

**EFFECTS OF COGNITIVE BEHAVIOURAL THERAPY ON PSYCHO-SOCIAL
ADJUSTMENT OF VESICO VAGINAL FISTULAE (VVF) PATIENTS IN KWALLI VVF
REHABILITATION CENTRE KANO STATE, NIGERIA.**

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Abstract

Psycho-social adjustment of Vesico Vaginal Fistula (VVF) is a serious concern to the general public. Few studies have worked out to reduce trauma and ease challenges of VVF persons but no existing study has confirm the efficacy of Cognitive Behavioural Therapy (CBTH) on V.V.F. The present study therefore examined the effects of CBTH on psycho-social adjustment of V.V.F patients in Kwalli Rehabilitation Centre, Kano State, Nigeria. The study centrally focused on how CBTH enhance physical, emotional, and social adjustment of VVF patients. One research question and three hypotheses formulated for the study. True experimental research design was employed for the study. Ten (10) of the twenty (20) registered V.V.F patients participated in the study. Five participants each randomly assigned to the experimental and control groups respectively. Data were collected at baseline, and after eight-week of CBTH administration using Psycho-Social Adjustment Questionnaire for VVF Patients (PSAQ-VVFP, $\alpha = 0.87$). Descriptive (mean and standard deviation) and inferential (t-test) statistics analyzed the data. From the results, baseline data showed that VVF patients indicated low psycho-social adjustment. More so, CBTH significantly influenced psycho-social adjustment, especially, physical, emotional, and social adjustment of VVF patients. The study concluded that CBTH is an effective counselling therapy for increasing psycho-social adjustment among women with V.V.F. It was recommended that health and education institutions should adopt CBTH as one of the effective interventions for treating V.V.F cases.

Keywords: Cognitive Behavioural Therapy, Psycho-social Adjustment, Vesico Vaginal Fistulae, VVF Patients.

Introduction

Vesico Vaginal Fistulae (VVF) has constituted a great source of distress to most third world countries. VVF is often found among the Northern Nigerian women (Ahmed & Holtz, 2007). Worldwide two million women are living with vesico-vaginal fistula (VVF) with an annual incidence of 50,000 to 100,000 new cases (UNFPA, 2008). Nigeria accounts for about 40% of the annual global burden of VVF (UNFPA, 2008). An estimated two million women suffer from VVF globally. Nigeria with the highest prevalence of VVF in the world has estimated case between 400,000 and 800,000 and that about 20,000 new cases occurring annually, with 90 percent of the cases go untreated (Global Health, 2014). These figures may be low because accurate prevalence rates of obstetric fistula are not easy to come by due to inaccurate reporting, underreporting and shame, which keep women from complaining about fistula (Okoye, Emma-Echiegu, & Tanyi, 2014). VVF therefore is defined as an abnormal communication between the urinary bladder and the vagina that results in the continuous involuntary discharge of urine into the vaginal vault (Bashah, Worku, & Mengistu, 2018).

Vesico Vaginal Fistulae is a preventable maternal morbidity that results from prolonged and obstructed labour that is not relieved by cesarean section. It commonly occurs when there is Cephalopelvic disproportion (Capes, Ascher-Walsh, & Brodman, 2011). During obstructed labour, the difficult penetration of fetus through the birth canal due to malrotation or small maternal pelvis size occurs. The fetal pressure on the birth canal musculature occurs several hours, leaving excruciating pain. The condition cut off blood flow to delicate vaginal tissue, and ultimately causing cell death (pressure necrosis) (Wall, Arrowsmith, Briggs, Browning, & Lassey, 2005). As a result of prolonged labour, the necrotic vaginal tissue disintegrates, leaving a fistula or hole between the bladder or rectum and the vagina. This leads to uncontrollable leaking of urine and/or feces through the vagina (Wall, 2006).

The consequences of VVF victims are fatal. Foetal or early neonatal death occurs in the majority of obstetric fistula cases, and maternal clinical complications may include hemorrhage, infection and infertility (Wall, 2006). Apart from continuous leakage of urine, VVF also often leaves its victims with cervical and pelvic damages, and neurological conditions such as foot-drop, urogenital infections, ammonia dermatitis, genital lacerations, kidney infections and amenorrhea (Hilton, 2003). Women with fistula live in a state of distress and a fear of their future life (Lilian & Thecla, 2015). Additionally, higher symptoms of depression, posttraumatic stress disorder, somatic complaints, and maladaptive coping are reported among VVF persons (Wilson, Sikkema, Watt, & Masenga, 2015). They suffer physical challenges of losing body control, women's social and family relationships, and the challenges of losing income, marital relationships, mental health and economic capacity. Fistula also challenged women coping abilities (Bashah, Worku, & Mengistu, 2018; Lilian, et al., 2015).

Of all indications, people living with VVF encounter psycho-social adjustment issues. Findings from previous study show that nearly all the women with VVF stated that they go through a lot of physical, social, and emotional problems (Okoye, Emma-Echiegu, & Tanyi, 2014). Psycho-social adjustment therefore, is often more of psychological and social approach that involves dealing with new social and psychological standards and values. Psycho-social adjustment deals with physical, emotional, social, and mental stability of an individual amidst challenging environment (Shockden, Yahaya, Samaila, & Anthony, 2016). It is an attempt made by people living with VVF to address the standards, values and desires of a society as

well as psychological and personal desires in relation to the available resources so as to be accepted as well as to stabilize living situation amidst traumatic and stigmatized conditions. There are various components of psycho-social adjustment. The psychological which comprises of emotional, physical, and personal adjustment, and then the social adjustment. This study focused on the emotional, physical, and social components of psycho-social adjustment of people living with VVF.

Contextually, emotional adjustment refers to process where people living with VVF condition accept and adapt to their conditions by way of modifying attitudes to meet life satisfaction. Physical adjustment is the process where by people with VVF develops ability to appear need, dress well, maintain regular bath, maintain body hygiene, and look healthy in the face of VVF condition. Whereas, social adjustment to a VVF persons involves successfully managing time effectively, developing close friendship with other members of the society, and coping the frequency at which people (such as family members, friends, neighbours etc.) felt worried about meeting them.

Counsellors, psychologists, and relevant agencies have strategized interventions targeting at improving psychological well-being of VVF individuals. People living with VVF have also devised ways of physically coping with the problem which include bathing regularly and use of strips of old wrappers as pads. Many of them cope emotionally and financially by attending religious gatherings and having some form of income yielding business (Okoye et al, 2014). However, those interventions and strategies are yielding little outcomes. Due to efficacy of Cognitive Behavioural Therapy (CBT) on solving mental health challenges and other psychological disorders, there is tendency of producing promising results on psycho-social adjustment of VVF patients.

Cognitive Behavioural Therapy (CBTH) was developed by Aaron T. Beck, Albert Ellis, Maxie Maultsby, Michael Mahoney, Donald Meichenbaum, David Burns, Michael Mahoney, Marsha Linehan, Arthur Freeman, and others (McLeod, 2019). CBTH is a combination of cognitive and behavioural therapies that help people change negative thought patterns, beliefs, and behaviours so they can manage symptoms and enjoy more productive, less stressful lives. Cognitive behavioural therapy is a type of psychotherapeutic treatment that helps patients understand the thoughts and feelings that influence behaviours. In this context, people living with VVF get to know what VVF is, the causes, and its effects on their psycho-social lives, and how counselling can help them solve emotional, physical, and social problems.

Review of empirical studies outside Nigeria indicated dearth of studies testing the efficacy of CBTH on psycho-social adjustment of VVF patients. For example, Irina, Sarunas, Ginas and Saule (2018) on effects of a 7-month exercise intervention programme on the psycho-social adjustment and decrease of anxiety among adolescents. Findings showed that the 7-month exercise intervention programme enhanced psycho-social adjustment and its components and decrease anxiety in physical education lessons. Furthermore, Veerle, Lagerveld, Blonk, Wilmar, Leoniek and Wijngaardsde (2018) conducted a study on predicting the effectiveness of work-focused CBTH for Common Mental Disorders. Results yielded significant efficacy of CBTH on mental disorders. The implications of the findings in the reviewed studies tend to suggest that CBTH will have significant effects on psycho-social adjustment of VVF patients.

Further review of indigenous studies in Nigeria unveiled paucity of research aimed at promoting psycho-social adjustment of VVF patients through CBTH. Raji, Mairo, Yusuf, Yusuf, Abdul Hamid and Raji (2018) examined the knowledge, effect of Vesico Vaginal Fistulae (VVF) and satisfaction with VVF repair related services in a fistulae repair facility in North Western Nigeria. Findings indicated 55.6% respondents believed that VVF is due to evil spirit and 33.3% believed that VVF is due to punishment from the gods. Similarly, Ingwu, Odochi, Chikeme, and Israel (2018), examined the Knowledge of risk factors and perceived effects of Vesico Vaginal Fistulae among Primigravida attending antenatal care in Mater Misericordiae Hospital Afkpo North of Ebonyi State, Nigeria. The result shows that 51 (40.8%) of pregnant women have below the level of knowledge of the risk factors of Vesico Vaginal Fistulae.

The reviews indicated that many women living with VVF in Nigeria lack requisite knowledge about the condition and its effects on their lives. It portrays that knowledge about the interventions such as CBTH is lacking from the victims. Equipping with the Knowledge of CBTH will provide improvement in the emotional, physical, and social adjustment. Based on the identified gaps, the present study is tasked to establish the effectiveness of CBTH on psycho-social adjustment of VVF patients.

Aim and Objectives of Study

The study investigated the Effects of Cognitive Behavioural Therapy on Psycho-social Adjustment of VVF Patients in Kwalli Rehabilitation Centre, Kano State, Nigeria. Specifically, the study has the following objectives:

1. Ascertain the level of psycho-social adjustment of VVF patients prior CBTH.
2. Determine the effects of CBTH on psycho-social adjustment (emotional, physical, and social) of VVF patients.

Research Question

The following question was raised and answered in the study:

What is the baseline level of psycho-social adjustment of VVF patients before exposure to CBTH?

Hypotheses

The following null hypotheses are tested at 0.05 level of significance:

1. There is no significant difference in the emotional adjustment between VVF patients exposed to CBTH and those who are not.
2. There is no significant difference in the physical adjustment between VVF patients exposed to CBTH and those who are not
3. There is no significant difference in the social adjustment between VVF patients exposed to CBTH and those who are not

Methodology

Research Design

The researchers employed True Experimental (pre-test – post-test randomized control group) design for the study. This design consists of two groups: experimental and control group where only the experimental group received treatment (Cohen, Manion & Morrison, 2007). In

the current study, the experimental group were exposed to CBTH, while the control group was denied of such intervention.

Participants

The population for the study comprised of 20 VVF patients who registered and were receiving treatment in Kwalli Rehabilitation Centre, Kano State, Nigeria. The sample consisted of ten (10) VVF patients who completed the consent forms and agreed to participate in the study. There was no case of experimental mortality or attrition. All the 10 VVF patients completed treatment programme and control placebo. Purposively sampling method was used to select the participants because unregistered VVF individuals are hard to be accessed. The researchers willingly select those that registered and available for data collection and experimentation. All participants who gave informed consent to participate in the study were recruited for the study. Those unregistered and outside the Kwalli Rehabilitation Centre were exempted from the study.

Research Instrument

The instrument used for data collection was a “Psycho-Social Adjustment Questionnaire for VVF Patients (PSAQ-VVFP)”. It is a researchers’ developed instrument structured into section A and B. Section A elicited information from the VVF patients such as age and marital status. Section B consisted of twenty-five (25) items measuring three different components of psycho-social adjustment. Thus, emotional adjustment (10-items) has sample as “I tried not to be ashamed of myself”; social adjustment (9-items) has sample such as “I make sure that VVF does not affect my relationship with my relatives; and physical adjustment (6-items), sample include “I am determine to be physical strong even with my ill health.

Participants indicated the extent of their agreement about the statement by ticking the appropriate column on a scale as: 5 = Strongly agree (SA), 4 = Agree (A), 3 = Undecided (UD), 2 = Disagree (D), 1 = Strongly disagree (SD). Content validity was determined by experts from Educational Foundations Department, specifically, Psychology, Guidance and Counselling, and Research, Measurement and Evaluation units, University of Jos. Cronbach’s alpha reliability test was conducted and reliability coefficients yielded 0.87.

Procedure

The researchers first made contact with the Kwalli Rehabilitation Centre management through introductory letter from the Department of Educational Foundations, University of Jos. The essence of the letter was to use the VVF patients and some hospital facilities. Next, the researchers identified and made contacts with the participants through consent letter for ethical consideration. The approval was obtained before embarking on the study. Baseline data and posttest were obtained using direct method of administration before and after the intervention programme.

Participants were guided and encouraged to complete the questionnaire independently on reading the introductory letter and instructions. They were instructed to complete the questionnaire within 40 minutes and return directly to either the researcher or research assistants. The researchers later appreciated the time and efforts of the participants and research assistants. The responses of the participants were being promised to be treated with utmost confidentiality.

Experimental group: Five VVF patients were assigned to this group. The treatment package tagged CBTH for VVF patients were carried by the researchers and research assistants. The activities were completed within four (4) weeks, structured in eight (8) sessions. Each session lasted for 2 hours. Thus, first session had introduction, purpose, preliminary activities, and self-instruction training. The second session featured meaning and general state of people with VVF. Session three focused on the meaning of psycho-social adjustment. In session four, there was CBTH on emotional adjustment. Session five experienced CBTH on physical adjustment. Also, in session six, CBTH teaching was focused on the social adjustment, while session seven directed at activities on general counselling. The last session, which is session eight was the revision on the previous sections and the administration of posttest.

Control group: Five VVF patients were randomized to this group. Those in the control group were not exposed to CBTH. The placebo consisted of activities, structured into eight (8) sessions also. Each session lasted for two hours amounting to 120 minutes. Session one was an introduction. Session two was teaching on public health. Session three discussed health service delivery and systems development. In session four, teaching was directed to health co-operation. More so, brief overview of meaning and types of child abuse was discussed in session five. Session six featured teaching on sexual abuse. Also, teaching on the general causes, effects and prevention of child abuse was carried out in session seven. Whereas, summary of the discussion and administration of post-test was done in the last session (session 8).

Data Analysis

The data were analyzed using the descriptive statistics (means & standard deviation) to measure the baseline level of psycho-social adjustment of VVF patients. Also, t-test for independent sample was used to test the hypotheses at the 0.05 level of significance. This statistical method allows for the test of difference in the psycho-social adjustment mean scores of nurse educators exposed to CBTH and those who are not. This method examines the influence of an independent variable on a dependent variable (Cohen et al., 2007). All analysis was done with SPSS 23.

Results

Table 1: Baseline Level of Psycho-social Adjustment of VVF Patients Before Exposure to CBTH

Variable	Experimental (N=5)			Control (N=5)		
	$\bar{X}$	SD	Level	$\bar{X}$	SD	Level
Emotional Adjustment	16.13	4.51	Low	16.88	5.69	Low
Physical Adjustment	15.00	3.11	Low	16.25	2.71	Low
Social Adjustment	18.13	2.53	Low	17.38	2.07	Low
Overall Psycho-social Adjustment	30.25	7.34	Low	30.50	8.48	Low

Note: N = 10. Mean score 10.0 - 30.0 = Low emotional adjustment and 31.01 - 50.0 = High emotional adjustment. Mean 9-27 = Low Physical adjustment and 28-45 = high emotional adjustment. Mean range 6-15 = Low Social Adjustment and 16-30 = High Social adjustment. Mean 25-63 = Low Psycho-social adjustment and 64 - 125 = High Psycho-social adjustment.

Baseline data in table 1 shows that the mean scores for emotional, physical, social, and overall psycho-social adjustment for both experimental and control groups were low. This finding implies that VVF patients had low psycho-social adjustment issues before exposure to CBTH.

Table 2: Mean Difference in Emotional Adjustment between VVF Patients Exposed to CBTH and those who are not.

Group	N	$\bar{X}$	SD	df	t	p	Decision
Experimental	5	36.61	2.73	8	15.24	.000	Rejected
Control	5	16.51	1.43				

Note: N = 10. $P < .05$

Table 2 showed that the p-value = .000 is less than the .05 level of significance. However, the null hypothesis is rejected and implies that there is significant difference between the experimental ($M=36.61$, $SD= 2.73$) and the control groups ($M=16.51$, $SD= 1.43$) on post-test emotional adjustment, $t(8) = 15.24$, $p < 0.05$. This implies that CBTH has significant effect on emotional adjustment of VVF patients.

Table 3: Mean Difference in Physical Adjustment between VVF Patients Exposed to CBTH and those who are not.

Group	N	$\bar{X}$	SD	df	t	p	Decision
Experimental	5	30.50	2.18	8	13.69	.000	Rejected
Control	5	15.62	1.18				

Note: N = 10. $P < .05$

Table 3 showed that VVF patients treated with CBTH had higher physical adjustment ($M=30.50$, $SD= 2.18$) than those placed in the control group ($M=15.62$, $SD= 1.18$), $t(8) = 13.69$, $p < 0.05$. It means that CBTH had significant efficacy on physical adjustment of people living with VVF.

Table 4: Mean Difference in Social Adjustment between VVF Patients Exposed to CBTH and those who are not.

Group	N	$\bar{X}$	SD	df	t	p	Decision
Experimental	5	18.50	1.16	8	8.46	.000	Rejected
Control	5	6.13	.88				

Note: N = 65.

Table 4 revealed that the p-value = .000 is less than the level of significance ($p < .05$). Thus, the null hypothesis is rejected and implies significant difference between the experimental group posttest mean score ($M = 18.50$, $SD = 1.16$) and those in the control group ($M=6.13$, $SD= .88$), $t(8) = 8.46$, $p < 0.05$. It means that CBTH is an effective intervention for enhancing social adjustment of people living with VVF.

Discussion

The current study investigated the effects of CBTH on psycho-social adjustment of VVF patients in Kwalli Rehabilitation Centre. The results of baseline information demonstrated that VVF patients had low emotional, physical, social, and overall psycho-social adjustment prior exposure to CBTH. That is, low physical and sense of psychological wellbeing within the community (Malih & Jiyad, 2016) are reported. More so, difficulty coping with new standard and values, and getting along with the members of the society as much as they can (Cazan, & Stan, 2015) was also reported. This result aligned with previous findings that women with VVF go through a lot of physical, social, and emotional problems (Okoye et al., 2014). Although other factors count, but lack of exposure to CBTH could account for low psycho-social adjustment.

Also, significant difference in the emotional adjustment between the VVF patients randomized to experimental and control groups attributing to the effect of CBTH was established. Those in the experimental group unlike controlled group received CBTH counselling and developed adjustment strategies such as: not to be ashamed of themselves; feeling accepted by people around them; often feel supported by people; adjust living situation to avoid bringing pain to everyone; and refused any form of frustration as a result of VVF condition. This tends to corroborate Veerle, et al (2018) that used work-focused CBTH for Common Mental Disorders. Results yielded significant efficacy of CBTH on psychological issues such as mental disorders.

Another finding showed that VVF patients treated with CBTH had higher social adjustment than those assigned to the control group. Thus, CBTH has significant effect on physical adjustment of people living with VVF. VVF patients in the experimental group significantly gains from techniques of physical body maintenance. Due to CBTH exposure, they admitted to: maintain positive relationship with people; make sure that VVF does not affect their relationship with relatives; have concern for sex with my husband; feel superior and confident to speak in the public; kill intention of divorce because of VVF condition. Edwin, Alex, Irving, and Khan (2017) examined the effectiveness of cognitive behavioural therapy in a community-based pulmonary rehabilitation programme and findings tend to support the present result about the effectiveness of CBTH on psychological and social issues. Also, the effectiveness of Cognitive Behavioural Therapy on marital stress and emotional skills of infidel couples has been established (Aida & Shamoli, 2017).

More so, significant difference also reported in physical adjustment between the VVF patients in the experimental group and those in the control group. In other words, CBTH is proved to be an effective intervention for enhancing physical adjustment of people living with VVF. Infact, VVF patients that attended CBTH counselling indicated significant gains on: being determined to be physically strong even with the condition; always dress need and attractive; make sure they get physical attention of their husbands; caring for body amidst uncontrollable passage of urine that exposes them to body itching or odour; as well as looking out for means to see that the condition does not affect their child bearing. Previous finding (Thimm & Antonsen, 2014) showed similar outcome with the current finding by demonstrating effectiveness of cognitive behavioural group therapy for depression and physiological development.

Conclusion

The indispensable role of psycho-social adjustment of people living with VVF is central to their psychological and social well-being. It enable them equate environmental, personal, physical, psychological, and societal needs with available resources at their disposal. Cognitive Behavioural therapy has been hypothesized to an effective counselling therapy for improving psycho-social adjustment of VVF patients. The current study has tested this assumption and concluded that CBTH has significant effects on emotional, physical, and social adjustments of VVF patients. This implies that CBTH counselling is paramount for treating VVF patients. Those that will be subjected for CBTH stand out to maximize gains from such intervention.

Recommendations

The following recommendations are made based on the findings of the study:

1. Hospital management should adopt CBTH as one of the effective intervention for treating VVF. This will help improve low psycho-social adjustment (physical, emotional, and social) of people living with VVF.
2. Government should employ more counsellors and psychologists in the hospitals, schools, and other institutions to offer counselling on how to prevent potential VVF occurrences. Countenance of these personalities will help meeting the individual psycho-social needs of persons with VVF. Through CBTH counselling, they can offer assistance to help victims adjust psychologically and socially.
3. People living with VVF should not keep secrete of their condition but show up and subject themselves to specialists for both CBTH counseling and medical treatment. They should be able to develop adjustment techniques to accept life challenges that endangered them due to VVF condition.

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