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Perception of Illness and Life Satisfaction Following a Week of Yoga Therapy in Patients with Chronic Diseases

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Abstract

Background: The present study aimed to determine (i) the effect of a residential yoga therapy program on the perception of illness and life satisfaction in patients with non-communicable diseases and (ii) the relationship between perception of illness and life satisfaction in the study population.

***Methods*:** The patients were recruited from a yoga therapy center. All the patients were assessed for life satisfaction and perception of illness at the baseline and after one week of yoga therapy. Data obtained at baseline after 7 days was compared with paired t-test. Association between perception of illness and life satisfaction were determined using Pearson correlation.

***Results*:** There was significant negative relations between of life satisfaction and perception of illness, the both perception of illness and life satisfaction improve after 7 days of yoga therapy.

***Conclusion*:** Yoga therapy may be useful in improving life satisfaction and to perception of illness. This will facilitate a positive outcome and the patients tends to get maximum benefit of the therapy.

Keywords: Perception of Illness; Life Satis faction; Yoga Therapy; Chronic Diseases.

INTRODUCTION

According to Leventhal's Self-regulation theory every individual actively solves problems by modulation of thoughts, behaviors and emotions especially when facing illness.[1] Positive attitudes towards illness are associated with positive treatment outcomes and improved health related quality of life.[2] Hence interventions which help patients view their illness positively are relevant to treatment.

Yoga is a comprehensive lifestyle intervention which integrates an individual's physical, mental and spiritual dimensions of functioning to improve all aspects of health while leading to a positive mind state conducive to rapid healing.[3] Yoga practice was found to enhance feelings of life satisfaction among other benefits seen in nurses practicing yoga during the COVID-19 pandemic.[4] In a WHO definition, the key dimensions of well being include health, happiness and life satisfaction, key dimensions of well-being".[5] Conversely low life satisfaction is

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associated with greater morbidity and mortality.[6]

With this background the present study was planned to determine (i) the effect of a residential yoga therapy program on the perception of illness and life satisfaction in patients with non-communicable diseases and (ii) the relationship between perception of illness and life satisfaction in the study population.

MATERIAL AND METHODS

Participants

Seventy-five patients of both sexes aged between 20 and 70 years (average age ± S.D.; 44.37±10.36 years) were recruited from a yoga therapy centre located in north India. The power of the test was 0.95 with effect size (0.45) calculated from change in perception of illness after one week of yoga therapy using G power software version 3.1.9.7.[7] Patients with non-communicable diseases who agreed to comply with the requirements of the study were included in the study. Patients with mental health disorders based on a semi - structured interview were to be excluded (there were none). In the present study the maximum number of patients belongs to diseases of musculoskeletal system (42.67%), followed by diseases of genitourinary system (14.67%), diseases of nervous system (8.00%), and least number of patients belongs to certain infectious or parasitic diseases, neoplasm and disease of respiratory system (1.33%). Although the present study has few numbers of patients in different disease categories was well supported by an earlier study in which the numbers are comparable in various disease categories as per international classification of diseases.[8] Participation in the study was voluntary with no incentive to the patients. The signed informed consent was obtained from each patient prior to their enrolment. The study was approved from the ethics committee of the institution (approval number: YRD-019-002).

Study Design

The present single group pre-post trial with assessments at the beginning and end of a seven-day yoga therapy was carried out between April and December, 2019.

Yoga Therapy

Yoga therapy was administered to the patients according to their health conditions by an experienced yoga therapist having a minimum five years of experience in yoga therapy. The yoga therapy included yoga postures, breathing techniques, guided relaxation, meditation and philosophy of the principles and practice of yoga. The yoga therapy classes were conducted twice per day for seven days between 5:30 am-7:30 am and 5:00 pm to 7:00 pm.

Assessments

Brief Illness Perception Questionnaire (BIPQ)

The BIPQ questionnaire used an 11-point response scale that varies between 0–10 and assessed cognitive POI, emotional POI, comprehension POI, and causal perception of illness. Out of a total of nine items, five assessed patients' cognitive perception of illness [i.e., consequences (item 1), timeline (item 2), personal control (item 3), treatment control (item 4), and identity (item 5)]. Also, other items assessed: emotional perception of illness [i.e., concern (item 6) and emotions (item 8)] and comprehension about the illness (item 7). Assessment of the perceived causes was based on an open-ended response question, which asked patients to list the three most important causes of their illness (item 9). The BIPQ questionnaire has been standardized for use in an Indian population and included test-retest reliability (r) ranging from 0.42–0.75, and predictive validity (r) ranging from 0.30–0.43 for an Indian population.[9,10] The scoring of perception of illness used a weighted score of 0–10. A standard method was used to score the data.[9] The overall score represents the degree to which the illness is perceived as threatening. A higher score indicated that the patient viewed their illness as particularly severe.

Life Satisfaction Questionnaire-9 (LISAT-9)

The LISAT-9 is a nine-item self-administered questionnaire including one question about general life satisfaction and eight questions about life satisfaction for the specific domains of 'self-care ability', 'leisure situation', 'vocational situation' (including home-making), 'financial situation', 'sex life', 'relationship with partner', 'family life' and 'contacts with friends and acquaintances. The scale had good validity and test-retest reliability ranging from 0.41 to 0.64.[11] The LISAT-9 used a six-point Likert scales (1 = very dissatisfied, 6 = very satisfied) and score obtained by standard method.[11]

Statistical Analysis

The data were analyzed using SPSS version 24.0. Pearson correlation test was carried out to determine the relationship exists between perception of illness and life satisfaction. Paired t-test was performed to determine the effect of yoga therapy on perception of illness and life satisfaction.

RESULTS

All seventy-five patients completed the study. The present study, with a sample of 75, an alpha level of 0.05, and an effect size of 0.50, had power = 1.000. The baseline characteristics of the participants are given in Table 1.

Table 1: Baseline characteristics of the patients with chronic diseases.

S. No	Participant	Baseline Characteristics (n=75)
1	Average age in years (Mean ± SD)	
1.1	Group	44.37 ± 10.36
2	Gender	
2.1	Male: Female	29:46
	Average age in years (Male; Female)	46.38 ± 10.89; 43.11 ± 9.92

Table 2: Correlation of Life satisfaction and brief perception of illness and its sub-scales

Sl. No	Brief Perception of illness (BPOI)	Pearson correlation coefficient/ States	BPOI		Cognitive POI		Emotional POI		Comprehe-nsion	
			Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	Total LIS9Q	r-value	-.363*	-.334*	-.336*	-.350*	-.247*	-0.20	-0.09	-0.09

Perception of Illness

There was a significant decrease following seven days of the yoga therapy in (i) overall perception of illness scores, (ii) cognitive perception of illness scores and (iii) emotional perception of illness scores after seven days of yoga therapy ($p<0.05$ in all cases; paired sample t-test).

Life Satisfaction

A significant increase in scores of the overall life satisfaction questionnaire was found following seven days of the yoga therapy.

Relation between Perception of Illness and Life Satisfaction

Pearson correlation test showed a significant negative relationship ($p<0.05$; in all cases) of overall life satisfaction with (i) overall perception of illness ($r = -.363$), (ii) cognitive perception of illness ($r = -.336$) and (iii) emotional perception of illness ($r = -.247$).

DISCUSSION

In the present study, one week of yoga therapy improved cognitive and emotional aspects of illness perception and life satisfaction in patients with chronic non-communicable diseases.

The way a patient views their condition can affect how well they cope, follow treatment instructions, and recover functionally.[12] A review of thirty-one studies reported an association between negative perception of illness and poor physical and mental health outcomes in patients with heart failure, chronic obstructive pulmonary disease, myocardial infarction, coronary artery by pass graft, and total hip and/or knee arthroplasty.[12] Hence improved cognitive perception of illness after yoga therapy seen here can be expected to improve treatment outcomes, given that cognitive perception of illness includes various aspects of how the patient views their illness, including the label by which a person describes their illness, consequences of the illness, cause of the illness, time the illness will last and beliefs about recovery.[9] The emotional aspect of illness perception also improved following yoga; since emotional perception of illness includes negative emotions such as fear and distress.[9], this improvement can also be expected to positively impact the treatment outcome.

With a more positive way of perceiving their illness it is not surprising that the patients in the present study had increased levels of life satisfaction. Life satisfaction is considered of importance to health and functioning, with several prominent inter governmental organizations, including the World Health Organization, and the United Nations suggesting life satisfaction as index of well being when making important policy decisions.[13] Life satisfaction refers to a person's evaluation of their life, which is influenced genetics, life events and social factors.[14] High life satisfaction is associated with lower risk of chronic disease, reduced mortality and overall better health outcomes.[15] Hence the improved life satisfaction seen in the present study after a week of yoga therapy can be expected to improve the health status of the patients. The effect can be expected to further improve the way patients view their illness and in turn their levels of life satisfaction.

In summary, the patients in the present study showed an improvement in cognitive and

emotional aspects of illness perception and an increase in life satisfaction in patients with chronic non-communicable disease after a week of yoga therapy.

The findings are limited by the absence of a control group and of long-term follow up.

CONCLUSION

The present study suggests the importance of Yoga therapy may be useful in improving life satisfaction and to perception of illness. This will facilitate a positive outcome and the patients tends to get maximum benefit of the therapy.

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