Therapeutic Efficacy of Family Psycho-Education in Reducing Syndrome Severity among Schizophrenic Patients in Neuro-Psychiatric Specialist Hospital, Ondo State

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Abstract: **The study examined therapeutic efficacy of family psycho-education in reducing syndrome severity among schizophrenic patients at the Neuro-Psychiatric Specialist Hospital, Akure, Ondo-State, South-Western part of Nigeria. Twenty respondents participated in the study. They were divided into two groups; experimental and control groups using simple random sampling technique. Group A belong to experimental group and; consisted of ten schizophrenic respondents, while Group B consisted of ten schizophrenic respondents and were classified as control group. The experimental group was exposed to family psycho-education (FPE) and drug therapy, while, the control group was exposed to drug therapy only. The study design is field experiment. The instrument used for the collection of data was Positive and Negative Syndrome Scale while, between subject Independent t-test statistics was used for statistical analysis using SPSS version 16.0. Findings revealed a significant difference in syndrome severity between the experimental and control groups after therapeutic intervention t (18) = -2.390, p<.05. A *P* value of less than 0.05 was considered significant for the analyses. Based on this findings, it is recommended that drug therapy and Family Psychoeducation should be integrated together to enhance holistic intervention for schizophrenic patients. Stress-vulnerability model was adopted as an explanatory model for the study.**

I. INTRODUCTION

Schizophrenia is a severe mental illness characterized by a variety of symptoms including, but not limited to loss of contact with reality. Furthermore, it could be referred to as a severe disorder of the brain expressed by disturbed behaviour and abnormal mental functioning. Schizophrenia patients have problems in how they think and what they think, thought and language are often disorganized; words have meaning only to the schizophrenic patients speaking them and the contents of their thinking is also disturbed. People with schizophrenia are found of seeing what others cannot see, hear what others do not hear, smell what others cannot perceive as odours.

Schizophrenics are often referred to as psychotic people because they loose touch with reality and their personality is generally disintegrated. Schizophrenia can affect an individual's thoughts, emotions, mood and behaviour. The range and course of symptoms experienced vary greatly among individuals, personal circumstances and cultural settings.

Schizophrenia is a complex psychiatric disorder that has an influence either directly or indirectly on practically every area of functioning, ranging from psychological well-being to social adaptation to health and self-sufficiency. In short, these set of mentally ill patients suffers from perceptual, language, thought, emotions (affect) and behaviour disorders.

Backer and Howard, (2007) describe schizophrenia as a troublesome disorder because it causes disabilities across most social functioning domains-disabilities that prevent people from achieving their life goals. Life may become unbearable for people with schizophrenia as they may have difficulty getting good jobs, earning a meaningful income, living in comfortable house, finding a mate, and generally not enjoying life accentuated by damages to the brain functions. Murray and Lopez (1996) say that patients with schizophrenia tend to struggle with many functional impairments including performance of independent living skills, social functioning and occupational or educational performance and attainment as they require some significant others assistance for support and only about 10-20% of these patients are able to sustain full or part-time competitive employment.

Therefore, the need to provide family psycho-education cannot be over emphasized having taking into cognizance the myriads effect it usually impacts on the consumers. This assertion find support in the work of Adams, Sampson and Okpokoro (2014) when they aver that since psycho-education is seen as a basic component of the comprehensive treatment of schizophrenia, it should be offer to all patients. Landsverk and Kane (1998) and Menzies (2000) postulate further that a comprehensive psycho-educational programme can work as coping resources and can help participants build on their existing strengths and encourage a sense of hope for recovering a new sense of self.

Family psycho-education for schizophrenia originated in the late 70s as documented by McFarlane, Dixon, Lukens and Lucksted (2009) and have since been used successfully; with

the psycho-educational needs of the service-users receiving increased attention. Family psycho-education (FPE) is an evidence-based psychiatric rehabilitation practice that aims at achieving the best possible outcome for consumers with schizophrenia through collaborative treatment between clinicians and family members of the individual with the mental health challenges

Cochrane working group of schizophrenia (2011) defines family psychoeducation as a systematic, didactic psychotherapeutic intervention, which is adequate for informing patients and their relatives about the illness and its treatment, facilitating both an understanding and personal responsibly handling of the illness and supporting those afflicted in coping with the disorders.

Family psycho-education is a method of disseminating pertinent information to service users and informal care-givers consider as very germane to the understanding of a disease process in order to take active role in enhancing positive outcome of the disease.

Purpose of the Study

The general purpose of this study is aimed at exposing the complimentary role of both psychological and pharmacological intervention in alleviating the symptoms of schizophrenia.

The specific objective is:

To determine whether or not family psycho-education can complement pharmacotherapy in reducing syndrome severity of schizophrenia symptoms.

Statement of the Problem

Family psycho-education interventions may improve medication adherence, reduce risk of relapse, frequent readmission to hospital, improve symptoms, functioning and quality of life, and provide support for patients.

Hypothesis

1. Family psycho-education will lead to a significant reduction in syndrome severity between experimental group and the control group.

II. LITERATURE REVIEW

Schizophrenia was first discovered as a disease of the brain by a French physician, Benedict Morel (1809-1873) and it was then referred to as *dementia praecox*. Dementia means a degeneration of the brain and praecox means starting at a very young age. Also, a German psychiatrist; Emil Kraeplin (1856-1926) further explained this by stressing that such psychotic behaviours in schizophrenic patients are as a result of diseases in the body. This premise was faulted by a Swiss Psychologist, Eugen Bleuler (1857-1939) who completely disagreed with Kraeplin and inferred that this disorder is as a result of abnormalities in the brain and not the body. He changed the name from dementia praecox to schizophrenia which is a Greek word (Skhizein-"to split" and phren- "mind") which literally means split mind. He also believed that no matter how hopeless a schizophrenic condition looks, with appropriate treatments and care, schizophrenic patients can still be recovered to sound mental health.

De-Haan, Linszen, Lenior, de-Win and Gorsira (2008) submit that most schizophrenic individuals decompensate into an active phase, often marked by psychosis which made them at this point to enter into treatment for the syndrome hence, patients suffers from long-lasting adverse effects such as impaired social and vocational functioning, as well as, the internal distress caused by the symptoms. De-Hann et al (2008) conclude that while some individuals manifest a chronic, unremitting illness, others follow a course of periodic exacerbation and remissions therefore, complete remission or a return to pre-morbid functioning is probably not common with schizophrenia.

Onwumere, Bebbington , and Kuipers, (2011) affirm that family psycho-education is an essential and promising element in the non-pharmacologic treatment of patients with a psychotic disorder as half of patients with schizophrenia who are on drug only usually relapse, and syndrome severity rates are found to be higher among the schizophrenic patients. Bisbee and Vickar (2012) conclude that family psycho-education has shown to be effective in reducing patients' symptoms, promoting remission, strengthening social functioning and reducing family burden.

Mino, Shimodera, Inoue, Fujita and Fukuzawa (2007) in their research work confirmed that when family psycho-education is combined with an appropriate antipsychotic therapy, it usually promote, increase and hasten the recovery process of schizophrenia and reduce percentage of relapse in a year to about fifty four per-cent (54%). This finding also agrees with the work of McFarlane, Dixon, Lukens, and Lucksted (2009) when they conclude that psycho-education has proven very significant and effective in reducing relapse rates of patients, improves recovery, family well-being and dynamics. Furthermore, Lucksted, McFarlane, Downing and Dixon (2012); and Lincoln (2010) in a longitudinal study observed that relapses of the schizophrenic patients decreases by twenty seven per-cent (27%) when psycho-educational interventions was combined with drug therapy.

Stress -Vulnerability Model

The stress-diathesis or stress-vulnerability model provides a widely accepted and empirically supported framework for describing the relationships among provoking agents (stressors), vulnerability and symptom formation (diathesis) and outcome among schizophrenic patients (Zubin & Spring, 1977). Thus, a vulnerable person, whose inborn tolerance for stress is incompatible with exposure to either internally- or externally-generated stimulation, may be thrown into a first or a recurring episode of illness. Put simply, biology provides the necessary pre-condition, but both biological susceptibility and environmental stress cause illness onset or exacerbation. The

course of schizophrenic disorders is likely to be a product of a number of different influences that can be broadly separated into vulnerability, stressor, and protective factors (Zubin & Spring, 1977). Therefore, in this model, risk factors and protective factors interact in any of three ways:

i. stressors, risk, and vulnerability factors combine and potentiate each other;
ii. As long as stress is not excessive, it enhances competence, and;
iii. Protective factors modulate or buffer the impact of stressors by improving coping and adaptation.

Schizophrenia is seen to involve a psycho-biological vulnerability (dopaminergic dysfunctions, reduced available processing resources, autonomic hyperactivity, schizotypal personality traits), and stressors (for example, life events, social environmental stress) which are seen as factors that interact with pre-existing vulnerability characteristics and produce psychotic episodes. Personal protective factors, on the other hand, include effective family problem-solving, supportive psychosocial interventions, antipsychotic medication, coping and self-efficacy and environmental protectors. The buffering (protective) factors include the coping and problem-solving skills of the patient. Most patients with schizophrenia do not submit to their situation passively but search for ways to deal with the aggravating circumstances. For example, a client has this to say "I feel raw inside and out when I decided not to take my medication, as well as, not attending my session during therapy". The aftermath effect was that "I now became bothered with everything, but psycho-social intervention usually cushions the blows that are in my life" (Cohen, Glynn, Hamilton & Young, 2010).

The other buffering or modulating factor in the vulnerability stress-coping-model is the protection that the patient receives from his or her environment which can protect him from stress. The protection can consist of practical, emotional, and social support to enable the patient handle better the consequences of the illness (Wing 1978).

Zubin and Spring (1977) emphasize that the episodic nature of schizophrenic disorders and the fact that the primary persistent characteristic of the person with schizophrenia is his/her vulnerability, not the disorder. According to Zubin (1980), as long as the stress is seen to cause the psychotic episodes in vulnerable persons is below the threshold of vulnerability, the individual responds to the stressor with a minor crisis and remains well within the limits of normality, his/her coping ability remains intact. When the stress exceeds the threshold, the coping style collapses and he/she is likely to develop a major crisis, followed by a time-limited psychopathological psychotic episode. Some people are highly vulnerable and have repeated psychotic episodes, while others are relatively invulnerable and have but one brief episode or none at all.

The vulnerability-stress approach can also be used to ameliorate hopelessness and helplessness by challenging distortions about psychosis, and challenging the catastrophic view of psychosis and the sense of unpredictability, i.e. the notion that psychosis can recur at any time without warning (Henry, 2004).

The applicability of stress-vulnerability as an explanatory model for schizophrenia was fundamentally due to its ability to reduce vulnerability to life stress and chronic symptom re-currence coupled with its effectiveness in the treatment of schizophrenia (Nuechterlein & Dawson, 1984).

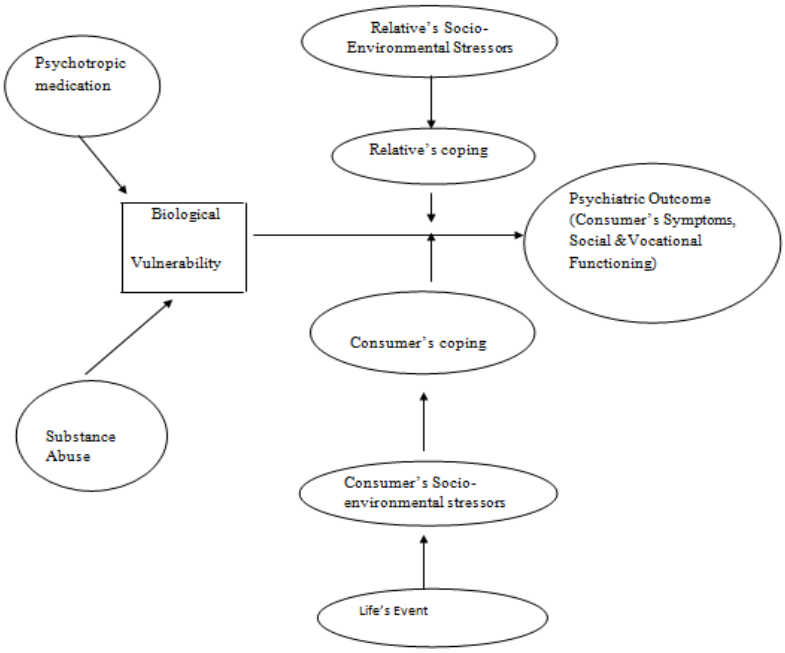

Fig.1. Stress-Vulnerability Model of Zubin and Spring (1977).

III. METHODOLOGY

The study was approved by the Research and Ethical committee of the Neuro-Psychiatric Specialist Hospital, Akure, Ondo-State in the South-western part of Nigeria. It is a facility that has about eighty bedded capacity with both Male and Female wards. They are further divided into substances and drugs related isolation and the general ward. The facility runs 24 hours duty daily thus the research was carried out in a natural setting of the hospital environment where sampling technique was used in selecting subjects for the study.

Apart from this, verbal and informed consent were obtained from the respondents after they had been fully informed about the purpose of the study. The study adopted field experiment in carrying out the research. Subjects were later assigned into two groups (experimental and control) using simple random sampling technique.

Twenty Nigerian in-patients schizophrenic patients who have insight into their problems and are relatively stable with a diagnosis of schizophrenia disorder were randomly allocated to the experimental (n = 10) or control groups (n = 10). Diagnosis of schizophrenia was established by a psychiatrist based on the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) criteria. Demographic data and disease characteristics were collected at baseline.

Schizophrenics subjects in the study having being randomly assigned into two groups (experimental and control) were assessed with Positive and Negative Syndrome Scale (PANSS) to measure their level of syndrome severity before the intervention. PANSS is a validated tool use to assess patients' clinical status pre- therapy and post-therapy. PANSS contains 30 items in three subscales of positive symptoms (7 items), negative symptoms (7 items), and general psychopathology, which evaluates general function of the patient (16 items). Each item is scored from 1 (absent) to 7 (extreme). Thus, the PANSS total score ranges from 30 to 210. Findings revealed that there was no significant difference among the two groups as reflected in their positive and negative syndrome scale (PANSS) scores. In other word, results showed a lack of significant group difference as measured in their pre-test means scores on positive and negative syndrome scale (PANSS) scores $t(18) = 7.487$, $p<.05$. These scores served as pre-test means scores or the baseline means scores for the two groups on syndrome severity before the intervention thus, showing that the two groups are equivalent as shown in their response to PANSS.

After the baseline data were obtained, the psycho-educational intervention programme commenced and lasted for thirteen weeks; one session per week culminating into thirteen sessions held only for patients in the experimental group (subjects that received antipsychotic drug treatment and psycho-educational programme) while, patients in the control group that received only antipsychotic medications were not included in the psycho-educational intervention session. A *P* value of less than 0.05 was considered significant in all analyses.

IV. PROCEDURE FOR DATA COLLECTION

The general summary of the intervention which lasted for thirteen (13) weeks are as follows;

Synopsis of the Sessions with the Schizophrenic Patients

The subjects for education included:

- 1st wk. Administration of PANSS and brief introduction of the topic.
- 2nd wk. General introduction of the topic
- 3rdwk. Introduction of mental health illness in order of severity from respondents various experiences and researcher perspectives.
- 4thwk. Introduction of Schizophrenia from participants and researcher perspectives and simple definition of schizophrenia.
- 5th wk. Discussion on schizophrenia and their characteristics behaviours
- 6th wk. Discussion on the prevalence of schizophrenia from the participants and researcher's perspectives.
- 7th wk. Introduction of schizophrenia from participants and researcher perspectives
- 8th wk. Highlights on S/S of Schizophrenia from the respondents and researcher perspectives.
- 9th wk. Completion of the remaining section of signs and symptoms and classification of sub-types.
- 10th wk. General introduction of drugs used in treating schizophrenia from respondents and researcher's perspectives and function of drugs and side effects.
- 11th wk. General introduction of psycho-social intervention with particular emphasy on PE from participants and researchers perspectives.
- 12th wk. Demonstration of stress -vulnerability model and explanation of the concept of remission and relapse.
- 13th wk. Revision exercise for all topics covered in the whole session held between the1st-12th week and administration of post-test.

V. ANALYSIS

Table 1.1: Independent t-test table showing that Family psycho-education will lead to a significant reduction in syndrome severity between experimental group and the control group.

Variables	Group	N	x	SD	SE	df	t	p
Pre-test	Exp.	10	126.60	12.411	3.925	18	7.487	< .05
	Control	10	84.30	12.850	4.064			
Post-test	Exp.	10	72.40	20.993	6.639	18	-2.390	< .05
	Control	10	91.80	14.763	4.669			

The above result show that there is a significant difference between the experimental and the control group in syndrome severity at post-therapy t (18) = -2.390, p<.05. Therefore, the above hypothesis is supported at <.05 level of significance.

VI. DISCUSSION

The hypothesis states that family psycho-education will lead to a significant reduction in syndrome severity between experimental group and the control group was supported at t (18) = -2.390, p<.05. The investigation conducted revealed that there was a significant difference between the experimental group and the control group after therapeutic intervention. This result agrees with the previous findings that combined therapy is more superior to standard or drug therapy only. The investigator was able to discover that there was a significant reduction in syndrome severity after the intervention when the baseline scores (pre-therapy scores) was compared with the post therapy scores among the two groups. This finding is in tandem with Patterson and Leeuwenkamp (2009) who said that the positive effects of psycho-educational intervention on the patients led to decrease of new symptomatic acute phases. Barbato et al (2010) and Adams et al (2010) also demonstrate clear superiority of psycho-educational family interventions when combined with standard treatments over standard treatments or drug therapy only in schizophrenia. Barbato et al and Adams et al (2010) conclude that the dual intervention (combined therapy) led to an evident decline in symptoms, duration of stay in medical institutions as well as, improves the recovery and remission of patients with schizophrenia. Mojtabai et al (2009) in a meta-analysis find out that on average, a patient receiving both psycho-education and medication performed better than sixty five per-cents (65%) of patients treated only with medication. Onwumere, Bebbington , and Kuipers, (2011) affirm that family psycho-education is an essential and promising element in the non-pharmacologic treatment of patients with a psychotic disorder as half of patients with schizophrenia who are on drug only usually relapse, and syndrome severity rates are found to be higher among the schizophrenic patients.

VII. CONCLUSION

Family psycho-education (FPE) is a cornerstone in the management of schizophrenia symptoms with particular therapeutic efficacy in reducing negative symptoms.

VIII. RECOMMENDATIONS

Family psycho-education (FPE) should be included as part of intervention for all service-users with mental health challenges as it was discover that standard therapy or drug only can never ameliorate the syndrome severity of the mentally ill patients, hence, FPE should be an adjunct to drug therapy. FPE should also be one of the primary interventions adopted for the treatment of schizophrenia in all mental health institutions.

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