Life events and life satisfaction in Nigerian patients with undifferentiated somatoform disorder and a non clinical population.

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SUMMARY

Background: Expression of mental disorder through physical symptoms is a common clincial presentation in Nigeria.

Objective: To compare life events and life satisfaction in Nigerians with undifferentiated somataform disorder and normal subjects.

Method: Ninety one patients with undifferentiated somatoform disorder and 67 normal community dwelling subjects were assessed with the Social Readjustment Rating Scale (SRRS), Stress Quiz (SQ), and Life Satisfaction Scale (LS).

Results: There was no statistically significant difference between the SRRS scores of the patients and normal subjects; however, patients scored significantly higher than the normal subjects on the Stress Quiz.

Conclusion: In a Receiver Operating Characteristic analysis, the most distinguishing factor between patients and subjects was life satisfaction, with the latter having much higher life satisfaction .

Niger Med J. Vol. 48, No. 1, Jan. – Mar.., 2007: 9 – 13.

***KEY WORDS*: Undifferentiated somatoform disorder, life events, life satisfaction, Nigeria.**

INTRODUCTION

Expression of mental distress through physical symptoms is a common clinical presentation in Nigeria. The concept of physical symptoms has been variously described as "psycho physiological", 'subjective bodily sensations', paraesthesiae, 'somatic'[1,2]. Both the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and the International Classification of Diseases (ICD-10) have adopted the term "somatoform" as a group of disorders[3,4]. When the full criteria for somatization disorder are not met, both diagnostic manuals recommend "undifferentiated somatoform disorder." There has been some argument as to whether "somatoform" symptoms represent a cultural style of manifesting mental distress by less developed societies compared to developed societies that are thought to be more "psychologised"[5,6] but recent evidence seems to suggest that existence of cultural differences in somatization appears questionable[7-10]

Nevertheless reports continue to appear indicating that many patients of African (or non-white) descent more commonly present their mental symptoms in "bodily" form[11,12]. Sometimes such somatoform symptoms constitute entirely discrete mental disorders identified in some Nigerian patients who have no other form of any psychological features. In other words, besides the DSM-IV and ICD-10 "Somatoform" disorders, any major mental disorder may present with wholly and purely bodily symptoms in Nigerians who develop mental disorder[13,14].

Consequently "somatoform" features have been variously construed and conceptualized, with some authors arguing that these bodily features constitute part of the symptom complex of anxiety disorders[15]. In a previous report, we had contended that bodily symptoms represent an expression of distress caused by external events, with the symptoms reflecting the cultural meaning of life events and difficulties[16]. Hexel and Sonneck[17] also opined that the type of somatic complaint allows a prediction of the kind of the traumatic experience suffered; for example, physical abuse may be predicted by discomfort in and around the praecoduim, loss of appetite, stomach, discomfort, a churning feeling in the stomach etc. In the same way, Waitzkin and Magana[18] have postulated some interrelationships among physical symptoms and the psychological, social, or cultural context of these symptoms.

One outstanding clinical characteristic of bodily (or somatoform) disorders is the grave difficulty encountered in their management. Somatoform disorders and somatoform features seem to defy most known forms of physical, pharmacological and psychological treatments. They often lead to numerous services use with high cost burden.

Lynch et al[19] reported that high Social Readjustment Rating Scale scores were significantly associated with somatoform symptoms, and such symptoms were highly related to increased consultation visits. Barsky and colleague[20] clearly demonstrated that somatization increases medical utilization and costs.

These reports of somatoform features in the context of social and psychological factors imply the involvement of life events. Research in life events is fraught with formidable methodological and general difficulties. By far, most life events research has largely focused on depression, and one main question has been the relationship between onset of depression and life events[21]. On the other hand, research reports on life events and anxiety disorders are rather few, which Finlay-Jones and Brown[22] proposed 3 possible reasons for such under estimation of life events in anxiety by both researchers and clinicians. These are tendency to restrict definition of anxiety

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to reaction which has no understandable external precipitant, forgetting life events when anxiety has become chronic and the possibility of only certain life events being related to anxiety.

An important issue in clinical management of somatoform features is, not only to relieve distress of the often-distraught patient, but also to reduce the cost of treatment by curtailing the excessive patronage of sundry services, usually in a circular manner. If life events are considerably associated with somatoform disorders, an understanding of the mechanism of the process would aid clinicians, in both preventive and therapeutic endeavours.

Our study had one major aim: to compare the quantity of life events in patients with undifferentiated somatoform disorders and in normal subjects. We also aimed to compare life satisfaction among these two groups. We hypothetised that patients with undifferentiated somatoform disorder would have much more life events than normal controls.

METHODS

The study site: The study was done at Nnamdi Azikiwe University Teaching Hospital, Nnewi (Nigeria), a 750-bedded tertiary health institution of the Nigerian Federal Government. The hospital has a catchment area population of about three million and the department of Mental Health receives referrals
throughout the district.

The subjects: The subjects comprised of 91 patients (37 males, 54 females) and 67 normal persons (33 males, 34 females) with no differences in the gender distribution. The subjects were aged 16-64 years (mean 35.9 + 14.3SD). There were no statistically significant differences between the patients and normal subjects ("controls") with respect to gender distribution (X^2 1.16, P=0.28) and marital status (x^2=1.18, P=0.3) but the "controls" (mean age 32.6±12.5 SD) were a little younger than the patients (mean age 34.5±11.6SD); x^2 2.6, P=0.04. The subjects consisted of applicants, artisans, nurses, barbers, builders, civil servants, cyclists, computer operators, dry cleaners etc. The proportions of the occupational groups were the same in the patients and normal subjects (X^2= 0.65, P=0.87).

Instruments: The Social Readjustment Rating Scale (SRRS). This was developed by Holmes and Rahe[23]. The original instrument had 43 items and each item (life event) had life change unit with a mean of 11 to 100. The authors had grouped the life change units into 4: 0-15 (no significant problem), 150-199 (middle life crisis level) with 35% chance of illness), 200-199 (moderate life crisis level), with 50% chance of illness, and =300 (major life crisis level) with 80% chance of illness. It was originally designed as a self report scale.

The SRRS has undergone a number of cultural validations over the years. At the same time many criticisms have been levied against the SRRS. For example, it has been argued that from a psychometric point of view, life events as interviewer scales should be preferred to self-report scales[24, 25]. The SRRS has been criticized for its preoccupation with dramatic events or severely taxing situations. It is further argued that severity of stressors may be closely related to pathogenetic factors[26,27].

On the other hand, Zimmerman et al[28] had demonstrated that symptoms do not necessarily contaminate the SRRS and that most arguments against the SRRS are not valid. Bech et al[29,30] have developed the SRRS as a 37-item interviewer version. This permits an interviewer to conduct the life event schedule as an interview. This pattern was followed in the present study with the original 43 –item SRRS. However, both in a pilot testing and in interview with some patients, we were not able to date events accurately. First, a subject was asked if he/she ever experienced a given event. If the answer was yes, an enquiry was made to state the date. Virtually no subject could state the exact date of an event; they were often encouraged to guess if the event was before, during, or after the onset of illness (somatoform symptoms). Because of the difficulty and poor reliability in dating, this aspect of the interview (time of event occurrence) was not analysed.

The Stress Quiz (SQ):

This is a 29-item self-report "stress" check list/quiz (31). The items are weighted as 3 points each (for items 1-9), 4 points (for items 10-22), 5 points (items 23-27) and 6 points (items 28-29). . As with the SRRS, the total scores is grouped into 3: mild stress level (0-15), moderate stress level (16-40), and high stress level (41-117); the higher the score, the more "stressed" the individual. Some items of the SQ represent life changes (as obtained in certain items of the SRRS).

Although the SQ (and perhaps the SRRS) has not been widely used in Nigeria, it seems to have face validity. Most of the items appear to be universal experiences. For example, some of the questions include trouble with in-laws, loss of close friends/ family members, addition to the family, being married etc.

Bigot's life satisfaction index (LSI).

This is a life satisfaction measuring scale (32). It has 2 sections: current contentment, and satisfaction with past achievements. There are 8 items. The total score for the 2 sections gives the total life satisfaction score. Higher scores indicate better satisfaction with life.

Procedure

Selection of study subjects.

The patients were recruited from the outpatient's psychiatric clinic of Nnamdi Azikiwe University Teaching Hospital. Following clinical evaluation, including mental state, physical and neurological examination, with appropriate laboratory investigations (as needed), patients were enrolled in the study if they met the ICD- 10 diagnosis of undifferentiated somatoform disorder. All patients who attended our psychiatric outpatient clinic for the first time between January 2004 and December 2005 were assessed for possible inclusion. Patients who had any physical diseases or abnormal laboratory results (either alone or co-occurring with a mental disorder) or any other major mental disorder were excluded. Finally the patients were evaluated with the Montgomery and Asberg Depression Rating Scale (MADRS, 33) by an independent physician blind to the diagnosis of undifferentiated somatoform disorder made by one of us (RU). Any

patient who scored =18 on the MADRS was excluded. In this way ninety- one patients were eventually selected to participate in the study assessments.

The "control "subjects were selected from volunteers in the Community.

The normal subjects (controls) did not undergo full physical and psychiatric evaluation; they were simply selected for being Community residing non-patients and scoring less than 3 on the 12-item General Health Questionnaire (GHQ, 34). Of the original 100 subjects who consented, 22 scored > 3 on GHQ-12 and 11 could not fully complete the 3 assessments. Sixty seven normal subjects finally participated in the study.

Rating of instruments: A trained research assistant administered the Social Readjustment Rating Scale, Stress Quiz and Life Satisfaction Index questionnaire. All the instruments were interviewer-administered. The interviewer had no access to the status of the interviewees (either as having undifferentiated somatoform disorder or as controls).

Analysis: SPSS 11.0 was used for analysis. Simple descriptive statistics were used to present the scores on the SRRS, LS and SQ. For a binary test of association, the SRRS, LS and SQ were transformed to categorical variables by dichotomizing into high and low scores as follows: 0-299 and = 300:, 0-7, and = 8; 0-40, and = 41 respectively, using the cut offs suggested by the instruments' authors. The age was arbitrarily dichotomized as 16-44 years ("younger") and = 45 years ("older") whereas the LS was dichotomized into 0-7 (low) and = 8 (high). Simple odds ratios and one model regression analysis were calculated to compare the scores of patients and controls on the study instruments.

RESULTS.

Score on the SRRS

The scores ranged from 0-885, mean 339.08 ±163.55. There was no statistically significant difference between the patients (mean SRRS 348.6±182.04) and the controls (mean SRRS 329.1± 135-1), t=0.66, P=0.51.

Life satisfaction

The scores ranged from 0-12, mean 5.7+3.05. The controls had much higher life satisfaction (mean 7.34) than the patients (mean 4.6) , t= 6.4, P< 0.001).

Stress Quiz: Total score range was 0-109, mean 50.78±19.82. The patients had statistically significant higher scores than the controls (t=2.6, P=0.01). In a univariate analysis dichotomizing the SRRS score, there was no difference in the proportion of high and low SRRS scores between the patients with undifferentiated somatoform disorder and normal subjects (X^2= 0.88, P= 0.35) but there was much higher proportion of high life satisfaction scores among the normal subjects compared to the cases (X^2 =24.55, P< 0.001) and was no difference in the stress quiz (X^2= 2.88, P=0.09).

Correlation

The SRRS was significantly correlated with the SQ (r= 0.70, P< 0.001), and the LS (r= - 0.16, P= 0.05). The LS was highly correlated with the SQ (r =- 0.37, P< 0.001).

Association (Relationship) between case status and other variables

Table 1 shows the Odds Ratios and 95% confidence intervals of variables associated with having undifferentiated somatoform disorder.

Subjects with high life satisfaction score are much less likely to have undifferentiated somatoform disorder. Gender, high SRRS and high SQ scores were likely to be essentially the same between patients with undifferentiated somatoform disorder and normal subjects without.

Table 1: Association between having undifferentiated somatoform disorder and other variables

Variable	Odds ratio	95% C.I
Age (older)	1.76	0.99-3.09
Gender (female)	1.17	0.87-1.56
Marital status(married)	1.51	1.02-2.21

Association between case status (i.e. patients with undifferentiated somatoform disorder and normal controls) and test scores.

In a multiple linear regression analysis, the SRRS score was used as the outcome variable. The independent contributions of age, life satisfaction and stress quiz were tested.. These explanatory variables were significantly associated with SRRS: age (t=2.5, P< 0.001), SQ (t=9.6, P< 0.001). LS (t=2.9, P=0.18). The possibility of the sociodemographic profile and the results of the test variables to identify patients with undifferentiated somatoform disorder was tested in a logistic regression analysis. Age, SRRS, LS, and SQ were dichotomized (as previously explained) and were entered as explanatory covariates along with gender, marital status, using case status as dependent variable. Only life satisfaction score was clearly significantly associated with prediction of case status. This is shown in table 2.

In a Receiver Operating Characteristics using the area under the curve to discriminate between having undifferentiated somatoform disorder and being a normal control, the LS performed best (AUC = 0.23, 95%, C.I.= 0.16 – 0.31, p < 0.001); the SQ (AUC = 0.62, 95% C.I.= 0.54 – 0.7, p= 0.009) performed better than the SRRS (AUC = 0.52, 95% C.I = 0.43 – 0.61, p=

Table 2: Association between case status (patients with undifferentiated somatoform disorder) and sociodemographic/test score variables. (Logistic regression)

Variables	B	SE	Wald	P	
Marital status	0.43	0.42	1.04	0.31	Gender
0.58	0.38	2.26	0.13		
Age	0.27	0.47	0.31	0.58	SRRS
0.18	0.44	0.16	0.69		
LS	1.89	0.43	19.59	0.000	
SQ	0.018	0.45	0.000	0.99	

0.67).

Low LS score perfectly discriminated patients who had undifferentiated somatoform disorder from normal subjects (AUC = 0.77, 95% C.I= 0.69 – 0.84, p< 0.001).

DISCUSSION

Patients and normal subjects (controls) had about the same scores on the SRRS, which is inconsistent with our hypothesis that patients with undifferentiated somatoform disorder would have higher SRRS scores than normal controls. However, patients had significantly higher SQ score than normal controls. The Social Readjustment Rating Scale score and the Stress Quiz score are positively correlated. This suggests that even though SRRS and SQ contain certain life event items common to both, the two scales are not exactly the same. Hexel and Sonneck[7] examined somatoform symptoms, anxiety and depression in connection with traumatic life experiences by comparing participants with and without psychiatric diagnoses. They reported group differences in the quantity of somatoform symptoms and the degrees of anxiety and depression between participants with and without psychiatric diagnoses. However the present study compared the quantity of life events in patients with undifferentiated somatossform disorders and 'normal' controls. Although the controls were not specifically examined for somatoform symptoms, it is possible that life events are as common in patients and normal persons alike. Life events are common human experiences but as to whether those with more life events are more likely to develop (or subsequently experience) somatoform disorder is not clear. Both the DSM-IV and CD-10[3,4] indicate that unlike catastrophic experiences which will evoke some mental disorder in nearly every one who experiences them, this may not be the case with life events. Life events may serve to exacerbate rather existing disorder or precipitate one in vulnerable individuals.

Gupta and Gupta[35] reported that the total number of major life events experienced over the previous months by a non-clinical sample of 600 subjects (using the SRRS) correlated with the severity of individual cutaneous symptoms. The somatoform symptoms reported included burning, crawling sensation, tingling, pricking, pins and needles, pain, and tenderness of skin, numbness, itching, and easy bruising. It is possible that non-clinical subjects may as well have both high SRRS scores and many life events, and also somatoform symptoms as seen in a clinical sample. Patients may present for treatment for various medical and non-medical reasons. Previous reports have however shown that somatoform symptoms and high SRRS scores are associated with increased medical utilization[19].

In the present study, we can not be certain why the patients with undifferentiated somatoform disorder and the non-clinical "normal" controls had about the same SRRS score. Spila et al[36] used the Hospital Anxiety Depression scale and the SRRS in 49 psychiatric patients and 64 people without any mental disorders. They reported that patients with mental disorder had a significantly higher occurrence of stressful psychosocial factors during the previous year and were exposed to traumatic events in childhood more frequently than the control group. The non- clinical 'normal' controls in our study had significantly higher life satisfaction score than the patients with undifferentiated somatoform disorder. As expected, both the SRRS and SQ negatively correlated with life satisfaction scores. Gender, high SRRS, high SQ were not significantly associated with predicting the presence of undifferentiated somatoform disorder. In a logistic regression model, only life satisfaction was highly significantly associated with (predictive of) case status. Irrespective of life events, somatoform symptoms may be producing much distress that impairs life satisfaction. Patients with somatoform disorders experience high life dissatisfaction. Life satisfaction may be related to over all quality of life or continuity of life; this may in turn be associated in some way with suicidality. In clinical practice, partly because of the resistance to treatment, patients with somatoform disorders are highly distressed. One implication of our finding is perhaps that life satisfaction indicates the level of somatoform symptoms. It may therefore be useful to routinely assess life satisfaction in patients who complain of any somatoform symptoms.

In interpreting our results, the weaknesses in the study, must be noted. First, our selection of non-clinical normal controls was less than perfect. The normal subjects (controls) were not extensively investigated as the patients. However, we did not include any subjects with suspected emotional disorders as demonstrated by the GHQ-12.

Second, we recognize that life events study presents formidable challenges. We merely quantified life events (with the SRRS and the SQ). We did not enquire into the details of the context of life events. Effort after meaning is often a problem in life events and we omitted dates for lack of reliability. We did not equally subtype or separate events as subject focused and non-subject focused; nor did we disentangle dependent and independent events. Our major interest was in the number (quantity) of life events between patients with undifferentiated somatoform disorder and normal subjects.

Finally, we did not investigate the role of personality and social support in moderating life events.

An important strength of our study was the rigour with which we identified patients who had undifferentiated somatoform disorder . The present study has also contributed to the scanty literature of life events and mental disorders in Africans[37-39]. We have demonstrated that patients with undifferentiated somatoform disorder have higher stress index and much less life satisfaction compared to normal subjects. Future studies in our environment will address some of the deficiencies of the present report. To what extent life events will have therapeutic, and preventive role in undifferentiated somatoform disorder may remain a subject for studies for yet some time to come.

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