were maintained as 'strongly disagree' and 'strongly agree'. A total score was computed for each

subscale. High scores represent dysfunctional beliefs. The DBAS demonstrated reliability in poor sleepers ($\alpha = .81$) and good sleepers ($\alpha = .80$; Morin, 1994). The DBAS discriminated between insomniacs and good sleepers, correlated with relevant sleep outcomes (e.g., sleep efficiency), and was sensitive to change following cognitive behavior therapy (Morin, 1994). The items were internally consistent in this study ($\alpha = .83$).

Perception of treatment attributes and preferences for treatment options were assessed with the Treatment Acceptability and Preferences measure developed by the investigators (Sidani et al, In Press). The measure contained three sections. The first section presented the description of one treatment option offered in the respective site, followed by items inquiring about participants' perception of its acceptability. The description introduces the name of the treatment option and explains its purpose, components and activities, dose, mode of delivery, and effectiveness. Information about effectiveness is synthesized from available empirical evidence and is presented in simple, lay terms. The items request participants to rate the treatment option for the following attributes: suitability, appropriateness, effectiveness, and convenience (operationalized as willingness to comply with the treatment). The items were adapted from Morin et al. (1992) and Vincent and Lionberg (2001). A five point rating scale ranging from 'not at all' (0) to 'very much' (4) was used. The second section presented the description followed by items to rate the other treatment option offered at the respective site. The third section of the Treatment Acceptability and Preferences measure included one item inquiring about the treatment option of choice. Participants indicated which of the two options they preferred. The measure was reliable and valid. The items assessing perception of treatment attributes were internally consistent with ($\alpha > .80$). Results of paired t-test showed that the mean item scores observed for the first treatment option differed from those for the second option rated. The mean item scores were higher for the selected treatment option than the other option (Sidani, et al., in press).

Procedure

The study protocol was approved by the Institutional Review Board at the participating institution at each site. Persons study completed the 14 day Daily to determine if they meet the selection criteria related to insomnia. Eligible individuals were invited to attend a face-to-face data collection session with the research assistant (RA), at the research office. At the meeting, the RA explained the purpose of the study, the nature of the persons' involvement, risks and benefits of participation, addressed any concerns the persons had about the study, and obtained written consent. The RA administered the MMSE and asked consenting participants to complete the BSI to determine their eligibility. Eligible participants responded to a questionnaire containing items and instruments measuring the socio-demographic characteristics, clinical factors (i.e., insomnia severity), and beliefs about sleep. The RA then administered the Treatment Acceptability and Preferences measure. Specifically, the RA 1) read the description of the treatment option slowly, clearly, and in an unbiased way to facilitate understanding and avoid any potential bias, 2) instructed participants to respond to the items assessing appropriateness, effectiveness, and willingness to comply with treatment in relation to the intervention described, 3) proceeded with the same two steps in relation to the second treatment option, and 4) inquired about participants' preference for the treatment options.

Data Analysis

Descriptive statistics were used to delineate the socio-demographic and clinical characteristics of participants in each site. Independent sample t-tests compared the mean scores on personal beliefs and perception of treatment attributes for participants who expressed a preference for either of the two treatment options offered within each site. Logistic regression examined the direct relationship between personal beliefs and perception of treatment acceptability, and expressed preferences for either option, after controlling for the potentially confounding

influence of socio-demographic and clinical characteristics. The odds ratio (OR) was examined to determine the influence of the selected factors, and the Hosmer and Lemeston chi-square test evaluated the fit of the model. Pearson's correlation coefficients were used to explore the relationship between personal beliefs and perception of treatment attributes.

Results

Characteristics of the sample

In site 1, the age of the 198 participants ranged from 24 to 81 years, with an average age of 47 (± 15). The majority were women (71%), identifying themselves as White (85%). The number of education years varied between 12 and 27, with a mean of 16 (± 4). On average, participants experienced moderate level of insomnia severity (16.7 ± 3.9).

In site 2, the 233 participants had an average age of 52 years (± 16 ; range = 21 to 85). Women comprised 68% of the sample. Most (72%) were White. The number of education years varied between 0 and 25, with a mean of 16 (± 4). Their insomnia severity level was moderate (17.7 ± 4.5).

Treatment preferences

In site 1, 77% of the participants expressed a preference for the MCI, and 23% for the SEH. In site 2, 56% of the participants preferred the SCI and 44% the SRT.

Comparison based on treatment preferences

The mean (SD) scores on personal beliefs and perception of treatment acceptability for participants expressing a preference for either option offered at the respective site are presented in Table 1 for site 1 and Table 2 for site 2.

In site 1, there were no statistically significant differences between participants with a preference for the SEH and those with a preference for the MCI on personal beliefs related to causes and consequences of insomnia, expectations about sleep, control and predictability of sleep, and sleep promoting behaviors. Similarly, participants who selected the SCI or the SRT in site 2 were comparable in their personal beliefs. However, participants choosing the SRT had a slightly higher score on mistattributions about the consequences of insomnia than those choosing the SCI.

Overall, perception of treatment acceptability differed significantly between participants with a preference for either option, in site 1 (Table 1) and site 2 (Table 2). In site 1, participants expressing a preference for the MCI rated this option as more suitable, acceptable, and effective, and were more willing to comply with it, than the SEH. In contrast, participants preferring the SEH viewed this option more favorably than the MCI. In site 2, participants with a preference for the SCI rated it as more acceptable, effective, and convenient than the SRT, while those preferring the SRT perceived it as more suitable, acceptable, effective, and convenient than the SCI.

Relationships between personal beliefs, perception of treatment attributes, and expressed preferences

The relationships between personal beliefs about sleep and perception of treatment acceptability, and expressed preferences for behavioral treatment for managing insomnia were examined after controlling for the confounding effects of socio-demographic and clinical characteristics on preferences. In site 1, results of logistic regression analysis revealed that socio-demographic and clinical characteristics were associated with preferences. Participants with high education preferred SEH (Odds Ratio, OR = 0.88), while those with increased

insomnia severity were likely to choose the MCI (OR = 1.11). However, the association of these socio-demographic and clinical characteristics with treatment preferences was no longer statistically significant when the variables representing perception of treatment acceptability were entered in the regression equation. In site 2, results of logistic regression showed no association between socio-demographic and clinical characteristics or beliefs about sleep and expressed treatment preferences. However, perception of treatment acceptability influenced preferences as described next.

In site 1, willingness to comply with treatment was the only predictor that contributed significantly to expressed preferences. Participants that indicated they were willing to comply with the MCI were more likely to select it as the treatment option of their choice (OR = 7.6), while those willing to comply with the SEH were more likely to select this option (OR = 0.90). The model had a good fit (Hosmer & Lemeston $X^2(8) = 3.42$, $p > .05$, $R^2 = 0.47$).

In site 2, willingness to comply with the SCI was significantly related to preference for this option (OR = 0.36). Perceived suitability of the SRT (OR = 4.51) and willingness to comply with the SRT (OR = 2.20) were associated with participants' preference for this option. The model had a good fit (Hosmer & Lemeshow $X^2(8) = 4.54$, $p > .05$, $R^2 = 0.49$). Personal beliefs about sleep did not affect expressed preferences.

Association between personal beliefs and perception of treatment attributes

The results of correlational analysis showed that perceived acceptability and effectiveness of treatment was related to some personal beliefs. Specifically, in site 1, perceived effectiveness of the MCI was correlated with unrealistic expectations about sleep ($r = -0.24$, $p = .001$). Beliefs about sleep promoting behaviors was correlated with perceived effectiveness of the MCI ($r = 0.24$, $p = .001$) and the SEH ($r = 0.17$, $p = .024$), as well as perceived appropriateness of the SEH ($r = 0.17$, $p = .025$). In site 2, personal beliefs related to control and predictability of sleep were associated with perceived appropriateness of SRT ($r = -0.15$, $p = .019$), while beliefs about sleep promoting behaviors correlated with perceived effectiveness of SCI ($r = 0.16$, $p = .017$).

Discussion

The study is the first to focus on the contribution of personal beliefs and perception of treatment attributes to expressed preferences for behavioral interventions designed to manage chronic insomnia. Generally, the results indicated that persons with chronic insomnia express preferences for different behavioral interventions. In regard to the specific aims, treatment acceptability, reflected in the appraisal of different treatment attributes, is a significant determinant of preferences; and some beliefs about the clinical condition are associated with perception of treatment attributes.

Overall, participants viewed the behavioral interventions included in this study as acceptable, suitable, and effective. This finding is consistent with the results of Morin et al. (1992) and Vincent and Lionberg (2001). These researchers reported that persons with chronic insomnia rated behavioral interventions (SEH, SCI, and SRT) as acceptable, effective in the long term, likely to improve daytime functioning, and producing few side effects. In general, behavioral interventions were rated more favorably than pharmacological treatment for chronic insomnia. The findings of our study extend previous results, showing that persons with insomnia perceive specific behavioral interventions more favorably than others. This perception was guided by rating of the interventions' appropriateness, suitability, effectiveness, and convenience.

Participants' perception of treatment attributes was found to predict treatment preferences. Specifically, participants who indicated willingness to comply with a treatment option tended

to express a preference for this option. This finding is consistent with the results reported by Zoeller et al. (2003) and Lambert et al. (2004). Zoeller et al. found participants' preferences for treatments for PTSD were affected by the extent to which they rated the options as credible; perceived efficacy of the option was the most commonly reported reason underlying their expressed preferences. Lambert et al.'s results implied that effectiveness, appropriateness to manage symptoms, suitability for maintaining lifestyle, and convenience (i.e., easy to do) were important reasons for selecting one option over the other. The non-statistically significant association between perceived appropriateness and effectiveness, and treatment preferences observed in this study could be due to potential multi-collinearity among the treatment attributes. In addition to statistical multi-collinearity, the interrelationship among the attributes is conceptually meaningful. Participants who view an intervention as appropriate, effective, and suitable will likely comply with it. Adherence to treatment, particularly behavioral interventions for managing insomnia, is critical for its successful implementation (which often involves initiation and maintenance of behavior change) and achievement of intended outcomes.

Personal beliefs about the clinical condition did not influence expressed preferences for behavioral insomnia treatment; rather, some beliefs were associated with the rating of treatment attributes. Beliefs about sleep promoting behaviors showed significant correlation with perceived treatment effectiveness. The nature of this relationship varied with the treatment options rated. Participants having mistaken or dysfunction beliefs about sleep promoting behaviors viewed the MCI and SEH as effective in site 1, and rated the SCI of low effectiveness in site 2. In this study, participants completed the DBAS, the measure of personal beliefs, prior to being exposed to the information about the option. It is possible that after reading the description of treatments, participants became aware of the magnitude of each treatment's effectiveness in managing insomnia, which shaped their perception of this attitude. Thus, regardless of their initial beliefs, participants rated the treatment effectiveness on the basis of the evidence presented in the description. Further research is needed to elucidate the linkages between personal beliefs and perception of treatment attributes.

The associations observed among the variables investigated in this study suggest that treatment attributes may mediate the relationship between personal beliefs about the clinical condition and expressed treatment preferences. Persons with various beliefs may develop different understanding of the treatment options and interpretation of their attributes. Future studies should be designed to investigate the suggested mediational relationships.

Conclusions

This study's findings indicated that persons with chronic insomnia have preferences for different behavioral treatments for managing their sleep problems. Expressed preferences were associated with perception of treatment acceptability, specifically as it relates to its convenience. Persons who were willing to comply with a treatment option were likely to select it as the intervention of choice. Beliefs about insomnia were not related directly with the perception of treatment acceptability.

The results of this study highlight the importance of providing information about alternative treatments for managing a clinical condition and discussing patients' perception of each option during treatment selection. Each option should be clearly described in terms of its purpose, components and nature of activities, dose, mode of delivery, and effectiveness. Patients are requested to clarify their perception of each treatment's acceptability in terms of appropriateness, suitability, effectiveness, and convenience (i.e., willingness to comply). Misconceptions of treatment options have to be addressed prior to assessing treatment

preferences. Implementing this procedure for eliciting treatment preferences is demanding and time consuming; however, it ensures that the expressed preferences are well informed.

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Table 1

Comparison on personal beliefs and treatment attributes based on preference for treatment options in site 1

Variable	Preference for SEH	Preference for MCI	t-test
Personal beliefs:			
Cause	23.3 (6.0)	25.1 (6.6)	n.s
Consequences	33.8 (12.0)	34.8 (11.3)	n.s
Expectations	19.3 (5.9)	20.6 (5.6)	n.s
Control and predictability	28.0 (8.2)	28.8 (7.4)	n.s
Beliefs about behaviors	19.9 (7.2)	20.8 (6.9)	n.s
Treatment 1: MCI			
Suitability	1.9 (0.9)	2.5 (0.9)	F(1,184) = 14.7, p = .001
Acceptability	1.9 (0.9)	2.7 (0.8)	F(1,184) = 28.4, p = .001
Effectiveness	1.5 (0.8)	2.0 (0.8)	F(1,184) = 12.4, p = .001
Comply	2.2 (1.2)	3.2 (0.8)	F(1,184) = 35.7, p = .001
Treatment 2: SEH			
Suitability	2.6 (0.9)	1.4 (0.9)	F(1,184) = 50.8, p = .001
Acceptability	2.7 (0.7)	1.7 (1.0)	F(1,184) = 42.3, p = .001
Effectiveness	1.8 (0.8)	1.3 (0.8)	F(1,184) = 11.1, p = .001
Comply	3.1 (0.7)	2.4 (1.2)	F(1,184) = 14.1, p = .001

Table 2

Comparison on personal beliefs and treatment attributes based on preference for treatment options in site 2

Variable	Preference for SCI	Preference for SRT	t-test
Personal beliefs:			
Cause	27.2 (8.9)	28.3 (8.1)	n.s
Consequences	37.5 (12.5)	40.6 (12.2)	F(1,221) = 3.5, p = .063
Expectations	20.3 (6.4)	20.1 (6.0)	n.s
Control and predictability	31.1 (10.5)	32.2 (9.6)	n.s
Beliefs about behaviors	22.5 (7.8)	23.3 (8.4)	n.s
Treatment 1: SCI			
Suitability	2.5 (1.0)	2.3 (1.1)	n.s
Acceptability	3.1 (0.8)	2.8 (1.0)	F(1,223) = 3.8, p = .052
Effectiveness	2.3 (0.9)	2.0 (1.0)	F(1,218) = 4.8, p = .028
Comply	3.4 (0.8)	2.9 (1.1)	F(1,224) = 11.1, p = .001
Treatment 2: SRT			
Suitability	1.6 (1.1)	3.0 (0.8)	F(1,222) = 103.7, p = .001
Acceptability	2.4 (1.1)	3.2 (0.7)	F(1,223) = 34.9, p = .001
Effectiveness	1.8 (1.0)	2.7 (0.8)	F(1,220) = 42.1, p = .001
Comply	2.3 (1.4)	3.5 (0.6)	F(1,223) = 54.1, p = .001