Original Article

Effects of Group Psychoeducation (GPE) on Compliance with Scheduled Clinic Appointments in a Neuro-Psychiatric Hospital in Southwest Nigeria: A Randomised Control Trial (RCT)

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Abstract

Introduction: The aim of this study was to find out the effects of group psychoeducation (GPE) on the scheduled clinic appointments of patients admitted for psychosis and depression after discharge from hospital. Materials and Methods: A randomised controlled trial (RCT) of 4 sessions of GPE delivered while the patients were admitted was conducted and compared to no session of GPE with the usual care. This RCT was conducted in a 60-bed state reference neuro-psychiatric hospital in Southwest of Nigeria. The study population consisted of 48 admitted patients for psychotic disorders, including schizophrenia and depression. Twenty-five patients admitted were randomly selected to undergo 4 sessions of GPE before discharge from hospital, and 23 patients were randomly selected to receive regular medication and care without undergoing GPE. Both groups were then followed for 9 months on clinic days to measure compliance with scheduled appointments. Main outcome was measured by the number of clinic appointments kept within the period of study after discharge from hospital. Results: Patients in the treatment group were consistently more compliant with scheduled clinic appointments than those in the experimental group ($P = 0.0009$, DF = 34; t-test at 95% CI). There was also no significant difference in compliance with visits among patients with different diagnoses (treatment group; $P = 0.90$, DF = 12, experimental group; $P = 0.33$, DF = 11). Conclusion: GPE is effective in improving patients' compliance with scheduled clinic appointments after discharge for a period of 9 months. GPE can be used as part of treatment package for all psychiatric diagnoses and it has no age bias.

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Key words: Affective, Experimental group, Psychosis, Psychosocial intervention

Introduction

The appropriate treatment of mental disorders implies the rational use of pharmacological, psychological and psychosocial interventions in a clinical and integrated way.[1] Psychological treatment methods have been found to be effective in the treatment of mental disorders,[2] and group psychoeducation (GPE), a form of psychological or psychosocial treatment has been demonstrated to be useful in a broad range of psychiatric disorders.[3-6] It has also been found effective and useful in primary care settings.[7,8]

Hayes and Gantt[9] suggested that GPE decreases impairment by providing some form of self-mastery, which provides hope for the opportunity to lead a productive life. They demonstrated that developing a psycho-educational model for use with psychiatric patients has a positive effect on their functioning and attitude because knowing about one's illness demystifies the illness and diminishes associated stigma. GPE has also been demonstrated to be useful in improving the quality of life of patients.[10]

GPE has a positive effect on patients' compliance with treatment regimen and improves adherence to scheduled appointments.[11,12] A review of trials of GPE has established it as an evidence-based effective therapeutic tool for psychiatric patients, and it has been noted that GPE causes a reduction in the annual relapse rates of medicated patients, increases patients' participation in rehabilitation, decreases their symptoms, including deficit syndrome, and may reduce costs of care, among other benefits.[13]

Despite the demonstrated usefulness and efficacy of GPE, only a few clinical service providers systematically offer it as part of their service rendered to patients.[14] The non-availability of GPE is more prevalent in Nigeria where there is no standardised policy for the systematic use of psychosocial interventions for the management of the

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mentally disordered patients compare to United State of America and some countries in Europe, in addition to a serious dearth of psychiatrists and psychologists cum social workers in the country.[15]

Therefore, we aimed to establish our centre as one where GPE is regularly applied as a matter of policy as one of the components of the services provided for the patients. We posited that GPE in its entirety is an effective treatment modality for managing psychiatric disorders, and can reduce patient non-compliance with scheduled clinic visits.

This initial RCT for patient was conducted to see the effect of group psychoeducation on clinic appointment compliance after discharge among in-patients of the hospital. It is a part of series of studies we intend to conduct more studies to test the effect of GPE on outcome of treatment of psychiatric disorders. We intended to conduct similar study on the effect of GPE on patient compliance with medication, patient satisfaction with delivered services and general clinical outcome of treatment in the hospital which were not tested in the present study.

Materials and Methods

The study was conducted in a state neuro-psychiatric hospital in Ondo State, in Southwest Nigeria. It is a 60-bed reference hospital for psychiatric disorders and serves the state as well as other neighbouring states. We have 2 clinical psychologists, 1 social worker, 1 occupational therapist, 34 psychiatric nurses and 1 consultant psychiatrist.

The authors initially met to draft the protocol for the study. This was constantly reviewed and adjusted as required. A summary of the final protocol used for the study is presented below.

Step 1: Training of study team

A week's training was conducted for paramedical staff participating in the study. Training consisted essentially of application of the GPE schedule and the selection of patients.

Step 2:

Permission was obtained from the Hospital's research and ethics committee with a proposal of the study sent for review. A written consent form was prepared for the participants.

Step 3:

A short pilot study was conducted as part of the training for the research group. Only a total of 10 patients were used and they did not form part of the main study.

Step 4:

Recruitment of patients into the study was done by random selection. Each group, that is, the treatment and control group were allotted patients alternately. We did not attempt to predetermine by statistical calculation the size of the study population. Patients admitted into the hospital between January and February 2005 were included in the study.

A total of 48 admitted patients were recruited into the programme; 25 patients were randomly enlisted for the experimental group and 23 patients for the control group.

We selected patients who met the ICD-10 clinical diagnostic criteria for psychosis, including schizophrenia and depressive disorders. Patients with substance dependence, dementia, personality disorders and head injuries were excluded from the study. Patients who were not admitted were also excluded because of the difficulties involved in getting such patients to attend a special programme in the hospital different from their clinic appointment.

Each patient in the experimental group was scheduled to have at least 4 sessions of GPE, which is a more structured and intensive educational process about their illness, before discharge from hospital. The first session was held at least 1 or 2 weeks after admission which is the period at which the patient's condition was expected to have stabilised sufficiently to allow him or her to comprehend the contents of the sessions.

All sessions were done in groups of 5 to 8 patients depending on numbers of patients in the experimental group on admission. The first 3 sessions were structured in lecture form and the last one was an interactive forum where participants were allowed to ask questions, share their opinion or relate their experiences. They were also encouraged to talk about what they had learned so far in the first 3 sessions.

Two graduate assistant psychologists and 2 senior nurses were initially given 2 weeks' training on how to use the schedules for the GPE programme. They were recruited as facilitators during the period of the study. For the graduate assistant psychologists, this formed part of the assessment in their study of abnormal psychology.

Before commencing the sessions, the facilitators read through each patient's case file to know the symptoms of the illness, diagnosis, treatment regimen, and other relevant sections that may have helped in assessing the patients.

On discharge, patients who participated in the programme were asked to return in 2 weeks' time for clinical follow-up. Their case files were marked and they were scheduled to see the consultant psychiatrist, who would then refer them to the study group for their attendance to be noted. After the first visit, the patients were asked to visit the clinic every 4 to 6 weeks. The patients were followed-up for 9 months.

Written informed consent was obtained from all participants, and the hospital's ethics and research committee gave approval before the commencement of the study.

Schedule for GPE

A schedule was drawn up to serve as a guide for the contents of the GPE sessions. It highlighted the topics to be covered during each session. There were 5 modules, each covering different aspects of the disorders. These modules were:

1. Characteristics of the disorder,

2. Treatment options available for the disorder,

3. Cultural aspect of the disorder,

4. Psychosocial aspects and stigmatisation, and

5. Duration of treatment (Table 1).

More emphasis was placed on some specific aspects of the modules than the other. For example, with regard to the characteristics of the disorder, more emphasis was placed on precipitating and perpetuating factors, and recognition of signs of relapse.

In module 2, emphasis was placed on getting patients to recognise the need for compliance with scheduled clinic

Table 1. Schedule for GPE Sessions

1) Characteristics of the disorder	* Basic signs and symptoms of illness * Course and prognosis of illness * Possible precipitating factors * Possible perpetuating factors * How to recognise relapse in patients
2) Treatment options	* Medications available for illness * How to recognise the side effects of drugs * Duration of use and cost of drugs * Other treatment options like; electroconvulsive therapy and psychotherapy * Need for compliance * Consequences of non-compliance
3) Cultural aspects of illness	* Patient's belief about cause of illness * Patient's attitude and knowledge * Body-mind theory of human existence
4) Psychosocial aspect of illness	* Practices to help patients build their self-confidence and self-esteem * Reintegration into the society * Overcome stigmatisation
5) Duration of Treatment	* Course of illness * Benefits of attending clinic regularly and as scheduled * Consequences of failing to attend clinic

GPE: group psychoeducation

appointments, and relating the consequences of non-compliance as one of the causes of relapse of illness. With regard to the cultural aspect, patients' knowledge about their illness and attitudes were weighed against their religious practices and cultural beliefs, and were exhaustively explored. We tried to correct or modify some of the beliefs that may lead to non-compliance with scheduled clinic appointments. For example, the prevalent belief that mental disorders are spiritual and that medical treatment is therefore not appropriate was explored using the body-mind-spirit theory of human existence. We agreed that spiritual attacks may cause mental illness, but suggested that since the spirit is connected to the mind and the body, a disorder of the spirit would invariably affects the body and mind as well. Therefore, we posited that physicians are trained to take care of the body and the mind, and the priest or pastor to take care of the spiritual aspect. We did not dispute the use of prayers by our patients, but made them realise the deleterious effects of fasting and other practices.

Statistical Analysis

Clinical records of each patient were scrutinised to extract the following information: age, sex, level of education, occupation, religious practice and episodes of illness. These parameters were analysed in a simple frequency table.

We then used the 2-tail Student's *t*-test to find the difference in compliance with clinic visits between the experimental group and the control group using the Mini-tab version 10.51. We also analysed if age and sex would have any effect on compliance with clinic visits by analysing variance of age and compliance with clinic attendance for both the experimental and control groups. We also used this instrument to see if there would be a difference in response to GPE among patients with different diagnoses.

Results

There were 48 patients in all; 25 for the treatment group and 23 for the control group. The treatment group had 14 males and 11 females, while the control group had 11 males and 12 females. The mean age for the treatment group was 30.62 years, with a standard deviation (SD) of 8.59 years. The control group had a mean age of 32.26 years and SD of 8.75 years. There was no significant difference in the age distribution between the 2 groups. There was also no significant statistical difference in the cohorts' educational status; 82% of the treatment group and 78% of the control group had at least secondary school education (Table 2).

Seventy-two per cent of the treatment group had been admitted to the hospital for the first time, and 28% had had 2 or more episodes of relapse of their illness. On the other hand, 52.2% of the control group had been admitted for the

Table 2. Clinical Properties of Study's Cohort

Parameters	Experimental group (n = 25)	Control group (n = 23)
Age (y)	Mean = 30.62	32.26
	Standard deviation = 8.59	8.75
Sex	Male = 14 (56.0%)	11 (47.8%)
	Female = 11 (44.0%)	12 (52.2%)
Education	No education = 3 (18.0%)	5 (21.7%)
	Some education = 22 (82.0%)	18 (78.3%)
Marital status	Never married = 15 (60.0%)	9 (39.1%)
	Ever Married = 10 (40.0%)	14 (60.9%)
Rate of clinic visits	No visit = 2 (8.0%)	15 (65.2%)
	1-2 visits = 12 (48.0%)	8 (34.8%)
	>2 visits = 11 (44.0%)	0 (0.0%)
Diagnosis	The psychosis = 18 (72.0%)	15 (65.2%)
	Depressive disorders = 7 (28.0%)	8 (34.8%)
Episodes of illness	Index episode = 18 (72.0%)	12 (52.2%)
	2 episode = 2 (8.0%)	10 (43.5%)
	>2 episodes = 5 (20.0%)	1 (4.3%)

first time, and about 47.8% had had 2 or more relapses.

Psychotic disorders rather than depressive disorders were more prominent in both the treatment (72.0%) and control groups (65.2%), which accounted for 28% in the treatment group and 34.8% in the control group.

We found that the rate of compliance with appointments after discharge from hospital was consistently statistically significantly better for the treatment group than that observed in the control group ($P = 0.0009$, DF = 34) using two-tail *t*-test at a confidence interval of 95%.

For both, we found no significant statistical difference in compliance with clinic appointments between the psychotic and depressive patients ($P = 0.90$, DF = 12) in the experimental group and in the control group ($P = 0.33$, DF = 11).

Discussion

Our findings confirmed that GPE is an effective method of increasing patient's adherence to scheduled appointments; this is in agreement with the findings of other studies[11,16] which have found GPE to be useful in increasing compliance with both medication and scheduled appointments. We did not find any difference in the effect of GPE on clinic appointments across diagnoses. This suggests that the procedure may be useful as a treatment modality for both psychotic and affective disorders, although it has been suggested that it may be more useful in schizophrenic patients.[11] Although we excluded patients with drug or alcohol dependence, it may be useful in these patients, as some studies have found it effective in reducing

cigarette smoking in cardiac patients.[17]

It is also significant to note that age, sex and level of education did not have any effect on the outcome of GPE. This may imply that GPE can be used with patients irrespective of age, sex and level of education. However, one may suggest that for GPE to be useful in the non-literate population, the provider will have to be familiar with the local dialect. Though, we did not correct for religious beliefs because more than 90% of the study population were Christians, it is possible that making use of religious theme and cultural beliefs may influence the outcome of the application of GPE for patients as suggested by Shin and Lukens.[4]

There are limitations in our study. The study population was small with only 25 for the treatment group and 23 for the control group, which may make it difficult for any categorical conclusion to be reached about the efficacy of GPE.

The use of only patients on admission, and excluding patients treated as day case and outpatient cases may also make it difficult to generalise the findings from the study to all categories of patients.

Conclusion

In our environment, GPE is effective as part of the treatment protocol for psychiatric patients, and can be applied to all patients irrespective of their age, sex, religious belief and educational background. It may help to decrease incidences of poor compliance and clinic defaulting which may lead to relapses of their illness. It is not difficult to use and can be applied by other members of the mental health team. Including patients' belief and cultural lineage as a core part of GPE may help, though this study only raised this as a question to be explored further.

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