Effectiveness of Group Psychoeducational Intervention on Drug Compliance Among Patients with Affective Disorders

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Abstract

Affective disorders are long-term conditions characterized by poor understanding of disease, poor adherence to medications, high rates of relapse, significant general impairment, and long-term burdens of psychosocial dysfunction. Although complex regimens are available to treat affective disorders, over 50% of those with affective disorders fail to take their medications as directed. Therefore, improving medication adherence is an essential and "promising management component" in bipolar disorder as an addition to pharmacotherapy. Psychoeducation is a form of treatment designed to enhance medication adherence. Psychoeducation dates back to the so-called Mental Hygiene Movement of the early 1900s and the so-called Deinstitutionalisation Movement of the 1950's and 1960's. Over the past 30 years, studies on the efficacy of psychoeducation have indicated that it will help with medication adherence, early detection of symptoms, reduce relapse and hospitalization, and improve knowledge of illness. The purpose of this study is to evaluate the effectiveness of Group Psychoeducational Intervention on Drug Compliance among Affective Disorders in conjunction with Psychopharmacotherapy in 120 patients who met inclusion criteria and were randomly assigned to control (n = 60) or experimental (n = 60). Pre-test was administered to both groups (experimental and control) using HDAI 30 items scale, along with socio demographic variables. Experimental group received psychoeducational treatment 7 sessions group twice a week in 3-month duration. Control group was given routine care. Post-test was administered immediately, 03-month, 06 month, and 09 month after intervention. For the purpose of comparing pre- and post-test data, "RM ANOVA (for one factor repetition)" was used. For post-test data, the P-value for the Bonferroni 't' test (Post-hoc Multiple Comparisons) was set at 0.05. We discovered a substantial difference between the experimental and control groups. Significant variation between the test group (baseline versus immediate versus 3 months versus 6 months versus 9 months). Significant difference in group X test interaction.

Conclusions: According to the findings of the study, group psychoeducational interventions reduce the rate of patient noncompliance in those with affective disorders.

Keywords: Group Psychoeducation, Drug Compliance, Affective Disorders.

Introduction

Affective disorders (AD) are a chronic and long-lasting mental health condition that can have a devastating impact on the lives of individuals and their families. They can cause financial and social costs both directly (in the form of hospitalizations and increased health-related costs) and indirectly (absent from work and lost productivity).[1] "A recent study in 11 countries found that the lifetime prevalence was 0.6% for BPAD-I; BPAD-II was 0.4%; subthreshold bipolar was 1.4%; and bipolar spectrum was 2.4%".[2] Worldwide, affective disorders are estimated to affect between 0.3% and 1.2% of the population. In 2017, there were an estimated 46 million people with affective disorders worldwide, with 52% being female and 48% being male. There was a treatment gap for depressive disorder of 85.2% and BPAD of 70.4%. Median treatment duration from the time of symptoms was 11

months for BPAD and 2.5 months for depressive disorder. In most cases, the most common place of care was a government facility.[3]

Adherence can be broken down into two parts: compliance (implementing medication instructions) and persistence (presently taking the medication throughout the treatment course).[4,5] Adherence has been linked to a variety of factors, such as medication side effects, complicated medication regimen, long-term treatment, negative patient attitudes toward medication, inadequate information about illness, poor insight, loosening of job, social isolation, and substance abuse.[6] As a result, patients with affective disorders suffer from persistent symptoms, cognitive impairment, poor quality of life, recurrent episodes, frequent hospitalizations, financial dependency, poor social functioning, and comorbid psychiatric disorders.[7] When patients are expected to follow a rigorous pharmaceutical regimen to manage their illness, adhering to treatment for psychiatric disorders is frequently made more difficult.[8] The prescribed treatment plan is not followed by about 21 to 50 percent of patients.[9] In fact, more than one-third of patients stopped their treatment before completing it twice or more. Nine out of every ten patients have thought about stopping the medication at some time in their life. In addition, at least one in three people with affective disorders don't take more than 70 percent of their prescribed medications, leading to treatment failure and poor prognosis.[10,11]

The effects of the disorder and the subsequent relapses for both the individual and family members suggest that multiple therapeutic efforts must be made in addition to psychopharmacotherapy.[12] Therefore, nonpharmacological approaches such as individual psychoeducation, family oriented psychoeducation, group psychoeducation, and cognitive -behavioural therapy, are effective for treating affective disorder in addition to pharmacotherapy to enhance drug compliance.[13] Psychoeducation is a crucial component of a disorder management programme, according to Colom et al., more so than any other type of psychotherapy.[14] Psychoeducation can be given alone or in conjunction with methods from other evidence-based interventions. In actuality, psychoeducation is a component of all evidence-based psychotherapies to some degree. This is a fundamental and consistent therapeutic component seen in all treatments for affective disorders. The purpose of psychoeducation is to inform the patient about the problem, its therapy, and the circumstance that is stressing them out. When people are informed about their disease, they are more likely to take an active role in their own self-management and assist prevent recurrence. Along with the advantages of other psychotherapies, this usually increases their sense of self-efficacy.[15,16, 17 & 18]

Materials and Methods

A "Quasi-experimental study" was conducted at tertiary care centre South India. 120 Patients with Affective Disorders from the outpatient department were selected and enrolled into the control ("n = 60") and the experimental ("n = 60"). The study was conducted after obtaining Ethical clearance (Reg No ECR / 1442/Inst /KA /2020). Patients were informed about the purpose of the Study and informed Consent was obtained after Assurance of Confidence. Pre-test: Patients in both groups were administered a 30 item HDAI (Hogan Drug Attitude) scale along with Socio Demographic Variables. Patients in the experimental group were administered 7 sessions group psychotherapy twice a week over 4 weeks for 3 months duration for 1 hour each session. Patients in the control group were provided with routine care. Post-test was conducted immediately, at 03 months, at 06 months, and at 09 months after intervention. The demographic profiles of control and experimental were analysed by $\chi 2$ test for homogeneity. As a result of the data being collected at different times, the means were compared using a two-way repeated measures analysis of variance (RM ANOVA) for one factor repetition and the Bonferroni 't' test for post-hoc multiple comparisons. Statistical significance was defined as a probability of 0.05 or less. For statistical analysis and graph charting, Systat Software Inc.'s SigmaPlot 14.5 version, located in San Jose, California, was utilised.

Results

"Table 1 shows the mean, standard deviation, and standard error of HDAI". The mean HDAI score of control Baseline, Immediate, 3 months, 6 months and 9 months are -24.10, -14.70, -16.78, -17.20, and -16.80, respectively. The mean HDAI score of experimental Baseline, Immediate, 3 months, 6 months and 9 months are -23.25, 7.30, 1.48, -0.60, and -1.68, respectively. "Two-way RM ANOVA showed significant difference among

the groups (control and experimental) (P < 0.001). Significant difference was observed among the test (baseline, immediate, 3 months, 6 months, and 9 months) (P < 0.001). Significant difference was observed in the group X test interactions (P < 0.001)".

"Table 2 shows within group comparison of control baseline/immediate, baseline/3 months, baseline/6 months, baseline/9 months, showed statistical significance (P < 0.001); control immediate/3 months, immediate/6 months, immediate/9 months, 3 months/6 months, 3 months/9 months, and 6 months/9 months, showed no significant statistical difference (P = 1.000). Within group comparison of experimental baseline/immediate, baseline/3 months, baseline/6 months, baseline/9 months, immediate/3 months, immediate/6 months, immediate/9 months, showed statistical significance (P < 0.001); 3 months/6 months, 3 months/9 months, and 6 months/9 months, showed no significant statistical difference (P = 1.000), (P = 0.403), and (P = 1.000)", respectively

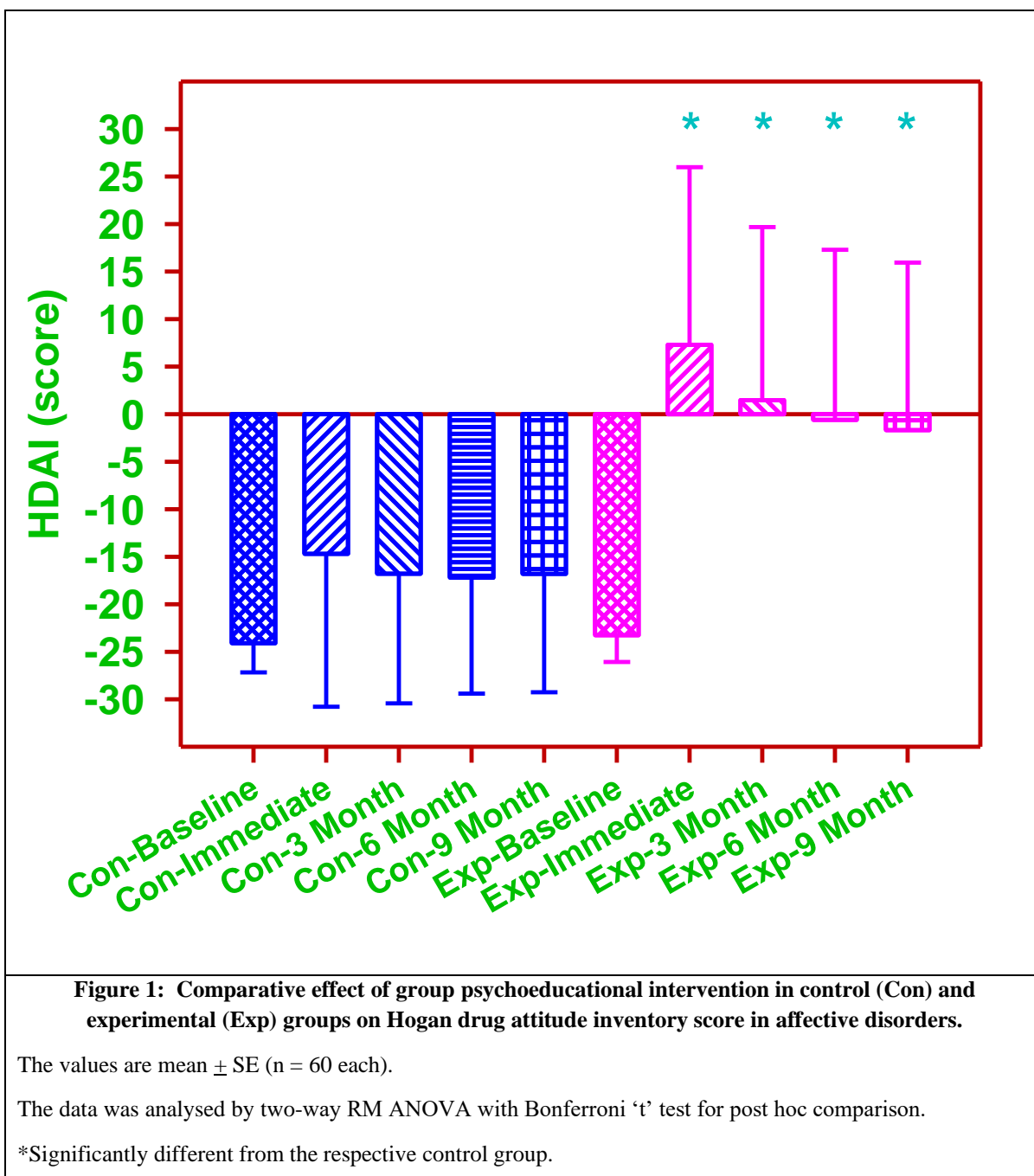**Table 1**

S.No	Group	Test	Mean	SD	SE	Statistics
		Comparative effect of group psychoeducational intervention on Hogan drug attitude inventory score in affective disorders				
1	Control	Baseline	-24.1	3.06	0.395	t=6.496; P<0.001
		Immediate	-14.7	16.08	2.08	
		3 months	-16.78	13.64	1.76	
		6 months	-17.2	12.2	1.58	
		9 months	-16.8	12.45	1.61	
2	Experimental	Baseline	-23.25	2.83	0.37	
		Immediate	7.3	18.69	2.41	
		3 months	1.48	18.21	2.35	
		6 months	-0.6	17.9	2.31	
		9 months	-1.68	17.62	2.28	

n=60 each

Table 2

S.No	Comparisons	Statistics
	Comparison of control and experimental groups on HDAI score among affective disorders	
1	Comparison between groups (control and experimental)	F = 42.194; P < 0.001
	Comparison within tests (baseline/immediate/3/6/9 months)	F = 97.847; P < 0.001
	Interactions (groups X tests)	F = 27.576; P < 0.001
2	Between group comparison – baseline	t = 0.323; P = 0.747
	Between group comparison – immediate	t = 8.360; P < 0.001
	Between group comparison – 3 months	t = 6.941; P < 0.001

	Between group comparison – 6 months	t = 6.308; P < 0.001
	Between group comparison – 9 months	t = 5.744; P < 0.001
3	Within group comparison – control (baseline/immediate)	t = 6.105; P < 0.001
	Within group comparison – control (baseline/3 months)	t = 4.752; P < 0.001
	Within group comparison – control (baseline/6 months)	t = 4.481; P < 0.001
	Within group comparison – control (baseline/9 months)	t = 4.741; P < 0.001
	Within group comparison – control (immediate/3 months)	t = 1.353; P = 1.000
	Within group comparison – control (immediate/6 months)	t = 1.624; P = 1.000
	Within group comparison – control (immediate/9 months)	t = 1.364; P = 1.000
	Within group comparison – control (3 months/6 months)	t = 0.271; P = 1.000
	Within group comparison – control (3 months/9 months)	t = 0.0108; P = 1.000
	Within group comparison – control (6 months/9 months)	t = 0.260; P = 1.000
4	Within group comparison – experimental (baseline/immediate)	t = 19.840; P < 0.001
	Within group comparison – experimental (baseline/3 months)	t = 16.063; P < 0.001
	Within group comparison – experimental (baseline/6 months)	t = 14.710; P < 0.001
	Within group comparison – experimental (baseline/9 months)	t = 14.006; P < 0.001
	Within group comparison – experimental (immediate/3 months)	t = 3.778; P = 0.002
	Within group comparison – experimental (immediate/6 months)	t = 5.130; P < 0.001
	Within group comparison – experimental (immediate/9 months)	t = 5.834; P < 0.001
	Within group comparison – experimental (3 months/6 months)	t = 1.353; P = 1.000
	Within group comparison – experimental (3 months/9 months)	t = 2.057; P = 0.403
	Within group comparison – experimental (6 months/9 months)	t = 0.704; P = 1.000
n = 60 each		
"The 'F', 't' and 'P' values are by two-way RM ANOVA with Bonferroni 't' test for multiple comparisons".		

Figure 1: **Comparative effect of group psychoeducational intervention in control (Con) and experimental (Exp) groups on Hogan drug attitude inventory score in affective disorders.**

The values are mean $\pm$ SE (n = 60 each).

The data was analysed by two-way RM ANOVA with Bonferroni 't' test for post hoc comparison.

*Significantly different from the respective control group.

Discussion

The purpose of this study was to compare pre and post-test level of drug compliance among patients in the control and experimental groups with affective disorder. The results of Table 1 of the current study reveal that the mean HDAI score for patients in the control group (control vs. experimental) were: -24.10 -14.70 -16.78 -17.20 -16.80 -23.25 -7.30 -1.48 -0.60 -1.68 - more change was observed in the experimental vs. control group. In the most recent study Angshu Lama et al. (2022), the researchers found improved drug adherence in both experimental and control groups, with the experimental group showing greater improvement immediately after treatment, compared to the control group. There were minimal changes observed in the treated as usual group, but there was a decrease in the score at 1 month and at the 3-month assessment. There was a much greater decline in scores observed in the control group compared to the experimental group in addition to usual treatment. "The results of the A H Pakpour (2017) study also supported the finding that Medication adherence increased over time in both treatment groups, although the patients in the experimental treatment group improved more over time (baseline score: 6.03;

score at the sixth month: 9.55) compared to those in the control treatment group (baseline score: 6.17; score at the sixth month: 6.67). Colom et al., (2006), compared the plasma lithium levels of patients receiving psychoeducation (n = 49) and those who did not (n = 44) for more than 2 years. They found that the mean plasma lithium levels were higher and more stable in the experimental group than in the control group"   .

Table 1 of the current study shows the statistically significant difference in drug attitude scores between the control group and the group receiving psychoeducational intervention (p < 0.001). The results were consistent with Mohammad Jafar Behredar et al., (2014). "The mean score for medication adherence was significantly higher (P = 0.001) in the psychotherapy group compared to the control group. Medication adherence score for the psychotherapy group increased by 6.27 points (0.88) compared to 7.92 points (1.38) in the control group. While the mean score for the psychoeducational group increased by 56.6 points (0.58) compared to 64.17 points (2.12). Javadpour (2013) showed that patients in the intervention group showed a statistically significant increase in medication adherence (P < 0.001)". Abiodun (2007) showed that Patients in treatment group consistently completed scheduled clinic visits more frequently than those in experimental group (p < 0.001; DF = 34, t-test = 95% CI) These results concur with the results of the present study.

Table 2 of the present study shows that Dai (Drug Attitude Inventory) scores in the experimental group were higher than in the control group within the groups. Significant differences in DAI scores were observed between the test groups ("baseline vs. immediate vs. 3 months vs. 6 months vs. 9 months"). Significant differences were observed in DAI test interactions within the group X (p<0.001). The present study findings were consistent with the findings by (Kathlyne Dupuis Maurin, et al. (2020) absolute variation of the Medication Adherence Rating Scale (MAR) and Drug Attitude Inventory (DAI) scores was higher in the BIPOLIFE® (edutainment tool). At the 1-month follow-up, the control group had a mean p-value of "0.03" compared to "0.002" in the control group. However, the mean p-value was higher at 4-month follow-ups ("0.22" vs "0.07"). "Findings from the immediate post-intervention (1 month) and 3-month follow-up (3 months) study (Linu Sara George, et al., 2013) showed that the experimental group had a significantly higher score on knowledge and attitude (p < 0.001) compared to the control group". There was an observed difference in adherence (P < 0.111) between the two groups, but the difference was statistically significant..

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