THE EFFECTS OF PSYCHOSOCIAL COUNSELLING ON PATIENT SATISFACTION AMONG PATIENTS WITH CHRONIC ILLNESS ATTENDING THE GENERAL OUTPATIENTS' DEPARTMENT (GOPD) OF THE JOS UNIVERSITY TEACHING HOSPITAL, PLATEAU STATE, NIGERIA

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ABSTRACT

Background: Patient satisfaction with health care services especially during consultation is considered an important health care index. This is more peculiar to patients with chronic illness, especially hypertensive and diabetic patients. Studies elsewhere have shown increased patient satisfaction ratings with psychotherapeutic interventions. There is however a paucity of literature on the use of the "Background Affect Trouble Handle Empathy" (BATHE) technique which is a brief psychotherapeutic intervention in Nigerian family practice settings. The study thus aimed to evaluate the effects of the BATHE technique on patient satisfaction among patients with diabetes mellitus and hypertension.

Methods: The study was a randomized controlled trial involving hypertensive and diabetic adults aged 18 years and above attending the GOPD of the Jos University Teaching Hospital. Recruitment was by convenience due to limited time, and study participants were randomly allocated to the control and intervention groups. The control group received usual care, while the intervention group received usual care and BATHE counselling once. Data was collected through an interviewer-administered questionnaire which included a patient satisfaction survey. Baseline sociodemographic data were represented using a table. Student t-test was used to evaluate changes in patient satisfaction scores; a chi-square test was used to analyze the level of patient satisfaction, and logistic regression was used to evaluate factors affecting patient satisfaction. Analyses were done using EPI info 3-5-3 (Centers for Disease Control and Prevention, Atlanta, Georgia, USA) with significance considered at a p-value of <0.05.

Results: A total of 72 study participants were enrolled, and 34 were randomized each into the control and intervention arms. The mean patient satisfaction score before and after the BATHE intervention was 49.05 (P=0.74), and 56.58 (P=0.001) respectively. The variables that were found to be predictors of patient satisfaction were doctor's concern (OR: 3.5, P-value = 0.0014), and patients' confidence in their doctor (OR: 15.7, P-value = 0.0023).

Conclusion: The study showed that the use of the BATHE technique among patients who are either hypertensive or diabetic improved their satisfaction during consultation.

INTRODUCTION

Chronic illness has emerged as one of the most pressing public health issues of the 21st century.[1] Chronic illness can be defined as an illness lasting three months or more.[2] Chronic illness often seems to begin abruptly and sometimes insidiously. The course of illness is long and sometimes unpredictable affecting all facets of life including social and family relationships, economic well-being and activities of daily living among others thus having a serious implication for effective health care.[3]

While the terms 'chronic disease' and' chronic illness' may be used interchangeably, they are not the same.[4] First, chronic disease is defined on the basis of the biomedical diseases classification and includes diabetes mellitus, bronchial asthma and depression.[4] Chronic illness is however the personal experience of living with the affliction that often accompanies a chronic disease.[5]

Chronic diseases are the major cause of death and disability worldwide. In 2002, the leading chronic diseases- cardiovascular disease, cancer, chronic respiratory disease, and diabetes caused 29 million deaths worldwide.[6] The mortality was led by cardiovascular disease (17 million), followed by cancer (7 million), chronic lung disease (4 million), and diabetes mellitus (almost 1 million). A substantial share of the chronic disease burden rests on the shoulder of working-age appropriate populations

(even when 'working age' is conservatively defined as 60 years or younger), particularly in developing countries.[7]

Africa carries a significant proportion of the global burden of chronic diseases, along with countries of Asia and Latin America.[8] This has been attributed to increased life expectancy, changing lifestyle practices, poverty, urbanisation and globalisation.[8] In Nigeria, chronic illness might have been responsible for 24% of all deaths in the year 2005; and the situation might become worse by 2015.[9] Some of the common ones include diabetes mellitus (DM), heart disease and stroke. It was also estimated that Nigeria would lose 40 million US dollars in national income from premature deaths due to heart diseases, stroke, and DM. These losses are projected to increase cumulatively; Nigeria stands to lose 8 billion US dollars over the next 10 years.[9] Although communicable diseases, as opposed to non-communicable diseases, remain the top priority in developing countries like Nigeria, DM and hypertension contribute a great deal to the high mortality figures already put forward and are, therefore, the trust in this work. Worldwide, about 972 million adults are hypertensive out of which 639 million are in economically developing countries.[10] In Nigeria, 1 out of every 4 adults is hypertensive.[11] Over 170 million people worldwide are diabetic. 1-7% of the Nigerian population are diabetic.[12]

The psychosocial impact of DM and hypertension on patients has been recognised as a stronger predictor of morbidity and mortality than many clinical and physiological variables. Addressing psychosocial issues is hence a key health care intervention. Considering this, the aforementioned impact, the growing population of these two chronic non-communicable diseases in Nigeria, and the growing health burden it bears demand a holistic approach to care.

The BATHE technique, therefore, though not specific to chronic illness, is an approach modified for primary care to offer care in a holistic manner. The BATHE technique is a simple patient-centred procedure. BATHE is an acronym for a series of four specific questions about the patient's **B**ackground, **A**ffect, **T**roubles and **H**andling of the current situation, followed by an Empathic response by the physician. It was pioneered by Stuart and Lieberman in the USA in 1993.[13]

Studies elsewhere including India a developing country have shown an increase in patient satisfaction ratings with the use of the BATHE technique[14,15,15] , but such studies still need to be included in Nigeria.

The study, therefore, intends to add to the already existing knowledge in the developed world concerning psychosocial interventions (BATHE technique) in primary care which is scarce in developing countries like Nigeria regarding patient satisfaction.

The aim of the study, therefore, is to determine the effect of the "BATHE" technique on patient satisfaction among patients with chronic illness attending the General Out Patients Department/Clinic (GOPD/C) of JUTH.

METHODS

Study setting

This study was carried out at the General Outpatients Department (GOPD) of the Jos University Teaching hospital (JUTH), Jos Plateau State, north-central Nigeria.

Type of Study

The study was a single-blind randomised controlled clinical trial. The intervention group received both routine care and psychological counselling (BATHE protocol) and followed up after a month, while the control group received only routine care with a follow-up period of one month.

Study duration

The study was conducted between the months of August and October 2012.

Study population

Patients aged 18 years and above with chronic diseases (either hypertensive or diabetic) who met the inclusion and exclusion criteria on follow-up.

Inclusion criteria

1. Patients who were on follow-up for diagnosed hypertension according to JNC7 and type II diabetes mellitus according to World Health Organisation (WHO) consultation criteria.[17]
2. Patients' whose diagnosis has been made at least three months before the time of enrolment
3. Patient who was willing to participate and gave informed consent
4. Patients who were able to communicate in English, or Hausa or both languages

Exclusion criteria

1. Patients admitted in the preceding three months
2. Patients who were depressed according to Beck's Depression Inventory.
3 Female patients with pregnancy-induced hypertension or gestational diabetes
4. Patients with other chronic diseases
5. Patients with both hypertension and diabetes mellitus

Sample size determination

The study sample was determined by the formula for a two-sided test, used to calculate the means of two independent groups[18]

A minimum sample size of 33 per group was the result.

Sampling method

Consecutive patients aged 18 years and above who attended the GOPD and who also satisfied the inclusion criteria were recruited. After obtaining consent, the subjects were randomly assigned to either Control or Intervention group.

Patient allocation was done using computer-generated random numbers by Open Epi sealed in numbered envelopes containing even numbers for Intervention and odd numbers for Control, drawn from a common pool and returned thereafter when the sample size was reached. The patients were followed up after a month once after the initial visit where every Tuesday morning, a group of 10 per visit (five in each group) were seen in series over eight weeks.

The structure of the SOAP routine care was;

S: SUBJECTIVE-Ask for any complaints and review fasting blood glucose result

O: OBJECTIVE-Measure pulse rate and blood pressure

A: ASSESSMENT-Diagnosis was either hypertension or diabetes

P: PLAN-Prescribe medication

FBG was repeated during the next scheduled visit.

The intervention group in addition received psychosocial counselling thus;

B: BACKGROUND-Ask for any background problems

A: AFFECT-Ask how the problem has affected their mood.

T: TROUBLE-Ask, what about it troubles them?

H: HANDLE-Ask, how are they handling it?

E: EMPATHY-The response was that “this must have been very difficult for you”

Data collection

The data were collected using an interviewer-administered satisfaction questionnaire that was developed and back-translated to include the Likert scale items taken from a patient satisfaction survey developed and validated by Press-Ganey Associates, Inc.[19] Items recorded on the questionnaire were the patient's socio-demographic data, educational level, diagnosis, illness duration and income. The blood pressure was measured using the mercury sphygmomanometer and fasting blood glucose was measured using a glucometer. Depression was screened using the Beck Depression Inventory (BDI). The doctor-patient encounter was also recorded and scored according to a 5-point Likert scale thus;

1= Very poor, 2= Poor, 3= Fair; 4= Good; 5= Very good

The total score was 60 which represented the total satisfaction score. The total score for each of the twelve questions was 5.

The level of satisfaction was based on categorizing the scores thus;

'Very satisfied': ≥48 to 60 'Satisfied': ≥36 to 48 'Fair': ≥ 24 to 36 'Poorly': ≥ 12 to 24 'Very poorly satisfied': < 12

Statistical analysis

Analysis was done using the EPI info 3-5-3 (Centres for Disease Control and Prevention, Atlanta, Georgia, USA). Data were presented using frequency tables, percentages and means.

T-test was used to determine the significance of the mean difference in patient satisfaction scores of the 2 groups. Chi-squared test was used to test for association, and logistic regression was used to evaluate factors influencing patient satisfaction. Significance was established at a P value of <0.05.

Ethical considerations

Ethical approval for the study was obtained from the ethical committee of the Jos University Teaching Hospital. Informed consent from patients was obtained after the nature, aims and objectives of the study were explained. The information obtained was treated as confidential. The study participants had the option of opting out of the study at any point with no prejudice to their further treatment.

RESULTS

Seventy-two patients who met the selection criteria were enrolled. Sixty-eight (94.4%) of the seventy-two subjects completed the study: 34 each in the control group and intervention groups. Four (5.6%) were lost to follow-up.

Socio-demographic characteristics of the study participants

The study participants' ages ranged from 30 to 70 years with a mean age of 46.9 ±10 years. Fifty (73.5%) females and eighteen (26.5%) males completed the study, giving a female-to-male ratio of 2.7:1.

Table 1: Socio-demographic characteristics of subjects enrolled in the study

Characteristic	Control N=34	Intervention N=34	Stat. test	P-value
Mean age	48.3±11.1	45.5±9.8	1.0833#	0.28
Sex				
Male	10	8	0.3022*	0.39
Female	24	26		
Educational Status				
No formal	6	2	7.6000*	0.055
education	8	12		
Primary	2	8		
Secondary	18	12		
Tertiary				
Monthly income				
≤$112.5	14	22	3.7778*	0.044
>$112.5	20	12		
Family size				
< 3 children	4	0	4.2000*	0.056
>3 children	30	34		

Note:
a) # Represents T-test and * represents Chi-square test
b) For cells containing figures < 5, Fisher exact test was used

Distribution by chronic illness type
Fifty-four (79.4%) of those who completed the study were hypertensive, and 14 (20.6%) were diabetic. The details are as shown in Table 2

Table 2: Distribution of study participants by chronic illness type

Characteristic	Hypertension	Diabetes
Age (mean)	48.54±10.9	42.2±61
Sex		
Male	14	4
Female	40	10

Level of satisfaction
The participants in the study were satisfied. Details are as shown in Table 3

Table 3: level of satisfaction of study participants

	Control	Intervention	P-value
Very satisfied	22 (64.7%)	18 (52.9%)	0.324
Satisfied	12 (35.3%)	16 (47.1%)	
Fairly	0	0	
poorly	0	0	
Very poorly	0	0	

Mean patient satisfaction scores
The mean patient satisfaction score is seen to increase post-intervention. Details are shown in Table 4

Table 4: Mean patient satisfaction scores pre- and post-intervention

	Mean	variance	Standard deviation	P-value
Pre-intervention				
Control	49.38	19.27	4.4	0.74
Intervention	49.05	12.96	3.6	
Post-intervention				
Control	51.94	10.11	3.18	0.001
Intervention	56.58	9.09	3.01	

Factors affecting patient satisfaction scores.
a) Demographic factors
The relationship between demographic factors and patient satisfaction is shown in the logistic regression in Table 5a

Table 5a: Logistic regression of demographic factors and patient satisfaction scores

Term	Odds Ratio	95%	C.I.	Coefficient	S. E.	Z-Statistic	P-Value
Age	0.9837	0.9193	1.0527	-0.0164	0.0346	-0.4748	0.6350
Duration of illness	0.9969	0.9900	1.0039	-0.0031	0.0036	-0.8603	0.3897
Educational-status							
Primary	1.4306	0.1699	12.0472	0.3581	1.0871	0.3294	0.7419
Secondary	0.1157	0.0090	1.4824	-2.1569	1.3013	-1.6575	0.0974
Tertiary	1.4524	0.0728	28.9878	0.3732	1.5274	0.2444	0.8070
Family size	1.0864	0.8526	1.3844	0.0829	0.1237	0.6704	0.5026
Monthly-income							
(>18000/≤18000)	0.8337	0.0910	7.6425	-0.1818	1.1304	-0.1608	0.8722
Sex (M/F)	0.4860	0.1052	2.2452	-0.7215	0.7807	-0.9241	0.3555
CONSTANT	*	*	*	1.7157	2.2260	0.7707	0.4409

b) Subscales of patient satisfaction

The relationship between subscales of patient satisfaction and patient satisfaction scores is as shown in Table 5b

Table 5b: Logistic regression of subscales of patient satisfaction and patient satisfaction scores

Term	Odds Ratio	95%	C.I.	Coefficient	S. E.	Z-Statistic	P-Value
Confidence in doctor	15.7048	2.6743	92.2276	2.7540	0.9032	3.0490	0.0023
Doctor's concern	3.5031	1.6235	7.5591	1.2537	0.3924	3.1948	0.0014
Doctor's effort	1.6521	0.7825	3.4884	0.5021	0.3813	1.3167	0.1879
Doctor's instructions on follow-up	0.6193	0.1738	2.2065	-0.4792	0.6483	-0.7392	0.4598
CONSTANT	*	*	*	-16.2465	4.4902	-3.6182	0.0003

DISCUSSION

The age groups in this study included the young adult, middle age, and elderly. However, the majority was found to be in the middle age range. Similarly, a study by Asibong et al. in Calabar, south-south Nigeria though not using the same tool but outcome, reported a mean age of 48.97 years.[20] Reasons for the similarity may be due to the fact that both studies were hospital-based and carried out in the outpatient department/ clinic. Also, the location of the hospitals in the urban area did not afford the elderly who mostly reside in the rural areas to attend. In contrast, however, a study by Iloh et al. in Abia, south-east Nigeria reported a mean age of 34.8± 11.3 years.[21] The reason for this difference may be because the study was conducted in the National Health Insurance Clinic of a federal medical centre which afforded only employed people the opportunity to attend.

Hypertension

A greater percentage of the study participants had hypertension. A vast majority of the participants were mostly females who had stage I hypertension. On the contrary Adebusoye et al. in Ibadan, south-west Nigeria reported a prevalence of 40%[23] These figures are seen to be above the prevalence of the general population possibly because this was a hospital-based study. The difference can however be explained by the fact that the Ibadan study looked at the elderly population only.

Less than half of the study subjects had diabetes mellitus. The majority of them were females with about half of them having good glycaemic control. In contrast, Nwafor et al. in a study in Port Harcourt South, South geo-political zone of Nigeria, reported a prevalence of 45.4%. This high prevalence could be a reflection of the patients who were oil company staff whose diet was high in fat and reduced in complex carbohydrates.[23]

According to the result of this study, it was found out more than half of the patients had a high level of satisfaction while just a little number of them had a low level of satisfaction or were not satisfied. This may be explained by the fact that the majority of the patients could have been impressed by the politeness of the researcher in getting information and because they had knowledge of their being involved in the study.

The result in this study is similar to the one by Iliyasu et al. in Kano, northwest geo-political zone of Nigeria, who found out that overall, 83 per cent were satisfied while the remaining 17 per cent were dissatisfied.[22] This similarity may be accounted for by the similar socio-cultural values and levels of literacy captured in both studies. Also, the citing and proximity of the residents of the patients to the hospital could have been responsible.

In contrast, however, a study in Ile-Ife by Abioye et al. found out that 63.3 per cent were generally satisfied while 19 per cent of the patients were uncertain of their level of satisfaction.[24] This finding was attributed to the fact that students contributed 78% of the study population. This was not the case in this study.

The use of the BATHE technique in this study showed that patients in the intervention (BATHE) group had a statistically significant increase in patient satisfaction scores. The result of this study is comparable to a study in Korea by Ji et al. who found that the BATHE group reported higher patient satisfaction than the control group in a statistically significant manner ($P< 0.05$).[16] Similarly, another study in New York by Samuel D et al. found that patients in the BATHE group were more satisfied with their visit than those in the control group: ($P= 0.001$).[15] This can be explained by the fact that both studies were randomized controlled trials.

In this study, it was found that the female gender relationship had a higher satisfaction compared to the male gender. The relationship was not significant. The middle age group was found to be the most satisfied, but the relationship was not found to be significant. Also, tertiary education had the highest number of those satisfied, and so was the large family size, but the relationship was not significant. However, a logistic regression done seem to suggest that the duration of illness, tertiary education, age, and monthly income

may have some influence on patient satisfaction when the odds ratios are considered even though the p values were not significant.

In a study by Udonwa et al. in Calabar on patient-related factors influencing patient satisfaction in the patient-doctor encounters at the general outpatient clinic of the university of Calabar teaching hospital, it was found that none of the socio-demographic variables studied was found to have any statistically significant relationship with patient satisfaction.[25] This finding may be the result of a few elderly patients that took part in the study. This was because the elderly patients did not agree to complete their questionnaires, and this was probably due to the influence of the accompanying persons who insisted they had to return to work as soon as possible. Also, the living arrangement in the society was said to make for the sharing of illness perception and the understanding of wellness or illness.

On the contrary, Ibrahim et al. in Kuwait found that there exists a significant relationship between patient satisfaction and gender where females were found to be less satisfied than males.[26] This was contributed by the fact that females represented their families more than males. It was also found that less educated patients were generally more satisfied. This was attributed to the fact that less educated patients are less demanding. This study did not show any relationship between sex and age possibly because the elderly were few in the study and the female patients might have given false responses. Also, a study in Saudi Arabia by Abdullateef demonstrated that a significantly high level of satisfaction was associated with female gender, low education and low socioeconomic status and rural residence. The level of education was seen to have a bearing on socioeconomic status.[27] In this study, the majority of the patient had low income which could have affected the outcome.

b. Doctor-patient encounter/ interaction

In this study, it was found that patient's confidence in their doctor and concern about their doctor showed, were the two subscales that significantly affected patient satisfaction

Similarly, a study in Ile-Ife by Abioye et al. showed that the patient's confidence in the doctor, the patient's perception of the doctor's communication skills and the patient's perception of information provided by the doctor predicted the respondent's satisfaction in relation to the physician-patient interaction.[24] Also, Williams et al. in Great Britain found out that patients' confidence in physicians increased their level of satisfaction.[28] This can be attributed to the establishment of good relationships and communication with patients during consultation in all the studies.

On the contrary, Udonwa et al. in Calabar in a study demonstrated a statistical significance between patients' perception of time spent in consultation and satisfaction.[25]This may be a reflection of confusion from the response of time spent in consultation to time spent in the waiting room. Sandra et al. also found out that all the subscales except doctor's friendliness, the degree to which the doctor spoke in a manner to which the patient understood him and confidence in the doctor were associated with patient satisfaction. Qidwai et al. in a study in Pakistan showed that patient expectations in terms of listening to the doctor with patience, explanation of the diagnosis and treatment and prescription of medicine were documented.[29] Linda et al. reported that the physician's attention to their medical concerns led to more satisfaction after their visit although the association was small.[30]

Conclusion

At the end of this study, it was found that the majority of the patients were satisfied. The BATHE protocol was demonstrated to increase patient satisfaction among patients with hypertension and diabetes.

Amongst all the subscales of patient satisfaction considered, only concern the doctor showed for the patient's questions/worries and the patient's confidence in the doctor was found to be predictors or factors affecting patient satisfaction.

limitations of study

A limitation of this study was that some patients felt that the questions asked from the questionnaire concerning doctor interaction were a witch hunt, so they sought to give favourable scores despite assurances to the contrary. This may explain the level of satisfaction prior to the intervention.

Psychometric analysis of the validated questionnaire was not done due to time constraints.

Recommendations

1. Psychosocial counselling (BATHE technique) could be used to increase satisfaction among hypertensive and diabetic patients on follow-up at the GOPD.

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