

Effectiveness of Yoga in Patients with Functional Psychotic Disorder

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ABSTRACT

Background: The application of yoga as a therapeutic intervention, which began early in the twentieth century, takes advantage of the various psychophysiological benefits of the component practices. The physical exercises (asanas) may increase patient's physical flexibility, coordination, and strength, while the breathing practices and meditation may calm and focus the mind to develop greater awareness and diminish anxiety, and thus result in higher quality of life. The present study was conducted to evaluate the effectiveness of Yoga in patients with functional psychotic disorder. **Materials & Methods:** 100 patients with a diagnosis of functional non-affective psychosis were involved in the study. They were divided into 2 groups. Group I (Yoga) – It included 50 patients. Group II (Exercise)- It included 50 patients. The severity of clinical state was measured on Positive and Negative Syndrome Scale (PANSS), Hamilton Depression Rating Scale (HDRS) and Clinical Global Impression Severity (CGIS). Assessment was performed at the time of starting yoga/exercise as well as 2 and 6 weeks thereafter. At these 3 time points, the extra pyramidal (Parkinsonian) side-effects too were measured using Simpson Angus Scale (SAS). **Results:** Group I had 25 males and 25 females. Similarly group II had 25 males and 25 females. The difference was non significant ($P = 1$). College literate in group I was 15, in group II was 9. 22 patients and 23 patients were on second generation antipsychotics in group I and group II respectively. Illness duration was 20.4 years and 24.2 years in group I and group II respectively. Positive syndrome score was 19.2 and 19.1 in group I and group II respectively. Negative syndrome score was 16.8 and 17.1 in group I and group II respectively. General psychopathology score was 25.4 and 26.2 in group I and group II respectively. Total HDRS score was 61.8 and 61.2 in group I and group II respectively. Total HDRS Score was 13.8 and 14.2 in group I and group II respectively. Total SAS score was 3.2 and 3.4 years in group I and group II respectively. The difference was non significant ($P > 0.05$). CGI illness severity score in group I, at baseline, 2weeks and 6 weeks was 6.04, 4.65 and 3.12 respectively. Similarly in group II, it was 6.18, 5.14 and 3.86 at baseline, 2weeks and 6 weeks respectively. The difference was significant ($P < 0.05$). Positive syndrome score in group I, at baseline, 2 weeks and 6 weeks was 18.98, 13.84 and 7.8 respectively. Similarly in group II, it was 18.5, 14.82 and

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Effectiveness of Yoga in Patients with Functional Psychotic Disorder

9.22 at baseline, 2 weeks and 6 weeks respectively. The difference was significant ($P < 0.05$). Negative syndrome score was significantly higher at 6 weeks in group II as compared to group I ($P < 0.05$). General Psychopathology score was statistically significant at 2 weeks ($P < 0.05$). Total PANSS score was statistically significant at 2 weeks ($P < 0.05$). There was statistical significant difference ($P < 0.05$) in HDRSS score in both groups. At 2 weeks the total SAS score was statistically significant among both groups ($P < 0.05$). **Conclusion:** Yoga may be beneficial in patients with psychotic disorder. This has additional advantage along with standard pharmacological management.

Keywords: *Psychotic, Psychophysiological, Yoga*

Mental illnesses are a significant global health concern, despite improvements in treatment modalities and access to care. WHO estimated that psychiatric disorders are the leading costs of disability adjusted life years world-wide, with recent figures indicating that 37% of the loss of healthy years from non-communicable diseases is from mental illnesses.

Depression was found to result in the greatest decrement in health, compared to asthma, angina, arthritis, and diabetes. Prevalence data for anxiety disorders, suggests that the lifetime prevalence and 12month prevalence for any anxiety disorder are over 15 and 10%, respectively, with higher prevalence in developed countries. Likewise, schizophrenia has been associated with significantly higher health care costs, unemployment rate, and morbidity. Sleep complaints are often associated with a variety of psychiatric disorders. About 9–21% of the population has been estimated to have insomnia accompanied by serious day-time consequences which include chronic fatigue, irritability, low mood, memory impairments, and interpersonal difficulties.

The application of yoga as a therapeutic intervention, which began early in the twentieth century, takes advantage of the various psychophysiological benefits of the component practices. The physical exercises (asanas) may increase patient's physical flexibility, coordination, and strength, while the breathing practices and meditation may calm and focus the mind to develop greater awareness and diminish anxiety, and thus result in higher quality of life. Other beneficial effects might involve a reduction of distress, blood pressure, and improvements in resilience, mood, and metabolic regulation.

Yoga is one among these complementary therapies that has received attention in recent years. Randomized trials in medication-stabilized patients have demonstrated the efficacy of yoga in treating schizophrenia, particularly negative symptoms. Yoga also benefits social cognition in schizophrenia. However, the efficacy of yoga as a complementary intervention in acutely ill-patients during in-patient care has not been examined. One of the reasons may be apprehensions about the feasibility of teaching yoga practices to patients in the acute stage of psychosis. On the

Effectiveness of Yoga in Patients with Functional Psychotic Disorder

positive side, patients being admitted in the hospital might overcome a potential barrier for seeking yoga therapy.

The present study was conducted to evaluate the effectiveness of Yoga in patients with functional psychotic disorder.

MATERIALS & METHODS

The study was conducted in the department of psychiatry in year 2015. Patients with a diagnosis of functional non-affective psychosis were involved in the study. They were informed regarding the study and a written consent was taken.

Patients' demographic data such as name, age, gender, total duration of illness, marital status, education and current medication (FGA or SGA). They were divided into 2 groups. Group I (Yoga) – It included 50 patients. Group II (Exercise)- It included 50 patients. The severity of clinical state was measured on Positive and Negative Syndrome Scale (PANSS), Hamilton Depression Rating Scale (HDRS) and Clinical Global Impression Severity (CGIS). Assessment was performed at the time of starting yoga/exercise as well as 2 and 6 weeks thereafter. At these 3 time points, the extra pyramidal (Parkinsonian) side-effects too were measured using Simpson Angus Scale (SAS).

The treating consultant psychiatrist made a clinical Diagnostic and Statistical Manual of Mental Disorders. Patients received antipsychotic medication at therapeutic doses with anti-parkinsonian drugs as needed. The drug management was under the control of their treating psychiatrist, unrelated to this yoga trial. In the 2 weeks of in-patient study, the doses were changed by the treating psychiatrist as needed and therefore only the nature of drugs was recorded. Patients were randomized equally to receive yoga or exercise therapy sessions daily over 2 weeks in the wards (at least 10 sessions). The procedures for these two interventions were adopted from an earlier study. A formally trained yoga therapist provided both these sessions for corresponding patients in batches not exceeding five. Each session lasted 1 h. After 2 weeks, patients were advised to practice the same for the next 4 weeks. Results were tabulated and subjected for correct inferences. P value < 0.05 was considered significant.

RESULTS

Table I shows that group I had 25 males and 25 females. Similarly group II had 25 males and 25 females. The difference was non significant (P – 1). Table II shows college literate in group I was 15, in group II was 9. 22 patients and 23 patients were on second generation antipsychotics in group I and group II respectively. Illness duration was 20.4 years and 24.2 years in group I and group II respectively. Positive syndrome score was 19.2 and 19.1 in group I and group II respectively. Negative syndrome score was 16.8 and 17.1 in group I and group II respectively. General psychopathology score was 25.4 and 26.2 in group I and group II respectively. Total

Effectiveness of Yoga in Patients with Functional Psychotic Disorder

Table I Distribution of patients

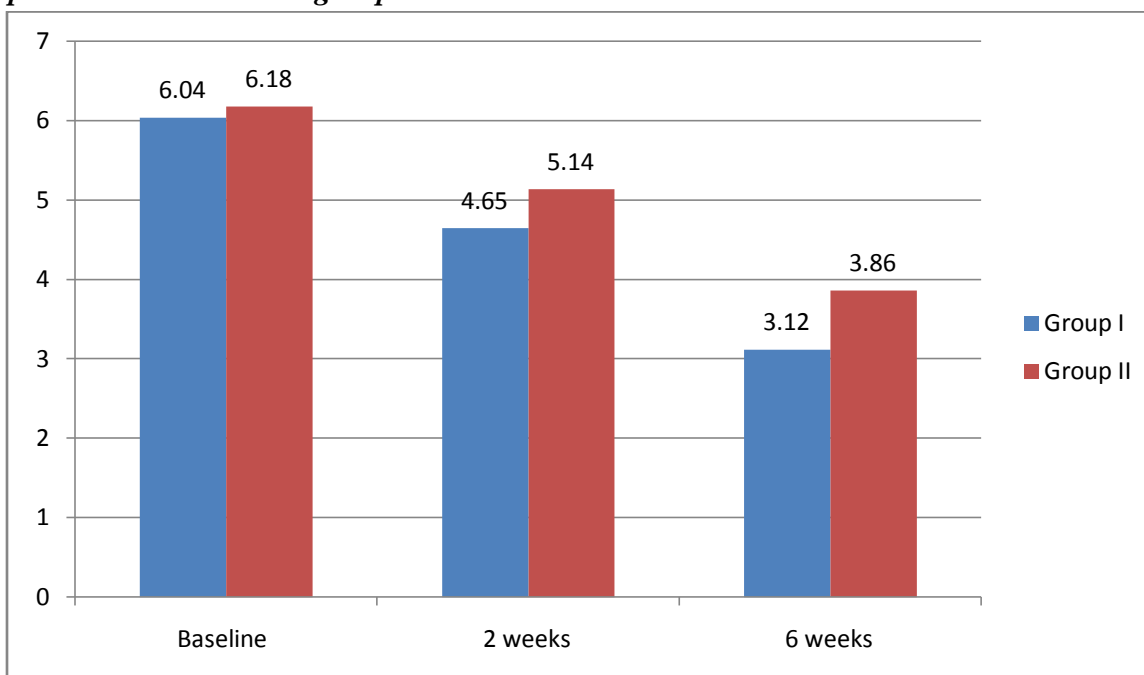
Total- 100				
Group I		Group II		P Value
Males	Females	Males	Females	1
25	25	25	25	

Table II Baseline demographic and clinical characteristics

Variables	Group I	Group II	P value
College literate	15	9	0.4
On second generation antipsychotics	22	23	1
Illness duration (years)	20.4	24.2	0.1
CGI illness score	6.2	6.5	0.2
Positive syndrome score	19.2	19.1	1
Negative syndrome score	16.8	17.1	0.3
General psychopathology score	25.4	26.2	0.1
Total PANSS score	61.8	61.2	0.5
Total HDRS score	13.8	14.2	0.2
Total SAS score	3.2	3.4	1

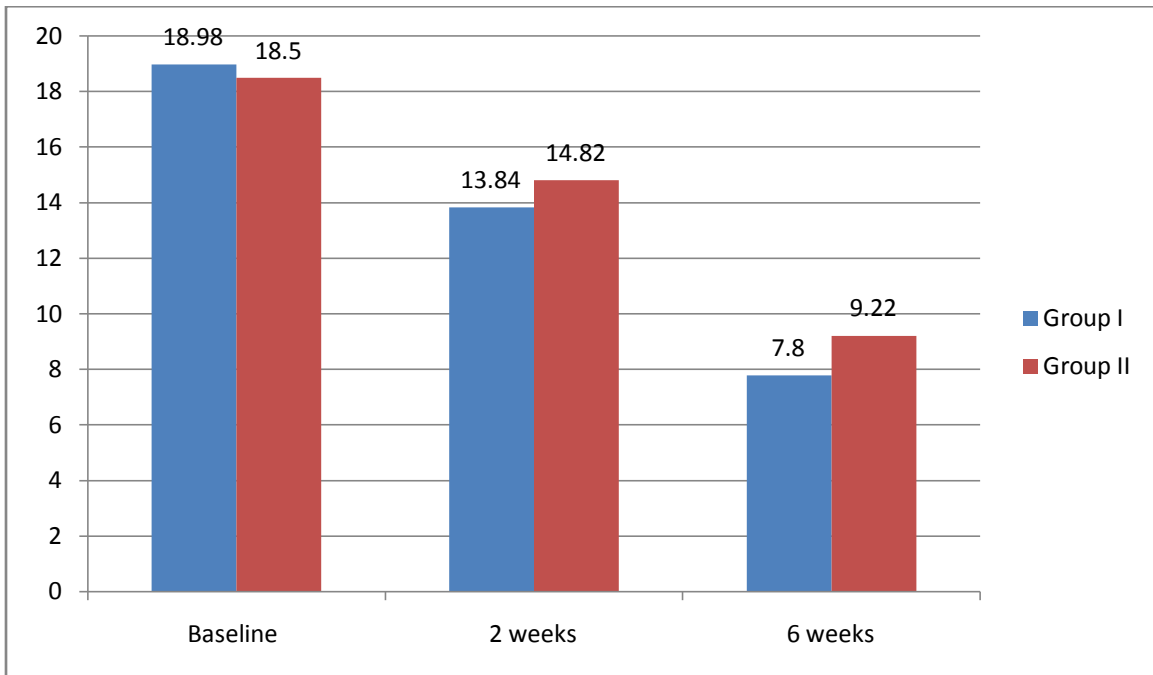
HDRS score was 61.8 and 61.2 in group I and group II respectively. Total HDRS Score was 13.8 and 14.2 in group I and group II respectively. Total SAS score was 3.2 and 3.4 years in group I and group II respectively. The difference was non significant ($P > 0.05$).

Graph I CGI score in both groups

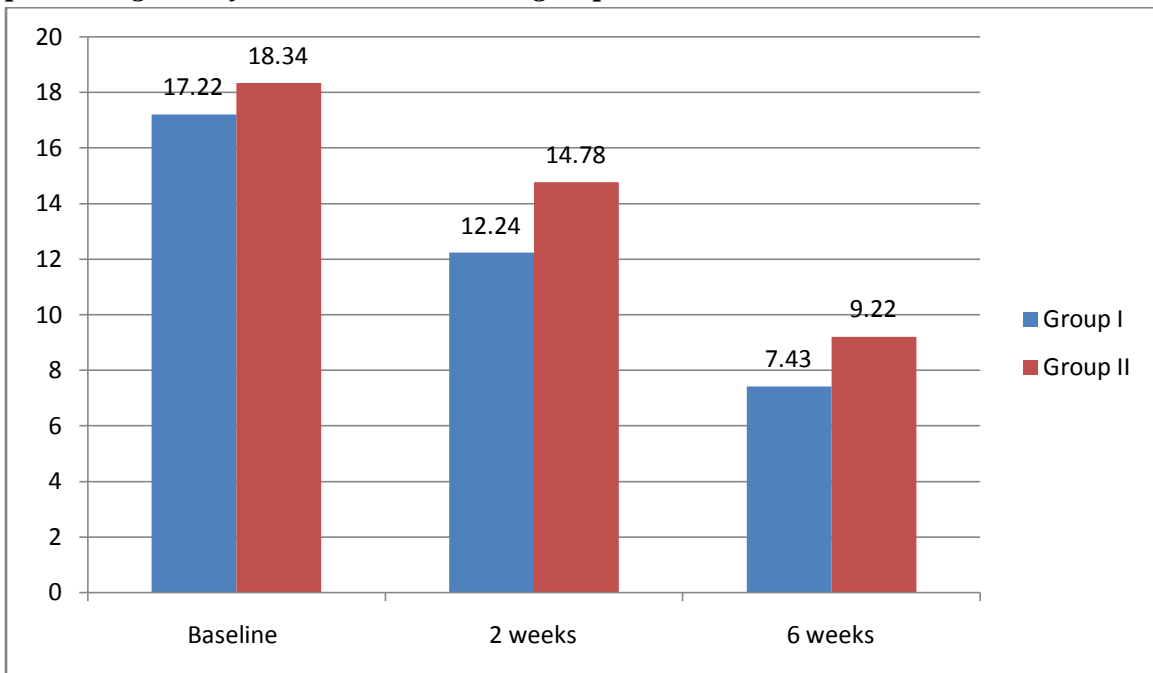


Effectiveness of Yoga in Patients with Functional Psychotic Disorder

Graph II Positive syndrome score in both groups

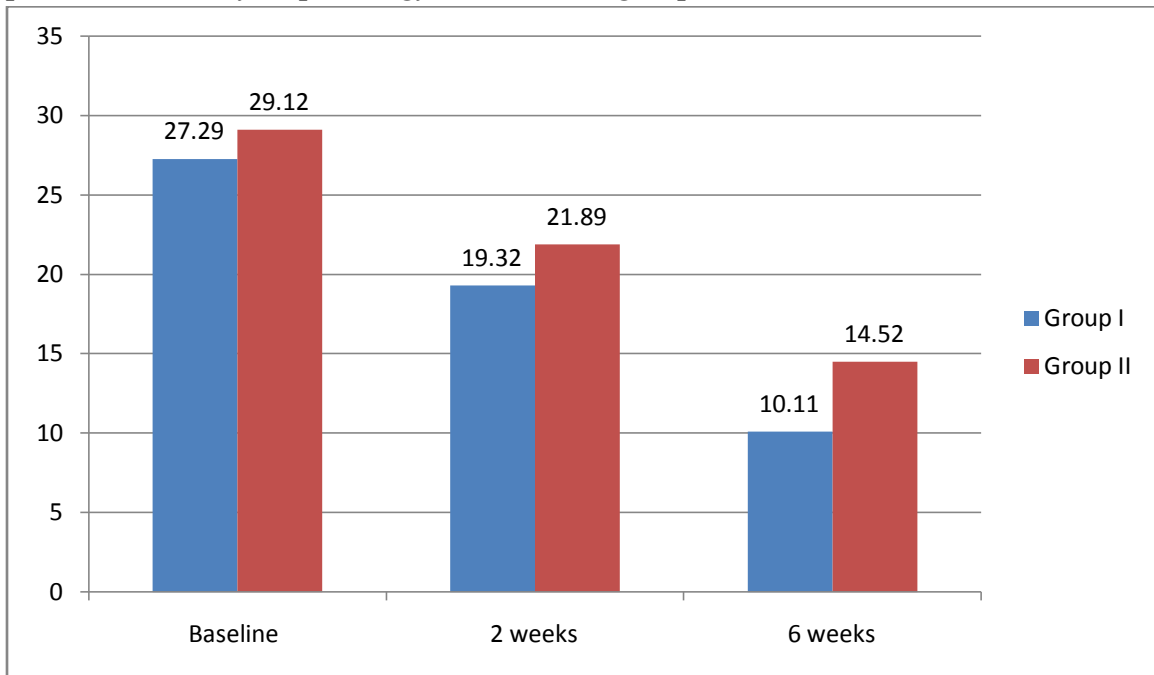


Graph III Negative syndrome score in both groups

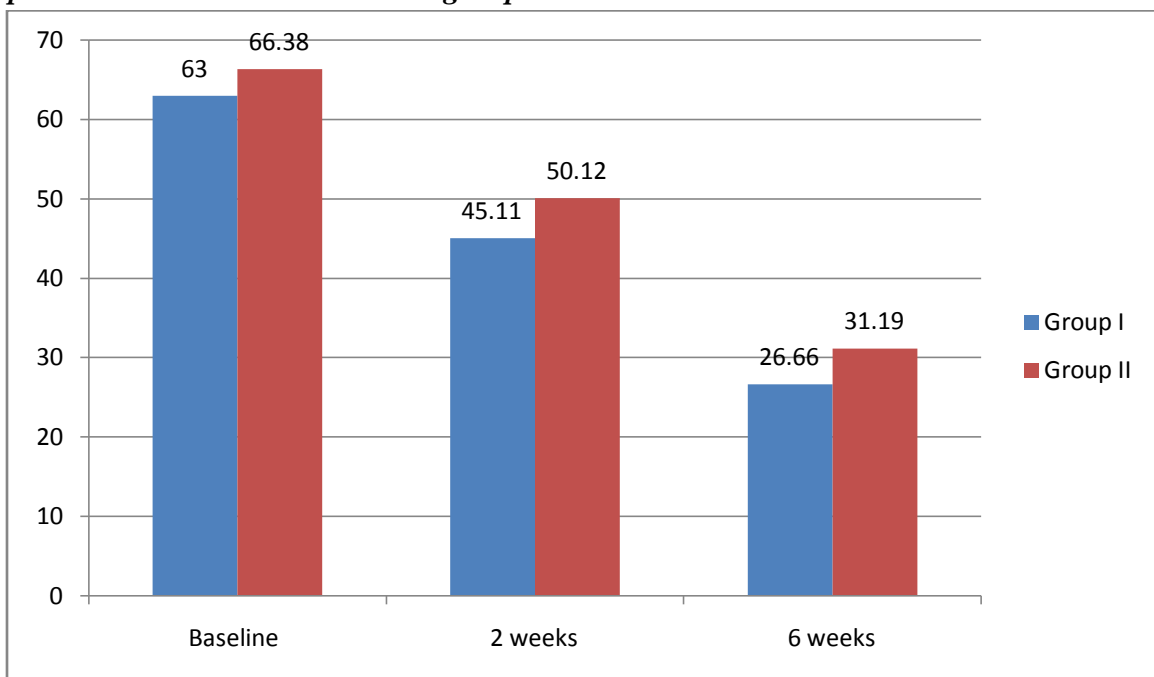


Effectiveness of Yoga in Patients with Functional Psychotic Disorder

Graph IV General Psychopathology score in both groups

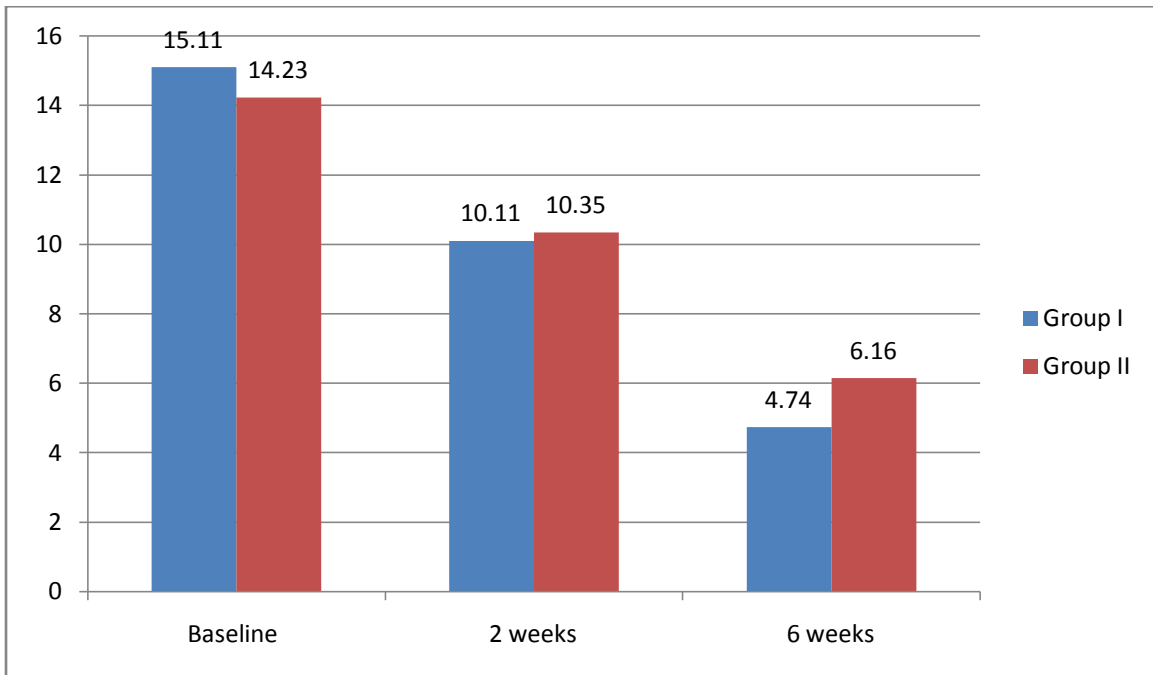


Graph V Total PANSS score in both groups

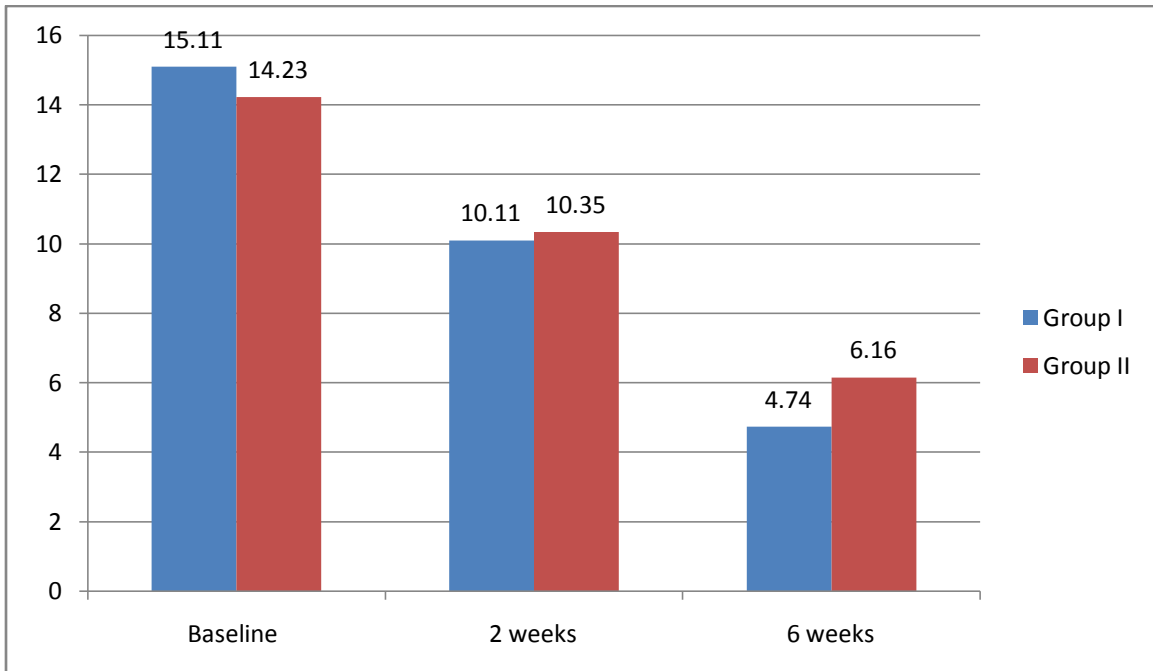


Effectiveness of Yoga in Patients with Functional Psychotic Disorder

Graph VI Total HDRSS score in both groups



Graph VII Total SAS score in both groups



Effectiveness of Yoga in Patients with Functional Psychotic Disorder

Graph I shows that CGI illness severity score in group I, at baseline, 2 weeks and 6 weeks was 6.04, 4.65 and 3.12 respectively. Similarly in group II, it was 6.18, 5.14 and 3.86 at baseline, 2 weeks and 6 weeks respectively. The difference was significant ($P < 0.05$). Graph II shows that positive syndrome score in group I, at baseline, 2 weeks and 6 weeks was 18.98, 13.84 and 7.8 respectively. Similarly in group II, it was 18.5, 14.82 and 9.22 at baseline, 2 weeks and 6 weeks respectively. The difference was significant ($P < 0.05$). Graph III shows that negative syndrome score was significantly higher at 6 weeks in group II as compared to group I ($P < 0.05$). Graph IV shows that General Psychopathology score was statistically significant at 2 weeks ($P < 0.05$). Graph V shows that total PANSS score was statistically significant at 2 weeks ($P < 0.05$).

Graph VI shows that there was statistical significant difference ($P < 0.05$) in HDRSS score in both groups. Graph VII shows that at 2 weeks the total SAS score was statistically significant among both groups ($P < 0.05$).

DISCUSSION

Research studies on yoga as a therapeutic intervention have been conducted only over the past 4 decades and are relatively few in number. Typically, individual studies on yoga for various conditions are small, poor-quality trials with multiple instances for bias. In addition, there is substantial heterogeneity in the populations studied, yoga interventions, duration and frequency of yoga practice, comparison groups, and outcome measures for many conditions. Disentangling the effects of this heterogeneity to better understand the value of yoga interventions under various circumstances is challenging. The present study was conducted to evaluate the effectiveness of Yoga in patients with functional psychotic disorder.

They were divided into 2 groups. Group I (Yoga) – It included 50 patients. Group II (Exercise) - It included 50 patients. The severity of clinical state was measured on Positive and Negative Syndrome Scale (PANSS), Hamilton Depression Rating Scale (HDRS) and Clinical Global Impression Severity (CGIS). Assessment was performed at the time of starting yoga/exercise as well as 2 and 6 weeks thereafter. At these 3 time points, the extra pyramidal (Parkinsonian) side-effects too were measured using Simpson Angus Scale (SAS).

We found that there was slight difference in illness duration, positive syndrome score and negative syndrome score in both the groups. Similarly general psychopathology score, total HDRS score, total SAS score showed slight difference among both groups. This is similar to Behere RV et al.

We also compared all the scores at baseline, 2 weeks and at 6 weeks. CGI illness severity score at baseline, 2 weeks and 6 weeks was significant. This is in accordance to Baspure S et al.

Effectiveness of Yoga in Patients with Functional Psychotic Disorder

The positive syndrome score in group I and group II, at baseline, 2 weeks and 6 weeks was statistically significant. Similar results were seen in study of Sheehan DV et al.

We found that negative syndrome score was significantly higher at 6 weeks in group II as compared to group I. Similarly general psychopathology score was statistical significant at 2 weeks. Total PANSS score was statistical significant at 2 weeks. This is similar to results of study of Kay SR et al. Similarly, we found that there was statistical significant difference in HDRSS score in both groups. At 2 weeks the total SAS score was statistical significant among both groups. Similar results were seen in study of Hamilton M et al.

CONCLUSION

Yoga may be beneficial in patients with psychotic disorder. This has additional advantage along with standard pharmacological management.

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Conflict of Interests: The author declared no conflict of interests.

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Effectiveness of Yoga in Patients with Functional Psychotic Disorder

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