EFFICACY OF POSITIVE PSYCHOTHERAPY IN THE REDUCTION OF DEPRESSIVE SYMPTOMS IN A CLIENT WITH SCHIZOPHRENIA

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ABSTRACT

The risk of having depressive symptoms remains high among clients with schizophrenia even though, therapies aimed at managing these clients often focus on the client's negative emotions. The current study was conducted to examine the efficacy of positive psychotherapy intervention in the reduction of depressive symptoms in a 54-year-old male diagnosed with schizophrenia. A single-subject (A-B-A type) experimental design was used. Pre/post-test measure was administered alongside, a measure aimed at constantly assessing the client's level of depression. The results showed decreased level of depression in the client post-intervention. Depressive symptoms measured before, during and after intervention were reduced to a minimal level of symptomatology by the end of the study. These findings therefore present an alternative to existing intervention modalities for managing depressive symptoms in clients with schizophrenia. This outcome suggests considerations for a single case design for treatment effectiveness studies conducted by clinical practitioners in Nigeria.

Keywords: Depressive symptoms, Positive psychotherapy, Schizophrenia, Single-subject design

INTRODUCTION

Background to the Study

Aside the negative and positive symptoms that are primary to the individual with schizophrenia, other psychiatric comorbidities like cognitive and affective disturbances are triggered by the illness. These symptoms become prevalent before intervention is commenced and occur in more than half of first-episode or drug-free clients (Johnson, 1981; Knights 1981). One of such symptoms is depression, which is

a common clinical feature in clients with schizophrenia (Amri, Millier, Toumi, 2014). For example, research conducted by Johnson (1981) shows that 70 percent of a sample of 30 participants with schizophrenia had a depressive episode over a two-year period (Johnson, 1981 as cited by Heald, Morris & Soni, 2008). Similarly, supporting evidence suggest that depressive symptoms can occur during any phase of schizophrenia and has negative impact on the course of the illness (Babinkostova, & Stefanovski, 2011; Avguštin, 2009).

In Nigeria, studies have revealed that schizophrenia particularly is a common diagnosis among clients with early onset psychosis (Okewole, Ogunwale, Mosanya, Ojo, Nzeakah, Adeniji, et al. 2012; Ibukun, Olubunmi, Cecilia, & Temitayo, 2015; Afolayan, Peter, & Amazueba, 2015). The World Health Organisation (2006) also reports that schizophrenia ranked the highest (51%) followed by mood disorders (24%) in the list of both inpatient and outpatient psychiatric illness treated in mental health facilities in Nigeria (WHO, 2006). Yet, majority of the individuals with schizophrenia and depression hardly receive intervention even though, effective treatments exist. For instance, the median untreated rate, or treatment gap, for schizophrenia and other non-affective psychoses was found to be 32.2% worldwide (Kohn, Saxena, Levav, & Saraceno, 2004).

Although, the long-term psychosocial complications of psychiatric disorders suggest not only that the treatment gap must be bridged but also that the treatment lags need be shortened (Kohn, Saxena, Levav, & Saraceno, 2004); literature on the efficacy of pharmacological interventions for depression in schizophrenia remains modest (Castle, & Bosanac, 2012). When used in conjunction with psychosocial interventions, effectiveness of psychotropic medications in the management of mental disorders become even greater (Haak, 2005). However, Eells (2000) noted that due to the advances in pharmacological treatments, there have been a small but steady and promising line of new studies aimed towards treating schizophrenia psychotherapeutically. Indeed, initial models of psychotherapy for schizophrenia were long-term and based on psychodynamic and interpersonal theory even though, newer models are short-term with focus on adaptation and adjustment, and are more empirically based (Eells, 2000).

On this note, the current study seeks to employ a rather recent theoretical outlook to treatment known as positive psychotherapy for the reduction of depressive symptoms in a client with schizophrenia. Positive psychotherapy originates from the field of positive psychology which is ‘the scientific study of optimal human functioning that aims to discover and promote the

factors that allow individuals and communities to thrive' (Seligman & Csikszentmihalyi, 2000). This approach to psychotherapy has empirical backings and directly seeks to promote strength and positive emotions in the client thereby, increasing meaning and fostering happiness (Seligman, Rashid, & Parks, 2006). Positive psychotherapy is described as a standard intervention for depression aimed at increasing positive emotions, engagement, and meaning (Seligman, *et al*., 2006; Seligman, 2008).

Statement of Problem

In 2004, the World Health Organisation projected that the prevalence of schizophrenia worldwide was 26.3 million (WHO, 2004 as cited in Hani, Ghuloum, Mahfoud, Opler, Khan, Yehya, *et al*., 2016). Remarkably, clients with schizophrenia are said to be 29 times more likely to have a lifetime diagnosis of major depressive disorder than the general population (Yu, Shen, Zeng, Ma, & Hu., 2013). Consequently, Castle & Bosanac (2012) suggest, there is a dearth of methodologically robust studies on the efficacy of psychological treatments for depression in schizophrenia. (Castle & Bosanac, 2012).

More so, efforts aimed at comparing different forms of psychotherapy with medication reveals that rigorous psychotherapy coupled with medications offered no better outcome over less intensive and less costly therapeutic approaches (Fenton, & Schooler, 2000). To address these gaps, this study analyzed the effectiveness of a rather distinct approach to therapy aimed at shifting focus from pathology to positive individual traits. Particularly, this study employed the use of positive psychotherapy intervention (Seligman & Csikszentmihalyi, 2000) to reduce depressive symptoms in a client with schizophrenia, as an alternative to existing management modalities.

Purpose of the study

In practice, clients who receive psychotherapy for depressive symptoms in schizophrenia focus on their negative and maladaptive behaviours in order to restructure them. However, Fredrickson (2000) have observed that the release of positive emotions rather than dwelling on past weaknesses affords the individual with the needed resources to become more creative, knowledgeable, resilient, socially integrated, and healthier (Fredrickson, 2000). In other to evaluate the efficacy of positive psychotherapy intervention for curbing depressive symptoms in client's with schizophrenia, the current study aimed at empirically testing the widely documented positive psychotherapy intervention (Magyar-Moe, 2009), using a single Nigerian participant.

Empirical Review and Theoretical Framework

Dating back 1908, depression was identified as a feature of schizophrenia. In fact, Bleuler (1908) who first introduced the term noted that depressive symptoms were "either directly triggered by the disease process in the acute stages or occurred as secondary symptoms" (Bleuler, 1908). Consequently, researchers like Bowers and Astrachan (1967); Knights and Hirsch (1981) among others, showed associations between depressive symptoms and schizophrenia (Adrian Heald, Julie Morris* & Som D. Soni, 2008). For instance, Kulhara (1989) examined 95 clients with schizophrenia and found that depressive symptoms such as lack of energy was associated with negative symptoms of schizophrenia (Kulhara, 1989).

In 1999, Sands and Harrow surveyed a sample of 70 schizophrenic clients and 117 non-schizophrenic clients to determine the occurrence and persistence of depression in schizophrenia. They found that 30 – 40% of the clients diagnosed with schizophrenia had full depressive symptoms at different phases and during follow-up (Sand & Harrow, 1999). Similarly, Rajkumar (2015) investigated the frequency and correlates of depressive symptoms during the acute phase of schizophrenia using 72 acutely ill clients diagnosed with schizophrenia. However, the findings showed that depressive symptoms during the active phase of schizophrenia are associated with the severity of positive psychotic symptoms (Rajkumar, 2015). While, some investigations looked at the prevalence of depression among clients who present with schizophrenia, other researchers like Castle and Bosanac (2012) focused on studying interventions for managing depression in persons diagnosed with schizophrenia (Castle & Bosanac, 2012).

This study uses four techniques for integrating positive psychotherapy principles into individual or group therapy, as proposed by Kauffman (2006). These include reversing clients focus from negative to positive, developing a language of strength, balancing clients positive and negative emotions and building strategies that encourage hope (Kauffman, 2006). This study also follows the principle of *broaden-and-build theory* of positive emotions (Fredrickson, 1998). On the bases on the principle, "some rewarding emotions like joy, interest, happiness, pride, and love although distinct in nature, can expand people's thinking thereby promoting their physical, intellectual, social and psychological well-being" (Fredrickson, 1998). Using a single-subject research design, the current study examines the effectiveness of positive psychotherapy intervention on a client diagnosed with schizophrenia.

Research Hypothesis

This study examined two hypotheses:

1. There is no significant difference in client's depressive symptom pre and post intervention (based on clients rating on the Calgary Depression Scale for Schizophrenia -CDSS).
2. There is no significant difference in the level of depressive symptoms observed at baseline, intervention, and post-intervention (as measured using Beck Depression Inventory-II).

METHODOLOGY

Participant

This study had one (N = 1) participant as the unit of analysis. The participant was a 54-year-old unemployed male who was on admission in an in-patient rehabilitation centre at the time of implementing the intervention. Client presented with schizophrenia based on ICD-10 (WHO, 1992) diagnostic criteria following review by a psychiatrist. However, after 2 months in treatment and attainment of some level of stability from initial psychotic symptoms, client apparently presented with symptoms of depression, which the researchers confirmed using the Calgary Depression Scale for Schizophrenia (CDSS). Initially, the participant received *routine* psychotherapy, but showed no sign of improved affect prior to the current study. This prompted the introduction of the current research measure.

Instruments

Three measures were employed in this study to ensure that the research outcome reflects a near accurate evidence-based examination.

1. *Calgary Depression Scale for Schizophrenia (CDSS)*

The CDSS is a 9-item questionnaire for assessing depressive symptoms in persons with schizophrenia. Addington (1990) developed the measure to assess depression, hopelessness, self-depreciation, guilty ideas of reference, pathological guilt, morning depression, early wakening, suicide and observed depression. The measure has a global score range of 0 – 27.

The scale is said to be helpful in complementing clinical assessment in differentiating depression from negative symptoms and medication effects in schizophrenia (Upthegrove, 2009). Each item on the scale is scored 0 – 3 and a cut-off score of > 6 points is indicative of clinically significant depressive symptoms (Amri, Millier & Toumi, 2014). CDSS has been found to be the most preferred option for assessing depression in schizophrenia for both clinical and research purposes (Rajkumar, 2015).

2. *The Beck Depression Inventory–II (BDI-II)*

The BDI-II is a measure for assessing depression developed by Beck, Steer and Brown (1996) based on the DSM-IV (1994) criteria for depressive disorders. The scale is a 21-item self-

report inventory that screens for severity of depression based on a two-week timeframe. Areas measured by the BDI-II include sadness, past failure, guilty feelings, suicidal thoughts or wishes, changes in sleep pattern and appetite, among others. Each of the scale is scored 0 – 3 and the BDI-II cut off scores ranges from 0 to 13 indicating depression, 14 to 19 denoting mild depression, 20 to 28 meaning moderate depression, and 29 to 63 indicating severe depression. The BDI has been found to be sensitive to change with treatment (Bryant, Moulds, Guthrie & Nixon, 2005) and is said to be a valid instrument for identifying depression in schizophrenia (Gaur, *et. al*., 2014).

Procedure

The present study took place within a 10-day period with baseline and intervention recordings made at three (3) separate intervals. The intervals were observed as follows: Day 1 – 3 (baseline A_1), day 4 – 7 (intervention B), and day 8 – 10 (withdrawal of intervention and return to baseline A_2). Prior to initial baseline, the subject was informed of plans to review his treatment modality. Following his consent, the Calgary Depression Scale for Schizophrenia (CDSS; Addington 1990) was administered to the participant as pretest measure. This was followed by the first observation period (A1).

At intervention (B) phase, the participant received four positive psychotherapy interventions and selected homework. The sessions were in line with Rashid (2017) Positive Psychotherapy Session-By-Session Planning guide and included orientation, identifying character strengths, acknowledging the role of good vs. bad memories, as well as being hopeful and optimistic, respectively. A typical intervention session lasted approximately 35 – 45 minutes and a total of four exposures to interventions were observed in all. At this stage, the participant responded to Beck Depression Inventory-II (BDI-II) after each session. Time taken daily by the participant to respond and return the research questionnaire ranged between 3-5 minutes.

Following the withdrawal of intervention (B), the BDI-II was continually administered to the participant on daily basis – through observation period (A2). Thereafter, the participant completed a post-test assessment using the CDSS scale. Finally, the researchers debriefed the participant and informed him on the outcome of the intervention based on data collected.

Setting

The study was conducted in an in-patient rehabilitation centre in Jos, Plateau State, Nigeria. The facility manages both substance and psychotic cases. Programs in the centre is

designed to provide organic and non-organic treatments in form of medications, which is complimented by both brief and extensive one-on-one therapy sessions, group discussions, and recreational therapy. These interventions are interdisciplinary coordinated by psychiatric doctors, clinical psychologist, social workers, rehabilitation nursing staff and other auxiliary workers on a 24 hours' work schedule.

Design

This study used a single-subject experimental design. This research design is useful when trying to analyse changes in behaviour caused by a particular intervention (Campbell, 2003). The design allows for the manipulation of an independent variable and a careful observation or consistent measurement of the dependent measure. Particularly, the ABA - type design was used in this study. This method is such that a baseline (A) is established after which treatment (B) is introduced. Thereafter, treatment is withdrawn for a return to baseline (A). With this design, the researcher can observe behavioural changes before, during and after the introduction of treatment. Thus, a consistent pattern of behaviour change between the baseline and intervention (treatment) phase would suggest that the intervention is causing the change in behaviour. However, to arrive at a conclusion in a single-subject design, participant's scores and inferential statistics are not necessarily used (Todman, & Dugard, 2001). For the sake of the current study, positive psychotherapy served as the independent variable and the participant's level of depression was the dependent variable.

Statistics

Data analysis for this study was computed using Microsoft Excel. Particularly, a line graph was used to present the visual analysis of the participant's responses. This shows the changes in depressive symptoms caused by the intervention on the participant.

Results

Hypothesis One: *There is no significant difference in client's depressive symptom pre and post intervention (as assessed by clients CDSS ratings).*

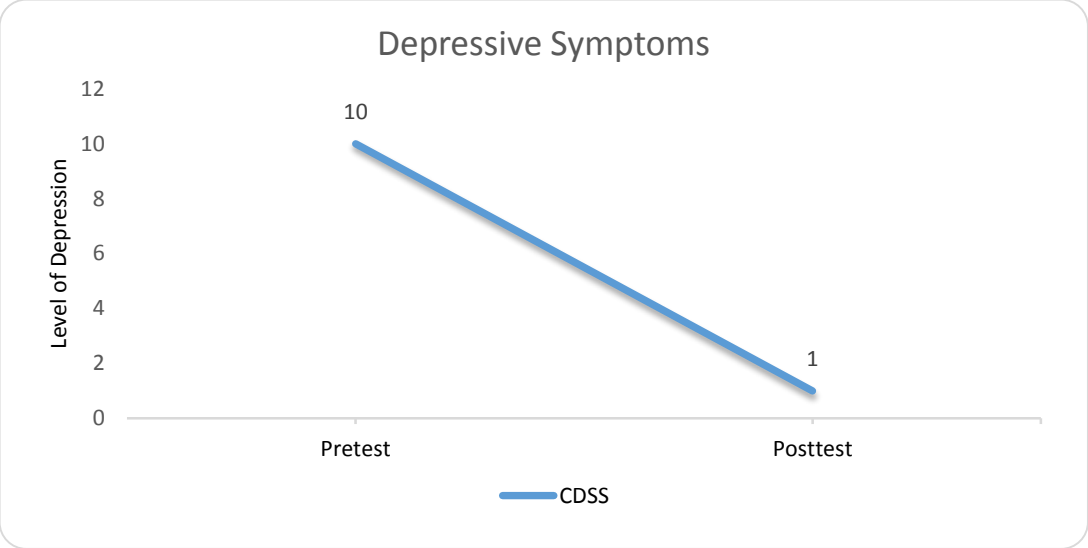

Figure 1: CDSS Pre and Posttest Ratings for Client's Pattern of Depressive Symptoms

As seen in Figure one, result for the first hypothesis indicates a significant drop in depressive symptoms pre / post intervention.

Hypothesis Two: *There is no significant difference in depressive symptoms observed at baseline, intervention, and post-intervention (as measured using Beck Depression Inventory-II).*

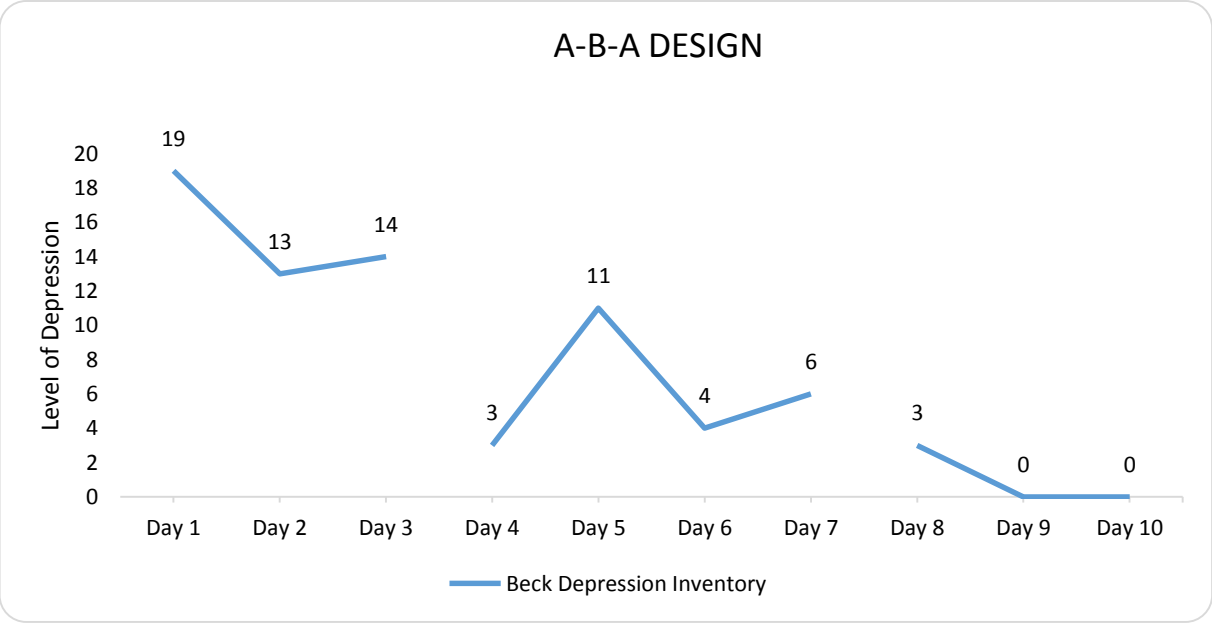

Figure 2: Hypothetical Outcome Supporting Intervention Efficacy with an Improved Baseline

Although, observations show an unstable baseline across days, figure two indicates a remarkable difference in participant's depressive symptoms following the three successive phases of this study.

Discussion

The findings of this study clearly indicate that not only can depressive symptoms be reduced but also could disappear, with the application of positive psychotherapy interventions. The first hypothesis particularly showed a significant drop in the client's level of depression as indicated by his CDSS ratings pre and post intervention. This result is consistent with research findings by Grant et al. (1995) which revealed that positive psychotherapy interventions can help fight depression in clinical participants.

Similarly, the second hypothesis also revealed a significant symptom relief as recorded by the BDI-II. Client's depressive symptoms were noted to have constantly changed all through the various research stages (baseline, intervention and return to baseline) until zero level of depression were recorded. This finding affirms research conducted by Seligman, Rashid, & Parks (2006), who also found a significant BDI score reduction in a sample of clients who received positive psychotherapy intervention.

In line with the Broaden-and-Build Theory of Positive Emotions therefore, the application of positive psychology techniques in therapy does produce flourishing in the client (Fredrickson, 2001). More so, a balance of positive and negative emotions can further predict a client's judgment of subjective well-being (Diener, Sandvik, & Pavot, 1991). In effect, the outcome of this study provides additional validity to the use of positive psychotherapy in managing symptoms of depression and could also be effective when used for other forms of psychopathology (Seligman, Rashid, & Parks, 2006; Rashid, 2010).

Limitations

Although, the day-to-day changes caused by the introduction of treatment is easily observed in this study, this study did not concern itself with how depressive symptoms manifested at various phases of schizophrenia or the determinants of depressive symptoms in clients with schizophrenia. In addition, due to the use of a single-subject for the current study, there were no particular emphasis on how various socio-demographic features (e.g., age, marital status, occupation and religion) influenced the research outcome.

However, the extremely small sample size could have been a major limitation. So also, we may assume that the client's subsequent change in behaviour after baseline (A) may have been influenced by the irreversible effect of the initial introduction of intervention (B). Furthermore, given the consistency in client's exposure to the research

measure, another limitation to this study could be familiarity with the research instrument.

Conclusion and Recommendations

Through the application of positive psychotherapy intervention, the participant used in this study was noted to have decreased level of depression comparable to those obtained when the CDSS was administered post evaluation. In fact, this study recorded an absolute zero level of depressive symptomatology in the days following the withdrawal of intervention as recorded by the BDI-II. This further confirms existing studies which suggest that positive psychotherapy is indeed an effective intervention measure for managing depression (e.g., Sin, Della Porta, & Lyubomirsky, 2011).

Thus, the current study re-echoes the need for clinicians to be mindful of the possibility of depression in patients with schizophrenia (Castle & Bosanac, 2012). In addition to providing basic education to the client regarding the nature of their illness, the use of interventions such as positive psychotherapy - aimed at identifying and building character strengths and positive virtues in client's, families, and communities - should also be encouraged among clinical practitioners in Nigeria. This would further serve to consolidate the already widely used psychotherapeutic methods such as cognitive behavioural therapy (CBT) and interpersonal psychotherapy for the management of certain psychopathologies. However, there is a need for further evaluation of this technique using larger sample and different research design.

Nevertheless, the findings of this study provide additional evidence of the importance of single-subject experimental research design for clinical practitioners. Although, an N = 1 design methodology may seem strange to the traditionally trained researcher (Lundervold & Belwood, 2000); single-subject research can also play a vital role in the development of evidence-based practice in counseling (Smith, Hollenbaugh, & Arora, 2014).

Acknowledgements

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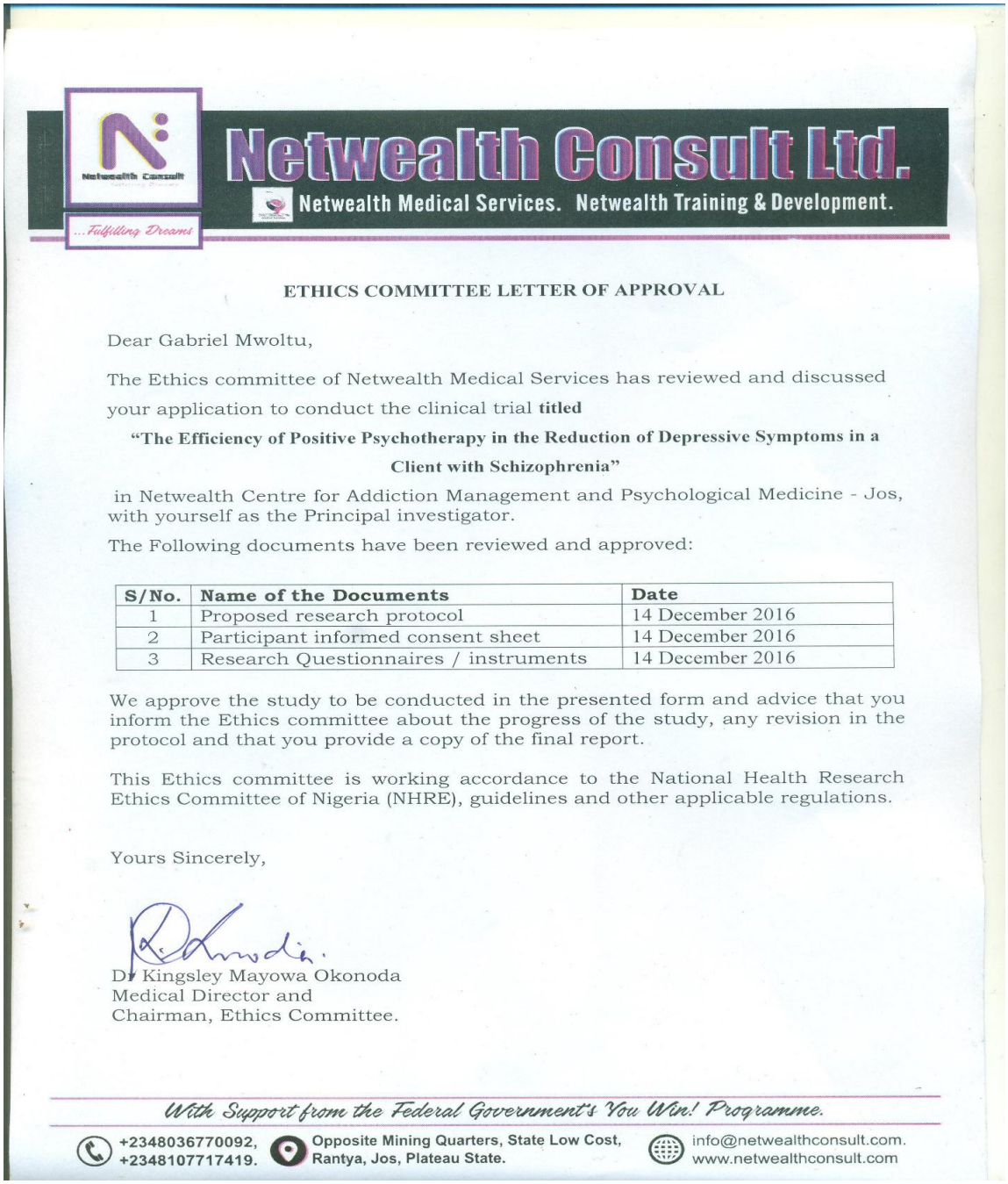
Appendix A



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ETHICS COMMITTEE LETTER OF APPROVAL

Dear Gabriel Mwoltu,

The Ethics committee of Netwealth Medical Services has reviewed and discussed your application to conduct the clinical trial **titled**

"The Efficiency of Positive Psychotherapy in the Reduction of Depressive Symptoms in a Client with Schizophrenia"

in Netwealth Centre for Addiction Management and Psychological Medicine - Jos, with yourself as the Principal investigator.

The Following documents have been reviewed and approved:

S/No.	Name of the Documents	Date
1	Proposed research protocol	14 December 2016
2	Participant informed consent sheet	14 December 2016
3	Research Questionnaires / instruments	14 December 2016

We approve the study to be conducted in the presented form and advice that you inform the Ethics committee about the progress of the study, any revision in the protocol and that you provide a copy of the final report.

This Ethics committee is working accordance to the National Health Research Ethics Committee of Nigeria (NHRE), guidelines and other applicable regulations.

Yours Sincerely,

Dr Kingsley Mayowa Okonoda
Medical Director and
Chairman, Ethics Committee.

With Support from the Federal Government's You Win! Programme.

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Appendix B

Consent to participate in a clinical trial

This form provides an overview of the nature of your participation in a clinical trial to improve your psychotherapy treatment outcome. Please take time to read and listen carefully after which, I will require your informed consent and completion of (signature on) this form to indicate that you have read and fully understood its contents and that you consent. Please feel free to ask questions and discuss any concerns regarding your involvement in this clinical trial.

Nature of the intervention

The initial phase of the intervention will involve the psychologist introducing you to positive psychotherapy. The technique will entail you attending regular one-on-one sessions that last approximately 35-45 minutes after which you will be required to fill out a questionnaire and assigned homework. During the intervention, you will receive four sessions that will include orientation, identifying character strengths, acknowledging the role of good vs. bad memories as well as being hopeful and optimistic, respectively. At the end of the sessions, the psychologist will work with you to decide if this intervention has benefited you in any way.

Treatment consent

I ..... voluntarily agree to participate in this clinical trial.

- I have had the purpose and nature of this clinical trial explained to me in writing and I have had the opportunity to ask questions about issues not clear to me.
- I understand that the outcome of this intervention may be used outside of this facility for knowledge sharing as such I can withdraw permission to use data from this intervention within two weeks after the sessions has been completed, in which case the information will remain confidential.
- I understand that my commitment to this intervention and the outcome of my sessions with the psychologist will remain anonymous and that nothing will reveal my identity if the information from this intervention is shared by Netwealth Centre for Addiction Management and Psychological Medicine.

_____ _____

Signature of Client Date

_____ _____

Signature of Principal Investigator Date

Appendix C

Calgary Depression Scale for Schizophrenia (CDSS)

Interviewer: Ask the first question as written. Use follow up probes or qualifiers at your discretion. Time frame refers to last two weeks unless stipulated. **N.B.** The last item, #9, is based on observations of the entire interview.

1. **DEPRESSION: How would you describe your mood over the last two weeks? Do you keep reasonably cheerful or have you been very depressed or low spirited recently? In the last two weeks how often have you (own words) every day? All day?**
   - 0. Absent
   - 1. Mild — Expresses some sadness or discouragement on questioning.
   - 2. Moderate — Distinct depressed mood persisting up to half the time over last 2 weeks; present daily.
   - 3. Severe — Markedly depressed mood persisting daily over half the time interfering with normal motor and social functioning.

2. **HOPELESSNESS: How do you see the future for yourself? Can you see any future? - or has life seemed quite hopeless? Have you given up or does there still seem some reason for trying?**
   - 0. Absent
   - 1. Mild — Has at times felt hopeless over the last two weeks but still has some degree of hope for the future.
   - 2. Moderate — Persistent, moderate sense of hopelessness over last week. Can be persuaded to acknowledge possibility of things being better.
   - 3. Severe — Persisting and distressing sense of hopelessness.

3. **SELF DEPRECIATION: What is your opinion of your self compared to other people? Do you feel better, not as good, or about the same as others? Do you feel inferior or even worthless?**
   - 0. Absent
   - 1. Mild — Some inferiority; not amounting to feeling of worthlessness.
   - 2. Moderate — Subject feels worthless, but less than 50% of the time.
   - 3. Severe — Subject feels worthless more than 50% of the time. May be challenged to acknowledge otherwise.

4. **GUILTY IDEAS OF REFERENCE: Do you have the feeling that you are being blamed for something or even wrongly accused? What about? (Do not include justifiable blame or accusation. Exclude delusions of guilt.)**
   - 0. Absent
   - 1. Mild — Subject feels blamed but not accused less than 50% of the time.
   - 2. Moderate — Persisting sense of being blamed, and/or occasional sense of being accused.
   - 3. Severe — Persistent sense of being accused. When challenged, acknowledges that it is not so.

5. **PATHOLOGICAL GUILT: Do you tend to blame yourself for little things you may have done in the past? Do you think that you deserve to be so concerned about this?**
   - 0. Absent
   - 1. Mild — Subject sometimes feels over guilty about some minor peccadillo, but less than 50% of time.
   - 2. Moderate — Subject usually (over 50% of time) feels guilty about past actions the significance of which he exaggerates.
   - 3. Severe — Subject usually feels s/he is to blame for everything that has gone wrong, even when not his/her fault.

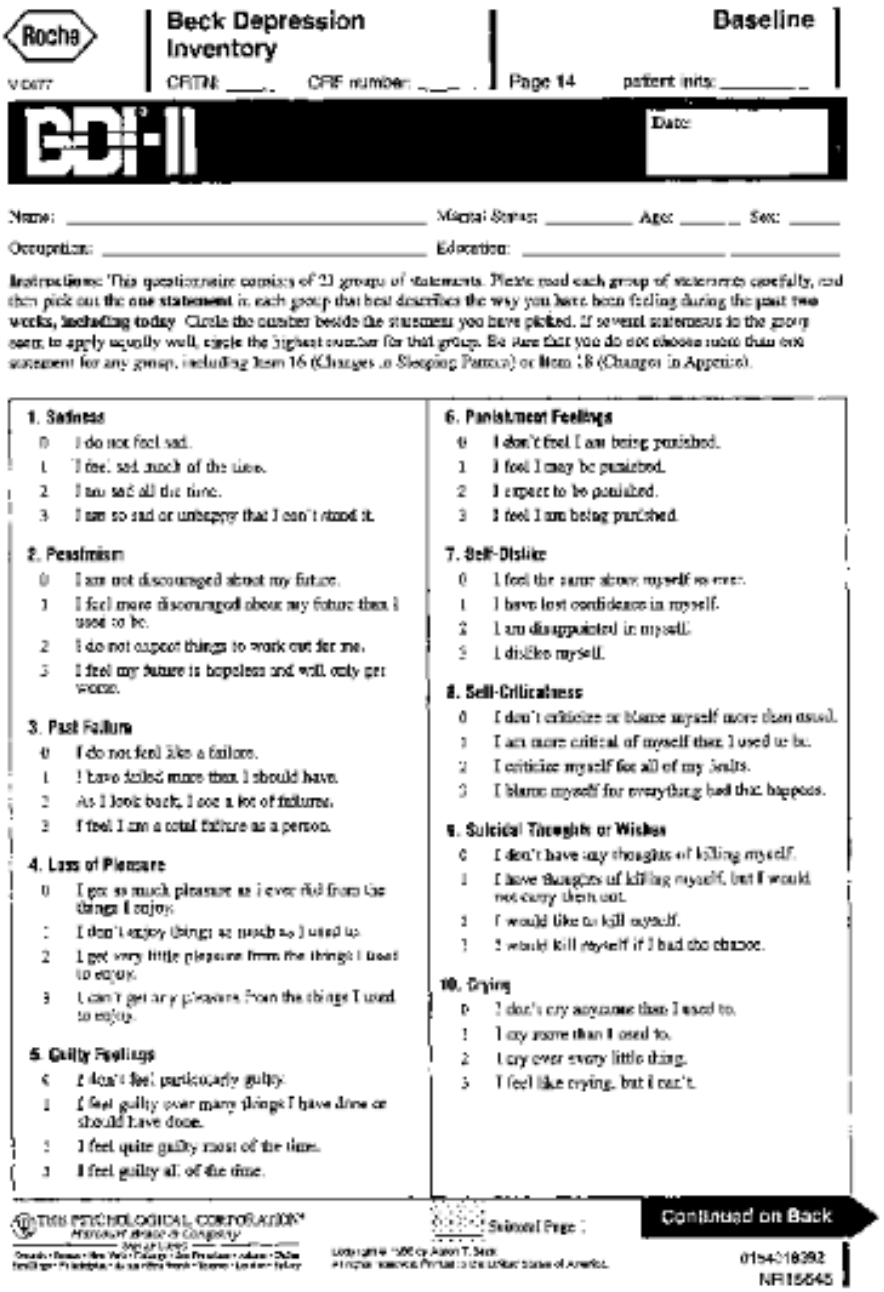
6. **MORNING DEPRESSION: When you have felt depressed over the last 2 weeks have you noticed the depression being worse at any particular time of day?**
   - 0. Absent — No depression.
   - 1. Mild — Depression present but no diurnal variation.
   - 2. Moderate — Depression spontaneously mentioned to be worse in a.m.
   - 3. Severe — Depression markedly worse in a.m., with impaired functioning which improves in p.m.

7. **EARLY WAKENING: Do you wake earlier in the morning than is normal for you? How many times a week does this happen?**
   - 0. Absent — No early wakening.
   - 1. Mild — Occasionally wakes (up to twice weekly) 1 hour or more before normal time to wake or alarm time.
   - 2. Moderate — Often wakes early (up to 5 times weekly) 1 hour or more before normal time to wake or alarm.
   - 3. Severe — Daily wakes 1 hour or more before normal time.

8. **SUICIDE: Have you felt that life wasn't worth living? Did you ever feel like ending it all? What did you think you might do? Did you actually try?**
   - 0. Absent
   - 1. Mild — Frequent thoughts of being better off dead, or occasional thoughts of suicide.
   - 2. Moderate — Deliberately considered suicide with a plan, but made no attempt.
   - 3. Severe — Suicidal attempt apparently designed to end in death (i.e.: accidental discovery or inefficient means).

9. **OBSERVED DEPRESSION: Based on interviewer's observations during the entire interview. The question "Do you feel like crying?" used at appropriate points in the interview, may elicit information useful to this observation.**
   - 0. Absent
   - 1. Mild — Subject appears sad and mournful even during parts of the interview, involving affectively neutral discussion.
   - 2. Moderate — Subject appears sad and mournful throughout the interview, with gloomy monotonous voice and is tearful or close to tears at times.
   - 3. Severe — Subject chokes on distressing topics, frequently sighs deeply and cries openly, or is persistently in a state of frozen misery if examiner is sure that this is present.

Appendix D



Roche

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Beck Depression Inventory

CRTN: ___. CRF number: ___ .

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patient init: _____

Baseline

BDI-II

Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Occupation: _____ Education: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the past **two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure

0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

THE PSYCHOLOGICAL CORPORATION

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