

THE EFFICACY OF GROUP PSYCHO-EDUCATION ON POSITIVE PSYCHOSOCIAL FACTORS AND HEALTH-RELATED QUALITY OF LIFE AMONG VESICO VAGINAL FISTULA PATIENTS IN ZARIA

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ABSTRACT

Background: With psycho-educational programs, patients diagnosed with vesico vaginal fistula can have increase in their psychosocial factors and health-related quality of life.

Objective: To determine the efficacy of the eight-session group psycho-educational program designed to improved positive psychosocial factors and health-related quality of life.

Method: A pretest/posttest control group design was used to evaluate the efficacy of psycho-education. A structured questionnaire which tapped information on socio-demographic characteristics: HRQoL ($\alpha=0.79$), Pain Self-efficacy ($\alpha=0.81$), Optimism ($\alpha=0.82$), Social support ($\alpha=0.87$), Coping strategies ($\alpha=0.80$) and Perceived cultural practices ($\alpha=0.91$) scales was administered to the participants. Thirty participants clinically diagnosed VVF patients with low scores on HRQoL were randomly assigned into two groups of 15 (experimental and control) at the VVF unit of Ahmadu Bello University Teaching Hospital, Zaria. Treatment which consisted of eight sessions focused on knowledge of VVF, awareness of positive qualities, psychological impact of VVF and visual tools on VVF were involved. The HRQoL was used for assessing quality of life at posttest.

Results: The VVF patients in the experimental group at posttest had significant higher mean score on HRQoL (89.02 ± 1.09) compared to the control group at posttest with lower mean score (79.11 ± 1.10). They also scored higher on optimism (59.05 ± 7.25), self-efficacy (48.52 ± 9.34), problem-focused (66.13 ± 9.62), emotion-focused (54.17 ± 8.91), social support (60.05 ± 8.62) and lower on perceived cultural practices (33.74 ± 9.30).

Conclusion: Psycho-educational program improved psychosocial factors and health-related quality of life in sampled patients in Zaria. Relevant organizations should consider continuous application of psycho-education for longterm effect in improving the quality of life of vesico vaginal fistula patients.

Keywords: Health-related quality of life, Psycho-education, Vesico vaginal fistula, Positive psychosocial factors.

BACKGROUND

Vesico vaginal fistula (VVF) is an abnormal opening between a woman's vagina and bladder which results in the continuous dribbling of urine (DeBernis, 2009). In addition to suffering from uncontrolled urine, women living with fistula may suffer from physical impediments caused by the obstructed labour and also from psychological and social consequences (Muleta, Hamlin, Fantahun, Kenedy and Tafesse, 2008; Tennfjord, Muleta and Kiserud, 2014). VVF is frequently associated with decreased quality of life and impaired psychosocial functioning (Bellivier, Yon, Luquiens, Azorin, Bertsch, Gerard and Lukasiewicz, 2011). Quality of life is a broad concept but essentially it refers to an individual's well-being across a spectrum of areas of life such as occupational, emotional, social and physical functioning (Michalak, Yatham and Lam, 2005).

Physically, women with fistula usually experience low quality of life due to the "obstructed labour complex" (Arrowsmith, Hamlin and Wall, 1996) which includes several comorbidities (Wall, 2012; Arrowsmith, Hamlin and Wall, 1996; Gutman, Dodson, Mostwin, 2007; Ahmed, Anastasi and Laski, 2016) such as chronic pyelonephritis, vaginal stenosis (scarring), dyspareunia (pain during intercourse), pelvic inflammatory disease, urea dermatitis. Apart from physical issues, many women experience low quality of life due to persistent psychological complications from unceased leakage of urine resulting to abandonment by their spouses and relatives, keeping victims in poverty, anxiety, social isolation and depression (Wall, 2006; Ahmed, Anastasi and Laski, 2016).

Despite the increased recognition of the various difficulties caused, VVF has triggered an important change in treatment paradigms, which have started to focus not only on symptomatic but also on functional psychosocial recovery by means of integrative approaches, including the use of several tested and efficacious psychological interventions (Michalak, Yatham and Lam, 2005; Colom, 2012). In these psychological interventions, psycho-education is a relatively straightforward, cost-effective technique (Scott, Colom, Valenti, Sanchez-Moreno and Vieta, 2009) with a broad range of potential benefits (Roso, Moreno and Costa, 2005). Psycho-education is a professionally delivered treatment modality that integrates and synergizes psychotherapeutic and educational interventions. Many forms of psychosocial interventions are based on traditional medical model designed to treat pathology, illness, liability and dysfunction.

In contrast, psycho-education reflects a paradigm shift to a more holistic and competence-based approach, stressing health, collaboration, coping and empowerment (Dixon, 1999). It is based on strengths and focused on the present. Although psycho-education can be practiced one-on-one, group practice models set the stage for within-group dialogue, social learning, expansion of support and cooperation, the potential for group reinforcement of positive change, and network building (Penninx, van Tilburg, Kriegsman, Boeke, Deeg and van Eijk, 1999). It reduces isolation and serve as a forum for both recognizing and normalizing experience and response patterns among participants, as well as holding professionals accountable for high standards of service.

Several outcomes of psycho-educational interventions for schizophrenia are particularly noteworthy and have been demonstrated across studies (Dixon, Adams, and Lucksted, 2000; Dixon, McFarlane, Lefley, Lucksted, Cohen and Falloon'2001; McFarlane, Dixon, Lukens and Lucksted, 2003). Other positive outcomes have been documented for patients and for families as well, suggesting that psycho-education provides multiple benefits. These include decreased symptomatology and improved social functioning for the patient (Dyck, Hendryx, Short, Voss and McFarlane, 2002; Montero, Acensio, Hernandez, Masanet, Lacruz and Bellver, 2001) and improved quality of life and well-being (Gumus, Buzlu and Cakir, 2017; Gumus, Buzlu and Cakir, 2016; Abooe, Sahaf, Kamrani, Lotfi, Heidari and Shahmansouri, 2017). Psycho-educational approaches are also well established as adjunctive treatment for cancer, where patients are struggling with different form of challenges. Numerous randomized studies over the last two decades have shown significantly increased quality of life and decreased levels of anxiety and distress for persons with cancer who participate in professionally led psycho-educational groups (Cunningham, 2000; Bultz, Specia, Brasher, Geggie and Page, 2000). This reinforces the value and importance of emotional and enhanced coping in the face of any form of severe illness.

The number of well-documented evidence-based studies on psycho-education as an intervention for illness different from schizophrenia and cancer suggests the potential for model. There is significant evidence that psycho-educational interventions are associated with improved psychosocial functioning and quality of life, decreased symptomatology, and positive outcomes for the persons with illness (McGillion, Arthur, Victor, Watt-Watson and Cosman,2008; Vainboim, Franco,Ciccone, Miura, Pires de Aguiar, Scaff and Marie, 2014). In Nigeria, there has recently been a growing interest in psycho-educational intervention. However, it is clear that the programs are not sufficiently incorporated into routine practice in most medical and clinical settings in Nigeria (Osotimehin, 2013).

In recent years, an influential movement has been sweeping through the field of psychology which turns its gaze onto the area of positive psychological functioning (Straub, 2007). According to Seligman and Csikszentmihalyi (2000), positive psychology is a science of positive subjective experience, positive individual traits and positive institutions which premise to improve quality of life and prevent the pathologies that arise when life is barren and meaningless. Seligman and Csikszentmihalyi (2000) contended that psychology has to shift its focus from merely correcting the weaknesses of an individual to exploring human strengths and virtues. Early in the history of psychology, the primary goals of researchers and clinicians were three-fold: help alleviate illness, improve personal fulfillment and sense of meaning,

identify and support strengths. However, an unfortunate shift in focus occurred following World War II which effectively eliminated the latter two goals that focused on improving people's lives. Although this focus on alleviating human suffering led to incredibly important breakthroughs in the understanding of various illnesses and disorders, it left a serious gap in the understanding of human strengths and the possible preventive factors against illness (Seligman & Csikszentmihalyi, 2000).

Aims and objectives of the study

The present study aims to examine the efficacy of group psycho-education on positive psychosocial factors and health-related quality of life among VVF patients. The specific hypothesis tested by the study was that patients participating in the psycho-educational training would have increased psychosocial functioning and health-related quality of life, compared to patients comprising the control group.

METHODS

Design

This study was conducted utilizing a pretest-posttest control group design. This quasi-experimental study became necessary because of the need to assess the efficacy of psycho-education on health-related quality of life of VVF patients and psychosocial factors of optimism, self-efficacy, coping strategies, social support and perceived cultural practices. A randomized controlled trial was performed for the research and repeated measures were taken. The experimental group was given pretest, the psycho-education training and posttest. The effect of the psycho-educational training was compared between the experimental group and the control group to assess the extent to which the training had significant effect on the experimental group. The independent variable was the intervention given while the dependent variables were health-related quality of life and psychosocial factors (optimism, self-efficacy, coping strategies, social support and perceived cultural practices).

The design is represented as follows:

Experimental group	(R)	Y ₁	X	Y ₂
Control group	(R)	Y ₃		Y ₄

Where
R = Randomization
Y₁ = Pre-test (experimental group)
Y₂ = Post-test (experimental group)
X = Intervention (experimental group)
Y₃ = Pre-test (control group)
Y₄ = Post-test (control group)

Study Setting

The research was conducted in Ahmadu Bello University Teaching Hospital (ABUTH), Zaria, Kaduna State and the experiment took place in the consulting room of physicians at ABUTH. The choice of the North was based on the high prevalence of the VVF sufferers in that region.

Participants

The participants were VVF patients of ABUTH, Zaria in Kaduna State. Thirty (30) outpatients with VVF, who were randomly assigned to groups, participated in the study. Fifteen (15) participants were in the experimental group while fifteen (15) participants were in the control group.

Inclusion criteria – The participants:

- (a) Indicated their willingness to participate in psycho-educational intervention
- (b) Signed participant (consent) form after reading through
- (c) Could understand English and/or Hausa languages
- (d) Patients that were screened to have low quality of life

Exclusion Criteria: - Participants that have:

- (a) Additional serious psychic diagnosis as indicated in the consent form.
- (b) Uncorrected serious visual and acoustic disability
- (c) Reduced health status (other diseases) with considerable reduction of dexterity

Sampling Procedure

The participants for this phase of the study were selected using purposive sampling method. They were selected based on their willingness to be available for the psycho-educational program and they were randomly assigned into the two groups i.e experimental and control group. This was done by distributing papers labeled A and B, participants who picked papers labeled A were assigned into experimental group while those who picked papers labeled B were assigned into control group.

The essence of randomly assigning patients with VVF to groups was to ensure that all the participants had the equal opportunity of being assigned into any of the two groups without the researcher having any control over their choice of group and also to ensure that the groups were similar to each other in number, before the commencement of the training. The participants were informed that they were to participate in the training sessions to be scheduled for different times, based on the group the individuals belong to.

Ethical considerations

The approval of the Research Ethics Committee was given by the Social Sciences and Humanities Research Ethics Committee (SSHEC), University of Ibadan. After the committee had reviewed the research proposal, the committee gave its full approval of the research with Ref. No. UI/SSHEC/2015/0010, and written consent was obtained from the participating VVF patients. Chief Medical Director of ABUTH also gave his approval after submitting the necessary documents.

Recruitment Procedure

Participants were VVF patients receiving treatment at ABUTH, Zaria, Kaduna State. Having found to be eligible, the participants were guided through the informed consent processes. This was followed by random allocation into either experimental group or control group. The researcher then scheduled appointment for the participants after their groups had been determined.

Baseline Screening

All consenting participants in this research were screened on their first appointment by the researcher following these steps (Sullivan, 2010):

1. Assessing the appropriateness of Psycho-education for the participants through a screening evaluation to identify patients with low quality of life by using the battery of questionnaire.
2. Socio-demographic and baseline data of all consenting participants in this study were obtained after the screening.

The Experimental Group: This group participated in psycho-education alongside the conventional treatment for VVF. Measurement of health-related quality of life and psychosocial factors was taken at baseline and at the end of the 4th week.

The Control Group: This group participated in conventional treatment for VVF only. Measurement of health-related quality of life and psychosocial factors was taken at baseline and at the end of the 4th week.

Measurements

Section A: Socio-demographic factors

This consisted of the socio-demographic characteristics of VVF patients including age, religion, educational background, marital status, socio-economic status and ethnicity.

Section B: Health-Related Quality of Life Scale

HRQoL was assessed by the World Health Organization Quality of Life Assessment Instrument-UK Version (WHOQoL-BREF) which is an abbreviated 26-item with four dimensions (physical, psychological, social and environmental) developed by WHOQOL Group (1998). It is based on a Likert-type scale and is scored from 1 to 5, with higher scores indicating a better QoL. WHOQoL-BREF is self-administered scale and measures the subjective experience of the patients.

Skevington, Lotfy and O'Connell (2004) reported the following alpha levels for each sub-scales: Physical health (0.87), psychological health (0.95), social health (0.83) and Environment (0.84). These respective following alpha levels of 0.85, 0.85, 0.77 and 0.83 were reported for Nigeria by the same authors. The researcher reported alpha levels for each sub-scale as follows: Physical health (0.84), Psychological health (0.86), Social health (0.78) and Environment (0.85).

Section C: Life Orientation Test-Revised (LOT-R)

Optimism was measured by Life Orientation Tests-Revised (LOT-R) developed by Scheier, Carver and Bridges (1994). It is a 10-item measure of optimism versus pessimism. Of the 10 items, 3 items measure optimism i.e item 1, 4 and 10; 3 items (3, 7, and 9) measure pessimism and 4 items (2, 5, 6 and 8) serve as fillers. Respondents rate each item on 4-point scale: 0=strongly disagree, 1=disagree, 2=neutral, 3=agree and 4=strongly agree. The scoring format indicates that items 3, 7 and 9 are reversed scored and items 2, 5, 6 and 8 are fillers and should not be scored. Scores above the mean was considered as high on the scale meaning that they are optimistic while scores below the mean indicated low scores on the scale and they are pessimistic. Internal validity using Cronbach alpha had been found by the authors to be 0.78. The scale was revalidated and reported Cronbach alpha of 0.82. Examples of the items are "in uncertain times, I usually expect the best, I am always optimistic about my future."

Section D: Pain Self-efficacy questionnaire

Pain self-efficacy was measured by pain self-efficacy questionnaire developed by Nicholas (2006). The PSEQ was designed to assess the confidence people with on-going pain have in performing activities while in pain. It is a 10-item scale with a response format ranging from 0 (not at all confident) to 6 (completely confident). Internal consistency was excellent (0.92 Cronbach's alpha) and test-retest reliability was high over a 3-month period (Asghari and Nicholas, 2007). The scale was revalidated and reported a Cronbach alpha of 0.81. Examples of the items are "I can enjoy things, despite the pain; I can gradually become more active, despite the pain." A total score, ranging from 0 to 60 was calculated by adding the scores for each item. Scores above the mean was considered as high on the scale measuring that they have strong self-efficacy beliefs, while scores below the mean indicated low scores on the scale and weak self-efficacy beliefs.

Section E: Coping Scale

Coping was measured by coping scale developed by Carver, Schier and Weintraub (1998). Coping scale was designed to examine the coping technique device used by an individual experiencing stress. It is a 28 item scale and uses summated rating with 4 response choices ranging from, 1 usually don't do this at all (1) to usually do this (4). The authors reported reliability co-efficient of 0.82 for the scale. The scale was dichotomized into problem-focused coping which included (active coping, planning, suppression of competing activities, instrumental support, emotional support, self-blame and positive reinterpretation) and emotion-focused coping which included (acceptance, mental and behavioural disengagement, denial, ventilation, religion, humour and substance use) (Ben-Zur, 2005). The scale was revalidated and reported Cronbach alpha of 0.77 and Guttman split reliability of 0.80. Scores above the mean was considered as high scores on the scale while scores below the mean indicated low scores on the scale.

Section F: Perceived Social Support

Perceived social support was measured by a Multidimensional Scale of Perceived Social Support (MSPSS) developed by Zimet, Dahlem, Zimet & Farley (1988). The scale was designed to measure amount of social support a person perceives that she has received from family members, friends and significant others. It has 12 items with an internal consistency and co-efficient alpha of 0.91. The reliability co-efficient alpha of 0.87 and the Spearman Brown Split-half Co-efficient alpha were reported by the authors. The format is summarized rating response choices from 1 (very strongly disagree) to 7 (very strongly agree). The scale has two levels of scores; high and low. Scores below the norm indicated low social support and scores above the norm indicated high social support. The scale was revalidated by the researcher for this present study. Cronbach alpha of 0.87 and Guttman Split-half reliability of 0.78 were obtained. Examples of the items are "there is a special person who is around when I am in need; my family really tries to help me; I can count on my friends when things go wrong."

Section G: Perceived Cultural Practices Scale

Cultural practices leading to VVF was assessed on a 15-item scale developed by the researcher. The cultural practices scale was designed to assess the perception of socio-cultural factors that are the causes of VVF in the Northern part of Nigeria. The items on the cultural practices scale has summated rating format with response choice ranging from strongly agree (5) to strongly disagree (1), so that, high score indicated high perception of cultural practices on the scale, while low score indicated low perception of cultural practices. The researcher obtained an alpha co-efficient of 0.79 and Spearman Brown Split-half reliability of 0.77 for the scale in development stage.

Randomization

Simple random sampling technique (A and B alphabet) was used to assign the participants to the groups. This allowed for the equal number of women in the sample matched being included in the study. First, randomization was used where participants were randomly selected and randomly assigned to various treatment groups. Second, there was equal number of participants in both experimental and control groups. Third, the same instruction was given to the participants in the experimental group. The researcher and the trained research assistant conducted the experiment so as to control for experimenter effect. The cooperation of medical personnel on duty in each day was sought so as to avoid intrusion throughout the period of intervention.

Psycho-educational Intervention: Psycho-education is a cognitive, clinical examination program based on a non-injury model where return to normal activity is the main goal. The psycho-educational intervention was delivered in four weeks. The sessions were led by the researcher and the two research assistants that understand and speak Hausa Language very well. The intervention followed a structured format similar to other manual-based psycho-

educational intervention in the literature (Colom,et al,2009; Cakir, et al, 2009; Colom, et al, 2010; Gumus et al., 2015).

Psycho-educational Intervention Modules

The intervention comprised of four modules for four weeks. The training was usually between 45minutes to 1hour per day for two days in a week with the trained assistants who understand English and Hausa languages. The trained assistants also did the follow-ups in making sure that the participants were present for the meeting. All participants in the experimental group of this study were involved in psycho-educational intervention.

The group psycho-education objectives are as follows:

1. To help VVF patients identify the signs and symptoms of their illness and to enhance knowledge about the course of illness and risk factors.
2. To raise awareness concerns the impact of VVF on psychological, cognitive, physical, emotional and social functioning.
3. To improve knowledge of the major surgical and pharmacological treatment modalities for VVF and their common side effects.
4. To heighten awareness of cognitive strategies for coping with VVF.
5. To increase self-awareness, self-confidence and social skills through interaction with other group members.
6. To develop visual educational tools on VVF that will explain the etiology, prognosis and management of the disease.

The structure of each psycho-education session was as follows: 1. Review and evaluation of the previous sessions. 2. Discussion of the main topic of the current session; 3. Answering the patients` questions; 4.Asking the patients to summarize or review the subject matter; 5.Giving homework to the patients for the next session; 6.Scheduling the next session; 7.Closing the session (Gumus et al., 2015).

Post-Test: It was carried out immediately after the experiment had been concluded. Participants in experimental and control group were assessed on the various dependent measures.

Data Analysis

Descriptive and inferential analyses were used to analyze the data in this study. The mean and standard deviation for each scale were calculated; the norms for the dependent variables were also established. This enabled the researcher to determine those that were to include in the program. One- way Analysis of Covariance and t- test for independent measure were also employed in the analysis.

RESULTS

Table 1: Demographic characteristics of participants in experimental and control groups.

Variable	Experimental		Control		
	N	%	N	%	
Age					
15-40 years	14	93.3	15-40	13	86.7
41-70	1	6.7	41-70	2	13.3
Religion					
Christianity	0	0	Christianity	2	13.3
Islam	14	93.3	Islam	13	86.7
Others	1	6.7	Others	0	0

Marital Status

Single	14	93.3	Single	2	13.3
Married	8	53.3	Married	7	46.7
Divorced	6	40.0	Divorced	6	40.0
Ethnicity					
Igbo	1	6.7	Igbo	1	6.7
Yoruba	0	0	Yoruba	1	6.7
Hausa/Fulani	14	93.3	Hausa/Yoruba	13	86.6
Occupational Status					
Skilled	3	20.0	Skilled	2	13.3
Unskilled	12	80.0	Unskilled	13	86.7
Educational Qualification					
Non-Formal Education	8	53.0	Non-Formal Education	8	53.0
Primary School	6	40.0	Primary School	8	40.0
Secondary School	1	6.7	Secondary School	1	6.7
NCE/ND	0	0	NCE/ND	0	0

Sixty eight VVF patients were identified with low health-related quality of life, only thirty met the inclusion criteria after screening and were categorized into the experimental (15) and control groups (15).

Frequency distribution of the participants` ages revealed that for experimental group, 14 (93.3%) of the participants aged between 15 and 40 years were categorized as young participants while 1 (6.7%) aged between 41-70 years categorized as old participant. For control group, 13 (86.7%) were between 15-40 years were categorized as young participants, while 2 (13.3%) between 41 and 70 years categorized as old participants. The religion distribution of the experimental group indicated that Christians were not represented, 14 (93.3%) were Muslims while 1 (6.7%) participant indicated other. For control group, 2 (13.3%) were Christians, 13 (86.7%) Muslims while other was not represented. Marital status distribution revealed that for experimental group, 1 (6.7%) was single, 8 (53.3%) were married while 6 (40.0%) were divorced. For control group, 2 (13.3%) were single, 7 (46.7%) were married while 6 (40.0%) were divorced.

The ethnic distribution revealed for experimental group that 1 (6.7%) was Ibo, there was no representative for Yoruba while 14 (93.3%) were Hausa/Fulani. For control group, 1 (6.7%) was Ibo, 1 (6.7%) was Yoruba while 13 (86.6) were Hausa/Fulani. Also 3 (20.0%) of participants in the experimental group were skilled in occupation while 12 (80.0%) were unskilled in occupation. In the control group, 2 (13.3%) of the participants were skilled in occupation while 13 (86.7%) were unskilled. Frequency distribution of the participants educational qualification revealed that for experimental group, 8 (53.0%) of the participants had non-formal education, 6 (40.0%) went to primary school, 1 (6.7%) went to secondary school, while no one went to NCE/ND. For control group, 6 (40.0%) had non-formal education, 8 (53.3%) went to primary school, 1 (6.7%) went to secondary school while no one went to NCE/ND.

Table 2: Comparison of psychosocial variables of participants in the experimental and control groups at baseline of study.

Variables	EXPERIMENTAL	CONTROL
	n=15 $\bar{x} \pm S.D$	n=15 $\bar{x} \pm S.D$
Optimism	50.05 \pm 6.52	50.06 \pm 5.9
Self-Efficacy	36.52 \pm 8.34	35.52 \pm 8.7
Coping Strategies:		
Problem focused	46.32 \pm 8.15	45.69 \pm 10.25
Emotion focused	31.22 \pm 7.12	32.15 \pm 9.13
Social Support	49.05 \pm 5.52	49.41 \pm 4.9
Perceived Cultural Practices	45.24 \pm 6.30	44.92 \pm 7.25
Health-Related Quality Of Life	79.62 \pm 10.09	78.73 \pm 1.57

At baseline of the study, the mean values of the selected psychological variables for both groups showed that the mean score on the optimism scale for the experimental group was 50.05 and 50.06 for the control group. No significant difference was observed in mean score on the optimism scale of both the experimental and the control groups at baseline. The mean score on the self-efficacy scale for the experimental group was 36.52 and 35.52 for the control group. No significant difference was observed in mean score on the self-efficacy scale of both the experimental and the control groups at baseline. The means of coping strategies (problem-focused and emotion-focused) scores of the experimental (46.32 and 31.22) and control groups (45.69 and 32.15) respectively were not significantly different at baseline. The mean score on the social support scale of the experimental (49.05) and control groups (49.41) were not significantly different at baseline. The mean score on perceived cultural practices scale of the experimental (45.24) and control groups (44.92) were not significantly different at baseline. The mean score on Health-Related Quality of Life scale of the experimental (79.62) and control groups (78.73) were not significant at baseline.

Table 3: Comparison of psychosocial variables of participants in the experimental and control groups at the end of 4th week of the study.

Variables	EXPERIMENTAL	CONTROL
n=15 $\bar{x} \pm S.D$	n=15 $\bar{x} \pm S.D$	
Optimism	59.05 \pm 7.52	51.06 \pm 5.6
Self-Efficacy	48.52 \pm 9.34	34.52 \pm 8.5
Coping Strategies:		
Problem focused	66.13 \pm 9.62	45.10 \pm 12.11
Emotion focused	54.17 \pm 8.91	33.42 \pm 9.17
Social Support	60.05 \pm 8.62	50.31 \pm 6.9
Perceived Cultural Practices	33.74 \pm 9.30	42.92 \pm 8.25
Health-Related Quality Of Life	89.02 \pm 1.09	79.11 \pm 1.10

At the end of 4th week of the study, the mean values of the psychological variables for both groups were shown in Table. The mean score on the optimism scale for the experimental group was 59.05 and 51.06 for the control group. There was a significant difference observed in the mean score on the optimism scale of both the experimental and the control groups at the end of 4th week. The mean score on the self-efficacy scale for the experimental group was 48.52 and 34.52 for the control group. There was a significant difference observed in mean score on the self-efficacy scale of both the experimental and the control groups at the end of 4th week. The mean scores on coping strategies (problem-focused and emotion-focused) for the experimental group were 66.13 and 54.17, also for the control group was 45.10 and 33.42 respectively. There were significant differences observed in the mean scores of both problem and emotion focused coping for the experimental and the control groups at the end of 4th week. The mean score on the social support scale for the experimental group was 60.05 and 50.31 for the control group. There was significant difference between the two groups at the end of 4th week. The mean score on the perceived cultural practices scale for the experimental group was 33.74 and 42.92 for the control group. There was a significant difference between the two groups at the end of 4th week. The mean score on the Health-Related Quality of Life scale for the experimental group was 89.12 and 79.11 for the control group. There was significant difference between the two groups at the end of 4th week.

Table 4: One-way ANCOVA showing the effect of Psycho-education on Health-Related Quality of Life among VVF patients.

	Sum of Squares	Df	Mean Square	F	P	η^2
Pre-test	11.716	1	11.716	.721	>.05	.026

Treatment	606.813	1	606.813	37.337	<.05	.580
Error	438.817	27	16.252			
Corrected Total	1103.867	29				

* Significant at p<0.05

It is evident as shown in Table 4 that the effect of treatment as indicated on the post-test scores of participants is significant ($F_{(1,27)} = 37.337, p < .05$). This shows that there was significant effect of treatment on Health-Related Quality of Life among women with VVF. In order to determine the magnitude of the mean of Health-Related Quality of life scores of participants in each of the groups (treatment group and control group), the post hoc shown in Table 5 indicated this.

Table 5: LSD Post Hoc Analysis Showing Mean Differences between Groups.

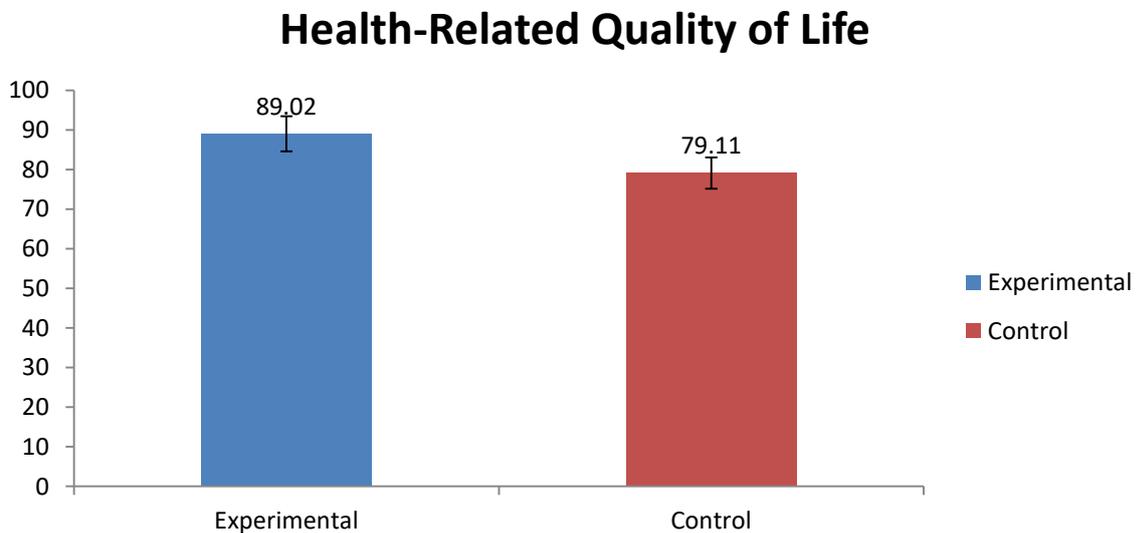
	X	SD	LSD	Sig.
Experimental	89.02	1.09		
Control	79.11	1.10	9.91*	<.001

Covariates appearing in the model are evaluated at the following values: pretest = 54.6000.

** mean differences Significant at p<0.01

As shown in Table 5 the result of the post hoc analysis on the level of differences in health-related quality of life between the women exposed to psycho-education and the control group (LSD = 9.91, p<.01). The comparison of the means of experimental group (89.02) and control group (79.11) also indicated a significant difference. The difference is also represented in bar chart in fig.1

Fig. 1: Bar chart graph showing the difference between experimental group and control group on health-related quality of life among VVF patients.



Further analysis also indicated that women who received psycho-education training would have higher significant report on their level of health-related quality of life considering the sub scales (Physical, Psychological, Social and Environment) compared to the control group at the post-test. The t-test for independent sample revealed this in Table 6.

Table 6: Summary table of t-test for independence showing the differences in the level of health-related quality of life between the experimental and the control groups based on four dimensions of health-related quality of life.

	TREATMENT	N	Mean	S.D	T	df	P
Physical health	Experimental	15	25.00	2.73	2.20	28	<.01

Psychological health	Control	15	22.47	3.54	2.43	28	<.01
	Experimental	15	20.47	3.29			
Social health	Control	15	17.67	2.87	3.94	28	<.001
	Experimental	15	11.73	2.63			
Environmental health	Control	15	7.80	2.83	1.96	28	<.05
	Experimental	15	27.46	3.68			
	Control	15	24.86	3.62			

From the table 6, it was observed that there was statistically significant effect of psycho-education intervention programme on Physical health $t(28) = 2.20, p < .01$, Psychological health $t(28) = 2.43, p < .01$, Social health $t(28) = 3.94, p < .001$, and Environmental health $t(28) = 1.96, p < .05$. Women exposed to psycho-education significantly reported better physical, psychological, social and environmental health compared to women in the control group.

Fig. 2: Bar chart graphs showing the differences between experimental and control groups on sub-scales (physical, psychological, social and environment) of Health-Related Quality of Life among VVF patients.

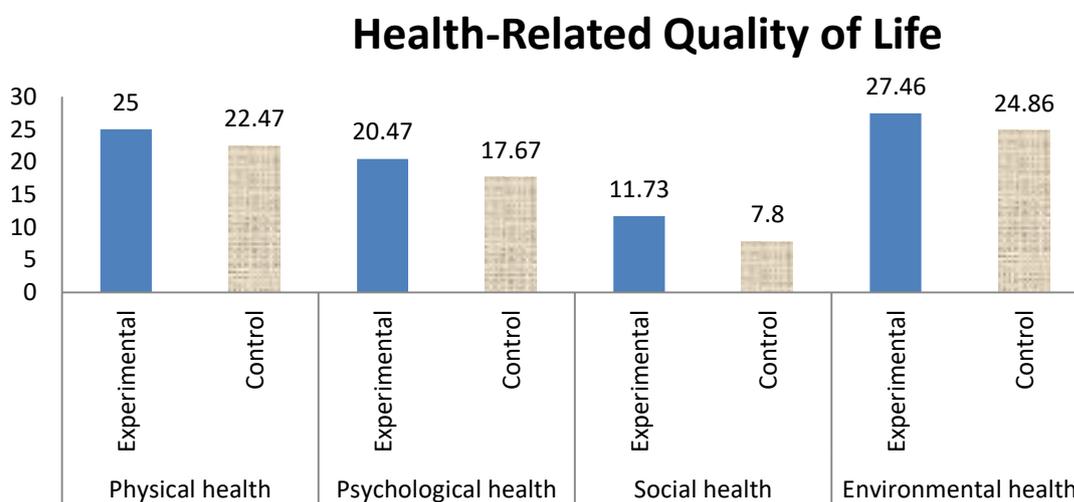


Fig. 2 is a graphical representation showing the effectiveness of psycho-education on sub-scales of health-related quality of life among VVF patients in experimental and control groups. The sub-scales are physical health, psychological health, social health and environmental health. It is evident that psycho-education was very effective because there was an increase in health-related quality of life in all sub-scales of experimental group compared to control group.

DISCUSSION

Findings revealed that women with VVF who were exposed to psycho-educational training reported significant higher level of health-related quality of life compared to women in the control group. The result demonstrated that there were significant higher reports of HRQoL among women with VVF in the experimental group. The VVF patients that were exposed to psycho-education reported higher level of HRQoL compared to the control group; meaning that the intervention had significant effect in improving HRQoL among women with VVF. This was an indication that the psycho-education modules have improving effects on their HRQoL. After participating in the psycho-educational program, all participants showed improvement in their quality of life. As regards the women in control group, their quality of life remained the

same. It is believed that psychotherapeutic intervention applied in a group, offer an environment where individuals can express their feelings, and share knowledge and life experiences related to illness. This environment is seen as a place for showing experiences related to caring for sick individuals and a place where patients may identify with each other. Patients are usually eager for information as a way to better understand the disease and guide them in questioning decisions related either to treatment or to its side effects (Fox and Lantz, 1998; Lepola et al. 2001).

The present findings supported earlier findings of McGillion, Arthur, Victor, Watt-Watson, and Cosman (2008) who used meta-analysis in order to determine the effectiveness of psycho-educational interventions for improving symptoms, HRQL and psychological well-being among stable angina patients. The effectiveness of psycho-education has been demonstrated by different researchers in different range of illnesses such as bipolar disorder (Michalak et al, 2005), Chronic liver diseases (Sharif et al, 2005), Schizophrenia (Baumi et al, 2006).

Findings revealed that women with VVF who received intervention or psycho-education training reported higher significant level of all aspects of health-related quality of life (such as physical, psychological, social and environment) compared to the control group at the post-test. The results demonstrated that scores for experimental groups in all the subscales (physical, psychological, social and environment) were significantly higher compared to that of control groups of these subscales. Psycho-educational modules have an increasing effect on factors affecting health related quality of life across treatment period. This finding indicated that participants that were exposed to psycho-educational treatment reported better in physical, psychological, social and environment health compared to control group. In other words, the intervention training was more effective.

It is also worth noting that psycho-educational intervention uniformly improved all domains of health-related quality of life. Significant improvements were seen in mean scores and there was a trend toward improved health-related quality of life in most of the questionnaire's domains. Furthermore, the four domains (physical, psychological, social and environment) were significantly improved on group level. Thus group psycho-education appeared to have a strong general effect on all aspects of health-related quality of life with a more pronounced specific effect on social health. One of the eight psycho-educational sessions focused on treatment issues in VVF, covering topics such as increase in self-awareness, self-confidence, and social skills through interaction with other group members. Education in these issues may have allowed group members to make relatively rapid changes in their lives to improve their social functioning. The effectiveness of psycho-education in improving all domains of HRQoL has been demonstrated by different researchers (Ros, 2014; Bauer, et al., 2006; Dogan and Sabaciogullari, 2003).

The present study also found that eight-session group psycho-education increased psychosocial factors coping strategies, social-support, self-efficacy and optimism. This finding is not surprising because of the expectation that people with different positive psychological qualities or dispositions should have increase in their quality of life, indicating a growing interest for psychosocial aspects that are positive in enhancing quality of life of people with chronic diseases. Previous studies evaluating other psychosocial factors such as coping strategies, the extent of social support, self-efficacy and level of optimism in daily life showed positive influence on patients' health status (Garrett et al. 1990; Hjortswang et al. 2003; Janke et al. 2005). However, psycho-educational training was ineffective on perceived cultural practices among patients with VVF. This finding showed that the cultural practices in the North such as "Gishiri cut", early girl child marriage, female genital mutilation etc. affected their health and also affected all aspects of life including social relationships, cause physical disability and psychological problem.

Limitations



The limitations of this study are that the study was carried out in a single center and consisted of a small number of VVF patients. Performing these studies in multiple centers with a larger sample numbers would contribute further to the literature.

Conclusion

Psycho-educational intervention was found to be efficacious in addressing positive psychosocial qualities and improve health-related quality of life. This is useful in the body of knowledge in the area of managing psychological and social conditions in women with VVF. Psycho-education had a significant impact in improving the health-related quality of life of women with VVF. Also, psycho-education had a significant influence on the four dimensions of health-related quality of life (physical, social, psychological and environment domain). This study showed that psycho-education led to the patients' better knowledge of the reality of their problem. However, psycho-education was not found to improve perceived cultural practices among patients with VVF. This finding showed that psycho-educational training received by the VVF patients on cultural practices was not effective. It is recommended that psycho-educational program should be incorporated into the management of women with VVF as it has shown its effectiveness in raising their hopes and add values to their life.

REFERENCES

- Abooe, A., Sahaf, R., Kamrani, A. A., Lotfi, M. H., Heidari, F and Shahmansouri, N. (2017).The effect of psycho-education on quality of life and dependency in elderlies. *Elderly health Journal*, 3(2), 107-112.
- Ahmed, S., Anastasi, F and Laski, L. (2016). Double burden of tragedy: still birth and obstetric fistula. *Lancet Global Health*, 4(2), 80-82.
- Arrowsmith, S., Hamlin, E. C and Wall, L. L. (1996). Obstructed labour injury complex: obstetric fistula formation and the multifaceted morbidity of maternal birth trauma in the developing world. *Obstetric Gynaecological Survey*, 51(9), 568-74.
- Asghari, A.,& Nicholas, M.K. (2007). Pain self efficacy beliefs and pain behaviour A prospective study. *Pain*, 94, 85-100.
- Bauer, M. S., McBride, L., Williford, W. O., Glick, H., Kinosian, B., Altshuler, L and Sajatovic, M. (2006). Cooperative Studies Program 430 Study Team: Collaborative care for bipolar disorder, II: impact on clinical outcome, function and costs. *Psychiatric Services*, 57(7), 937-945.
- Bellivier, F., Yon, L., Luquiens, A., Azorin, J. M., Bertsch, J., Gerard, S and Lukasiewicz, M. (2011). Suicidal attempts in bipolar disorder: results from an observational study (EMBLEM). *Bipolar Disorders*, 13(4), 377-386.
- Benzur, H. (2005). Coping, Distress and Life Events in a community Sample: *International Journal of Stress Management*, 12, 188 – 196.
- Bultz, B. D., Specia, M., Brasher, P. M., Geggie, P. H and Page, S. A. (2000).A randomized controlled trial of a brief psycho-educational support group for partners of early stage breast cancer patients. *Psychooncology*, 9, 303-313.
- Carver, C. S., Scheier, M. F., and Weintraub, J. K. (1998).Assessing coping strategies. A theoretical based approach. *Journal of Personality and Social Psychology*, 56, 267 – 283.
- Colom, F. (2012). Social cognition and its potential role in bipolar disorder roughening an editorial comments to Samame, C, Matino, D. J, Strejilevich, S. social cognition in euthymic bipolar disorder: Systematic review and meta-analytic approach. *Acta Psychiatrica Scandinavica*, 125, 264-265.
- Cunningham, A. J. (2000). Adjuvant psychological therapy for cancer patients: putting it on the same footing as adjunctive medical therapies. *Psychooncology*, 9, 367-371.
- De Bernis, L. (2009). Obstructed fistula: guiding principles for clinical management and programme development, a new WHO guideline. *International Journal of Gynaecologic*, 99(1), 117- 121.
- Dixon, L., Mcfarlane, W., Lefley, H., Lucksted, A., Cohen, M and Fallon, I. (2001). Evidence-based practices for services to families of people with psychiatric disabilities. *Psychiatric Services*, 52, 903-908.
- Dixon, L., Adams, C and Lucksted, A. (2000). Update on family psycho-education for schizophrenia. *Schizophrenia Bulletin*, 26, 5-20.
- Dixon, L. (1999). Providing services to families of persons with schizophrenia: present and future. *Journal of Mental Health Policy and Economics*, 2, 3 – 8.
- Dogan, S and Sabanciogullari, S. (2003). The effects of patient education in lithium therapy on quality of life and compliance. *Archives of Psychiatric Nursing*, 17(6), 270-275.
- Dyck, D. G., Hendryx, M. S., Short, R. A., Voss, W. D and Mcfarlane, W. R. (2002). Service use among patients with schizophrenia in psycho-educational multiple family group treatment. *Psychiatric Services*, 53, 749-754.
- Fox, S and Lantz, C. (1998). The brain tumor experience and quality of life: a qualitative study. *Journal of Neuroscience Nursing*, 30(4), 245-252.
- Garrett, J. W and Drossman, D. A. (1990).Health status in inflammatory bowel disease. *Gastroenterol*, 1(99), 90-96.
- Gumus, F., Buzlu, S and Cakir, S. (2017). The effectiveness of individual psycho-education on functioning and quality of life with bipolar disorder in Turkey: A randomized controlled study. *International Journal of Caring Science*, 10(1), 490-502.

- Gumus, F., Buzlu, S and Cakir, S. (2016). A sampled individual psycho-education model for bipolar disorder. *Journal of Psychiatric Nursing*, 7(3), 142-147.
- Gumus, F., Buzlu, S and Cakir, S. (2015). Effectiveness of individual psycho-education on recurrence in bipolar disorder: A controlled study. *Achieves of psychiatric Nursing*, 29(3), 174-179.
- Gutman, R. E., Dodson, J. L and Mostwin, J. L. (2007). Complications of treatment of obstetric fistula in the developing world: gynatresia, urinary incontinence and urinary diversion. *International Gynecologic Obstetric*, 99(1), 52-64.
- Hjortswang, H., Jarnerot, G., Curman, B., Sandberg-Gertzen, H. ... Strom, M. (2003). The influence of demographic and disease-related factors in health-related quality of life in patients with ulcerative colitis. *European Journal of GastroenterolHepato*, 15, 1011-1020.
- Janke, K. H., Klump, B., Gregor, M., Meisner, C and Haeuser, W. (2005). Determinants of life satisfaction in inflammatory bowel disease. *Inflammatory Bowel Disease*, 11(3), 272-286.
- LePola, T., Toljamo, N., Aho, R and Louet, T. (2001). Being a brain tumor patients: a descriptive study of patients' experiences. *Journal of Neuroscience Nursing*, 33(3), 143.
- Mcfarlane, W. R., Dixon, L., Lukens, E and Lucksted, A. (2003). Family psycho-education and schizophrenia: A review of literature. *Journal of Marital and Family Therapy*, 29, 223-245.
- McGillion, A. V., Watt-Watson, N. P., &Cosman., M. (2008). Effectiveness of Psychoeducational Interventions for Improving Symptoms, Health-Related Quality of Life, and Psychological well Being in Patients with Stable Angina. *Current Cardiology Reviews*. 4(1), 1-11.
- Michalak, E. E., Yatham, L. N and Lam, R. W. (2005). Quality of life in bipolar disorder: a review of the literature. *Health and Quality of life Outcomes*, 3: 72.
- Montero, I., Asencio, A., Harnandez, I., Masanet, M. J., Lacruz, M and Bellver, F. (2001). Two strategies for family intervention in schizophrenia. A randomized trial in a Mediterranean environment. *Schizophrenia Bulletin*, 27, 661-670.
- Muleta, M., Hamlin, E. C., Fantahun, M., Tafesse, B., Kennedy, R. C and Tafesse, B. (2008). Health and social problems encountered by treated and untreated obstetric fistula patients in rural Ethiopia. *Journal of Obstetric Gynaecology*, 30(1), 44 – 50.
- Nicholas, M.K.(2006). The pain self-efficacy questionnaire: taking pain into account. *European Journal of pain*, 2, 1-10.
- Osoimehin, B. (2013). Obstetric fistula: ending the health and human rights tragedy. *Lancet*, 381, 1702-1703.
- Peninx, B. W., Van Tilburg, T., Kriegsman, D. M., Boeke, A. J., Deeg, D. J., & Van Eijk, J. T. (1999). Social network, social support and loneliness in older persons with different chronic diseases. *Journal of Aging and Health*, 11, 151 – 168.
- Roso, M. C., Moreno, R. A and Costa, E. M. (2005). Psycho-educational intervention in mood disorders: an experience of affective disorders study group. *Review Bras Psiquiatr*, 27: 165.
- Scheier, M. F., Carver, C. S. & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (trait anxiety, self-mastery and self-esteem): A re-evaluation of the Life Orientation Test. *Journal of Personality and Social Psychology*, 4, 1063-1078.
- Scott, J., Colom, F., Valenti, A. B. N., Sanchez-Moreno, J. M. G and Vieta, M. A. A. (2009). Long term mental health resource utilization and cost of care following group psycho-education or unstructured group support for bipolar disorders: a cost-benefit analysis. *The Journal of Clinical Psychiatry*, 70(3), 378-386.
- Seligman, M. E. P and Csikszentmihalyi, M. (2000). Positive Psychology: An introduction. *American Psychologist*, 55, 5 – 14.
- Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of Life assessment: Psycho-metric properties and results of the international field trial. A Report from the WHOQOL Group. *Quality of Life Research*, 13, 299-310.
- Straub, R. O. (2007). *Health psychology: A biopsychosial approach*. New York, NY; Macmillan.



- Sullivan, M. J. L. (2010). *Progressive Goal Attainment Program*. Treatment manual 3rd edition.
- Tennfjord, M. K., Muleta, M and Kiserud, T. (2014). Musculoskeletal sequelae in patients with obstetric fistula- a case-control study. *BMC Women Health, 14*: 136.
- Vainboim, T. B., Pereira Franco, M.H., Ciccone, A.O., Miura, F.K., Pires de Aguiar, P.H., Scaff, M., & Nagahashi Marie, S. K. (2014). Psychoeducation improves the quality of life of informal caregivers of Glioblastoma patients. *Medical Express, 1*(3), 158-165.
- Wall, L. L. (2012). A framework for analyzing the determinants of obstetric fistula formation. *Studies of Family Planning, 43*, 255-272.
- Wall, L. L. (2006). Obstetric vesico vaginal fistula as an international public health problem. *The Lancet, 368*(9542), 1201-1209.
- WHOQOL Group. (1998). "Development of the World Health Organization WHOQOL-BREF Quality of Life Assessment." *Psychological Medicine, 28*, 551-558.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52*, 30-41.