Effectiveness of Integrated Body–Mind–Spirit Group Intervention on the Well-Being of Indian Patients With Depression: A Pilot Study

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ABSTRACT

Background: Depression is a leading cause of disability worldwide. There is a need to develop effective strategies to treat depression and prevent recurrence. Treatments that combine pharmacological and psychotherapeutic approaches are preferred for treating severe forms of depression.

Purpose: The study assesses the effect of an integrated body–mind–spirit group intervention in patients with depression.

Methods: This pilot study was a pretest–posttest design study. Thirty adult patients diagnosed with depression attending the psychiatric outpatient department at a district hospital were randomly assigned to either the intervention group or comparison group. Each group had 15 patients. The intervention group received both the intervention and routine hospital treatment and underwent four group integrated body–mind–spirit group intervention therapy sessions. These sessions were held once per week on either Saturday or Sunday, with each session lasting more than 3 hours. Comparison group participants received routine hospital treatment only. Outcome measures, including level of depression, well-being, and work and social adjustment, were measured using the Beck Depression Inventory-II, body–mind–spirit well-being scale, and work and social adjustment scale. Both groups were evaluated at baseline, 1 month, 2 months, and 3 months.

Results: Results showed that both groups had significant reductions in the level of depression, improvements in well-being, and work and social adjustment at 3-month follow-up compared with baseline. In addition, the intervention group showed significant mean differences in levels of depression, well-being, and work and social adjustment compared with the comparison group.

Conclusion: The integrated body–mind–spirit group intervention model appears to reduce depressive symptoms and improve well-being in patients with depression.

KEY WORDS
depression, integrated body–mind–spirit group intervention, well-being.

Introduction

Depression is an illness that affects both the body and the mind and is a leading cause of disability, workplace absenteeism, decreased productivity, and suicide (Michaud, Murray, & Bloom, 2001). The World Health Organization estimates that depression will be the second most prevalent form of disability worldwide, after heart disease, by 2020 (World Health Organization, 2008). Depression is a common, serious, and complex illness that affects an estimated 121 million people (Schotte, Bossche, Doncker, Claes, & Cosyns, 2006). The high burden of depression requires formulating effective strategies to shorten episode duration and prevent recurrence. For severe forms of depression, treatments combining pharmacological and psychotherapeutic approaches have been shown to be effective (Selhub, 2007).

Accepted for publication: March 21, 2013
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doi:10.1097/jnr.0b013e3182a0b041

Mind–body intervention emphasizes interactions among the brain, the mind, and the body. The fundamental assumption is that individuals have the internal ability to change their own thoughts and behaviors and enhance their emotional and physical health. The concept is that the mind plays an important role in the improvement of health (Chan, Cheung, Tsui, Sze, & Shi, 2011).

In clinical practice, an increasing number of empirical studies have reported the positive effects of mind–body interventions on different mental and physical problems such as depression (Chou et al., 2004; Nakao et al., 2001; Tsai, Wong, Tsai, & Ku, 2008; Tsang, Cheung, & Lak, 2002; Yang et al., 2009), anxiety (Deckro et al., 2002), tension headache (Abbott, Hui, Hays, Li, & Pan, 2007), hypertension (Benson, Rosner, Marzetta, & Klemchuk, 1974), cardiac disease (Leserman, Stuart, Mamish, & Benson, 1989), Type 2 diabetes mellitus (Innes & Vincent, 2007), and cancer (Goldstein et al., 2005). One of the mind–body intervention models, integrated body–mind–spirit (IBMS) therapy, was found to be effective in reducing depressive symptoms among Taiwanese female patients in group interventions (Hsiao, Lai, & Chen, 2009). In a recent study conducted by Hsiao and colleagues (2011), an 8-week body–mind–spirit group psychotherapy program was found to reduce symptoms of depression and produce long-term positive outcomes on endocrine stress. Although most of the empirical studies on mind–body intervention have reported positive effects on depressive symptoms, the effectiveness of the IBMS model in facilitating improvements in patients with depression has not been explored in the Indian context. Spiritual interventions reported in the Indian literature have focused primarily on religious principles. This study tested the body–mind–spirit model proposed by Chan, Ho, and Chow (2001), which integrates elements of Buddhism, self-love techniques, acceptance of negative emotions, and gain-through-pain concepts. This model encourages clients to express their inner abilities and strengths, a function not highlighted in previous Indian studies.

IBMS therapy helps clients to both grow and change through suffering and enhance their strengths and resilience in coping with stress. The therapy emphasizes a holistic concept of health. Under the IBMS framework, physical (bodily functions), psychosocial (emotional and interpersonal relationships), and spiritual (meaning of life and inner abilities) well-being are believed to be interconnected and play major roles in facing stressful life events (Chan, Ho, & Chow, 2001). This therapy integrates concepts and practices from Western medicine (e.g., positive psychology and forgiveness therapy); traditional Chinese medicine; and Buddhist, Taoist, and Confucian philosophies. The theory of positive psychology is applied in body–mind–spirit therapy to help clients learn to love themselves and enhance their inner powers. Studies of positive psychology found that treatments designed to empower a person's positive features could increase self-esteem, improve relationships with others, and enhance spiritual growth (Tedeschi, Park, & Calhoun, 1998). The efficacy of IBMS therapy has been shown on groups of divorced women (Chan, Chan, & Lou, 2001), infertile couples (Chan, Chan, Ng, Ng, & Ho, 2005), patients with cancer (Chan, Lo, & Leung, 2000), and patients with depression (Hsiao et al., 2009, 2011).

The IBMS intervention usually takes the form of psychoeducational group counseling. Group experiences are used to alleviate psychological distress and enhance positive perceptions of belonging, knowledge, and strength. Substantial evidence regarding the effectiveness of group work interventions has been recorded. Dies (1993) summarized 40 years of research in group psychotherapy and concluded that group treatments are effective in the treatment of patients with depression and bulimia and sexually abused patients. The current study adapted the IBMS intervention to patients diagnosed with depression.

In this study, IBMS group intervention (IBMSGI) was administered to patients diagnosed with depression as a supplement to regular treatment regimens. Specific outcome measures were used to assess effectiveness over a 12-week follow-up period. This study assessed the effect of using IBMSGI on treatment outcomes. This is the first study in India to explore the efficacy of the IBMS model in improving the well-being of patients diagnosed with depression.

Methods

Setting

The current study was conducted at a 350-bed district hospital that sees an average of 20–30 outpatients with depression per month in the department of psychiatry.

Participants

Recruitment

The study obtained ethical permission from the institution. Thirty participants seeking treatment for depression were recruited from the hospital. Inclusion criteria were (a) diagnosed with depressive disorder according to the International Classification of Diseases, Tenth Revision (ICD-10); (b) 20–40 years old; (c) able to converse, read, and write in one of India's regional languages or English; (d) prescribed antidepressant treatment by the treating psychiatrist; and (e) began antidepressant treatment during the immediately preceding 1-week period. Participants with psychotic symptoms, cancer, severe life-threatening illnesses, or current drug- or alcohol-related disorders were excluded. Written informed consent was obtained from the patient before proceeding with the study. Participants were informed about the assessments, treatment sessions, and their roles. They understood that they would be assigned to either the intervention or comparison group and were informed about their responsibilities as participants. Four participants refused to participate in the weekly intervention sessions because of scheduling and transportation

difficulties. Additional participants were recruited until both groups had 15 members each. Participants in both groups were on stable dosing of antidepressant medication throughout the 12-week study period. During the study period, two participants from the intervention group and four from the comparison group withdrew from the study. Reasons for withdrawal included change of residence, no improvement in condition, treatment termination, scheduling difficulties, and excessive distance to travel.

Procedure

Participants were selected based on the inclusion and exclusion criteria. After assessing baseline outcome measures (Beck Depression Inventory II [BDI-II], Body–Mind–Spirit Well-Being Inventory [BMSWBI], Work and Social Adjustment Scale [WSAS]), researchers used a random number table to assign participants to one of the two groups. There were 15 participants in each group.

Measures

Information was obtained on participant sociodemographic status, clinical profile, level of depression (BDI-II), well-being (BMSWBI), and work and social adjustment history (WSAS). Sociodemographic status included age, gender, marital status, education level, family type, area of residence, and monthly income. Clinical profile information included duration of illness, number of depressive episodes, prior suicide attempts, and family history of psychiatric illness.

Psychometric measurements were taken four times in the study, including baseline (T0), 1 month after start of treatment (T1), 2 months after start of treatment (T2), and 3 months after start of treatment (T3). Assessment tools used are discussed below.

Beck Depression Inventory II (BDI-II)

Developed by Beck, Steer, Ball, and Ranieri (1996), the BDI-II is a self-administered, 4-point Likert scale containing 21 items designed to assess depression symptom severity. Items reflect symptom severity along an ordinal continuum that ranges from *absent* (0) to *mild* (1) and *severe* (3). Item scores are summed to generate the total inventory score. The total possible score range is 0–63, with higher scores indicating higher symptom level. The BDI-II earned high internal consistency in previous Indian studies (Cronbach's alpha = .96; Basker, Moses, Russell, & Russell, 2007; Steer, Bail, Ranier, & Beck, 1999).

Body-Mind-Spirit Well-Being Inventory (BMSWBI)

The BMSWBI was developed by Ng, Yau, Chan, Chan, and Ho (2005). It is a multidimensional inventory for assessing holistic health. The 56-item instrument comprises the four scales of physical distress, daily functioning, affect, and spirituality. Reliability is satisfactory, with alpha coefficients ranging from .87 to .92.

Work and Social Adjustment Scale (WSAS)

The WSAS is a self-reported scale of functional impairment developed by Mundt, Marks, Shear, and Greist (2002). It is composed of five questions scored on a scale of 0–8. Cronbach's measure of internal scale consistency ranged from .70 to .94, and test–retest correlation was .73.

All the research instruments were translated from English to Kannada by language experts. An independent bilingual expert then translated the instruments back to English.

Intervention

Comparison group

This group's participants received antidepressants (tricyclic antidepressants or selective serotonin reuptake inhibitors) and psycho-education (education on the signs and symptoms of depression, side effects of medication, duration of medication, and follow-up visits) from a psychiatrist on an individual basis and visited the psychiatrist every month for checkups and prescription renewals.

Intervention group

This group's participants received the IBMSGI as well as the standard therapy received by their comparison group peers. The IBMSGI, originally developed by Chan, Chan, and Lou (2001), emphasizes a holistic concept of health. This model incorporates mini-lectures on health and emotional management strategies and stress reduction training coupled with acupressure exercises, breathing techniques, and meditation. Furthermore, writing, drawing, and homework activities encourage participants to discover positive meaning in negative experiences.

Main IBMSGI features include the following:

- Participants are empowered to self-heal, grow, and transform. Participants are encouraged to face their disease (depression) positively and realize the interconnectedness of their physical health, their emotions, and their spiritual well-being to self-help and develop a healthier lifestyle.
- Treatments emphasize the normalization of traumatic experiences and the view that suffering is an opportunity for growth. A therapist helps participants accept and work through life challenges, reinforcing the "no pain, no gain" principle.
- In keeping with Buddhist philosophy, clients are taught that excessive desires are the source of suffering. Therefore, "letting go" of extraneous desires is an important step in healing. Treatment encourages participants to explore and discuss the meanings of suffering, attachment, and letting go.
- Strategies for practicing forgiveness and self-love are key to attaining joy and peace of mind. Participants are taught that unresolved grudges create and sustain negative emotions. Forgiving oneself and others is thus critical to dispersing negative energy and learning self-love.

- Social support and commitment to help others help participants find meaning in suffering, reducing perceived isolation and loneliness.

This study divided IBMSGI into four sessions: (a) growth through pain; (b) emotional management; (c) love, letting go, and forgiveness; and (d) transformation of self.

Growth through pain: In this session, the therapist gave an overview of IBMSGI. Participants were provided a supportive environment to express negative emotions and given a general introduction to human health and the body–mind–spirit model. Participants participated in 10 longevity exercise activities, group back massage, and abdominal breathing skills designed to improve well-being and relieve anxiety. The therapist assessed individual participant strengths and discussed these in subsequent sessions. The therapist led therapeutic writing and group discussion sessions to help participants recognize the nature of loss and adopt positive-thinking attitudes. Buddhist concepts were discussed by the group as a whole as a way to encourage participants to accept pain as a source of positive transformation.

Emotional management: In this session, participants developed awareness of their emotions and learned how to manage negative emotions. Participants learned the relationship between emotions and health and participated in hand massage techniques to relieve anxiety.

Love, letting go, and forgiveness: In session 3, participants practiced self-love techniques and engaged in meditation designed to encourage self-acceptance and forgiveness. Participants were encouraged to self-reflect on the meaning of self, letting go, and forgiveness. Participants listed their personal strengths and their support network.

Transformation of self: In this session, participants developed a healthy life plan, discussed future goals, and summarized their growth and transformation experiences.

The first author, as the therapist throughout the intervention, interviewed each intervention group participant individually. The therapist was trained at the Centre on Behavioral Health, University of Hong Kong. Intervention group participants received both IBMSGI and routine hospital treatment and participated in four small-group IBMSGI therapy sessions of three to four participants each. These sessions were held once per week on either Saturday or Sunday evening, with each session lasting more than 3 hours.

The attendance rate was 100% for all IBMSGI sessions. Comparison group participants received the routine treatment offered at the district hospital only. Follow-up assessments were scheduled for both intervention and comparison group participants at 1-month intervals for the first 3 post-intervention months.

Data Analysis

Baseline characteristics between the groups were compared using Fisher's exact test for categorical variables and independent sample t test for continuous variables. Level of depression, well-being, and work and social adjustment are assumed to follow normal distribution in the population. Normality was not expected because of the small sample size. A Shapiro–Wilk test indicated nonnormal distribution for duration of illness, level of depression, and work and social adjustment. A Mann–Whitney U test compared the two groups based on these three variables. Equal variance was observed for well-being, compared using t test. Within-group and between-group changes in level of depression, well-being, and work and social adjustment from baseline to 3 months were compared using repeated measures analysis of variance (ANOVA).

Results

Table 1 shows the demographic and clinical characteristics of both groups. There were no significant demographic or clinical characteristic differences between the groups.

Table 2 shows a significant time and group effects for depression, well-being, and functional impairment between the two groups using a two-way ANOVA with repeated measures ANOVA. The mean intervention group pretest depression score decreased significantly compared with the comparison group at the 3-month follow-up (28.20–6.27 vs. 26.13–18.60), and group and time interaction effects were significant ($F_{(3,\ 84)} = 20.55$, $p = .001$, partial $\eta^2 = 0.423$). The mean intervention group pretest well-being scores improved significantly compared with the comparison group at the 3-month follow-up (257.27–427.73 vs. 252.20–282.67), and group and time interaction effects were significant ($F_{(3,\ 84)} = 21.63$, $p = .001$, partial $\eta^2 = 0.436$). The mean intervention group pretest work and social adjustment scores decreased significantly compared with the comparison group at the 3-month follow-up (30.33–7.93 vs. 31.20–20.67), and group and time interaction effects were significant ($F_{(3,\ 84)} = 11.53$, $p = .001$, partial $\eta^2 = 0.292$). Findings indicate the IBMSGI intervention as effective in reducing depressive symptoms and work and social adjustment scores and improving well-being scores.

Discussion

The main findings of this study showed a significant improvement in the level of depression, body–mind–spirit well-being, and work and social adjustment scores after four IBMSGI sessions. The findings provide initial evidence for the effectiveness of IBMSGI in patients with depression.

In this study, no participants reported adverse effects during the study period. Moreover, the IBMSGI activities pursued by the participants were culturally accepted, which supported the feasibility of the intervention in the Indian context.

Although both groups achieved significantly reduced depression and improvements in well-being and work and social adjustment over the 3-month period, there were significant differences between the two. Positive improvements for the

TABLE 1.
Participant Demographics and Clinical Characteristics (N = 30)

Variable	Intervention Group			Control Group			p
	M	*SD*	*n*	*M*	*SD*	*n*	
Age (years)	26.07	7.40		29.87	8.12		.191
Duration of illness (mean months)	19.07	20.35		12.53	8.36		.633
Gender							1.000
Male			6			6	
Female			9			9	
Education							.054
High school			5			11	
Preuniversity			2			2	
Graduate			8			2	
Marital status							.260
Single			8			5	
Married			6			10	
Divorced or widower			1			0	
Religion							1.000
Hindu			12			13	
Muslim			3			2	
Attempted suicide							1.000
Yes			12			12	
No			3			3	
Area of residence							1.000
Urban			5			5	
Rural			10			10	
Monthly income (per month)							.188
<Rs. 5,000			7			9	
Rs. 5,000–10,000			5			6	
Above Rs. 10,000			3			0	
Number of episodes	0.87	1.85		0.73	1.33		.820
Type of family							.017
Nuclear			15			9	
Joint			0			6	
Family history of depression							.651
Yes			4			2	
No			11			13	
Previous treatment							.598
Yes			12			14	
No			3			1	
Medication type							.427
Tricyclic antidepressants			9			12	
Specific serotonin reuptake inhibitors			6			3	
BDI II score	28.20	10.58		26.13	8.90		.567
Well-being score	257.27	66.45		252.20	56.11		.823
Work and social adjustment score	30.33	9.77		31.20	6.58		.778

Note. BDI = Beck Depression Inventory.

intervention group participants were significantly higher than for the comparison group participants for all variables. This suggests that the IBMSGI intervention enhances the effects of pharmacotherapy and may provide an additional tool for treating depression. Study results are similar to those of previous body–mind therapy studies. Little, Kligler, Homel, Belisle, and Merrell (2009) revealed that multimodal body–mind group therapy achieved clinically significant declines in depressive mood and negative effect measures and significant improvements in positive effect and well-being

TABLE 2.
Outcome Measures Across Time Within and Between the Groups (N = 30)

	T0		T1		T2		T3		Group×Time	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*
Depression scores									20.55	<.001*
IG	28.20	10.58	12.20	11.40	6.80	7.13	6.27	6.16		
CG	26.13	8.90	22.33	10.10	18.87	10.98	18.60	10.86		
Well-being scores									21.63	<.001*
IG	257.27	66.45	384.13	63.13	423.80	64.48	427.73	64.35		
CG	252.20	56.11	267.67	58.47	280.73	65.69	282.67	62.60		
Work and social adjustment score									11.50	<.001*
IG	30.33	9.77	11.80	10.20	8.87	8.63	7.93	8.47		
CG	31.20	6.58	26.00	9.29	21.47	9.25	20.67	8.17		

Note. IG = intervention group; CG = control group; T0 = at baseline; T1 = at 1 month (end of the intervention); T2 = at 2 months (follow-up); T3 = at 3 months (follow-up).
*$p < .001$.

measures. Chan et al. (2011) found Dejian mind–body intervention to be an effective treatment for relieving depressive mood and improving positive effects.

In this study, improvements in the level of depression, well-being, and work and social adjustment in the intervention group participants were significantly better than in the comparison group participants. These findings indicate IBMSGI to be an effective adjunct for further reducing depressive symptoms and enhancing well-being and work and social adjustment in patients with depression. In the IBMSGI, participants used self-help to gain a sense of control through self-practice. Group participants acquired comprehensive knowledge about depressive disorder, which increased their well-being. The IBMSGI, being a comprehensive approach in addressing the varied dimensions of physical, psychological, and spiritual well-being, may have positively impacted the participants in terms of reducing physical distress and improving daily functioning, positive affect, spirituality, and work and social adjustment compared with their counterparts in the comparison group. For example, the IBMSGI sessions offered benefits including (1) using the pain session to encourage positive views of suffering and seeing depression as an opportunity for growth and (2) using Buddhism's "no pain, no gain" concept to encourage participants to accept pain as a source of gain. All these concepts may have facilitated the occurrence of positive features such as hope, confidence, and spiritual well-being.

The findings of this study have several implications for nursing practice, administration, and education. In the past few years, the field of psychiatric nursing has taken steps to expand beyond the conventional practice in implementing complementary and alternative therapies. In this connection, there is a need for nurse administrators to develop policies and standards of care with regard to complementary and alternative therapies in India.

Nurses need to be empowered to implement mind–body interventions, such as meditation, imagery, therapeutic touch, and humor, to reduce stress and promote self-control and positive well-being for their patients. The nurse should act as a facilitator in the healing process by using the holistic approach to care. Consistent with conventional nursing practice, nurses must be competent in using complementary and alternative therapies to provide holistic care for patients with depression. Consideration should be given to the education of nursing students and registered nurses about holistic nursing management, and continuing nursing education should offer nurses training and education on holistic nursing practices, both to improve knowledge on holistic practices as well as to enable them to impart this knowledge to patients.

However, this study is a preliminary effort. Given the small sample size, there is a need to confirm the findings with an optimum sample size using a randomized controlled trial. Outcome measures relied on participant self-reporting. Including objective measures in the future will strengthen study validity. In addition, the intervention was administered at a district hospital setting and targeted people who were actively seeking treatment. Findings thus may not be generalizable to those with chronic depression. The IBMSGI intervention involved a group-based approach, whereas the standard therapy was administered on an individual basis. Therefore, a group effect may have influenced the outcome. Despite these limitations, this study is the first known to show the effectiveness of IBMSGI in improving outcomes among Indian patients diagnosed with depression.

Conclusion

This study showed the effectiveness of IBMSGI in reducing depressive symptoms and improving psychological and spiritual well-being in patients diagnosed with depression. The effectiveness of such multimodal interventions is promising as an additional method to help group participants alleviate depressive symptoms. Further long-term evaluation of the psychosocial status of these patients is necessary to assess

the long-term and maintenance effects of the intervention. Complementary therapies such as IBMSGI may be incorporated into treatment plans alongside of the standard medical treatment.

Acknowledgments

We thank all patients who participated in the study and the Psychiatric Department team at the SNR District Hospital. We would also like to thank Hang Yee and Ted for manuscript review and statistical support.

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