

## Original Article

### PREVALENCE AND PATTERN OF MENTAL ILL HEALTH AMONG DIVORCED WOMEN IN KANO, NORTHWESTERN NIGERIA

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## ABSTRACT

**Context:** Divorce is one of the means of dissolving marriages. Available literature, mainly from the Western world, shows that there is a higher rate of psychiatric illnesses among divorced women compared to married women. The occurrence of psychiatric illnesses among divorced women is not a well-

researched area. We aimed to study the prevalence and pattern of psychiatric illnesses among divorced women in Kano, northern Nigeria.

**Materials and Methods:** This was a cross-sectional study conducted among divorced and married women in Kano, Nigeria. General Health Questionnaire (GHQ)-12 was used to screen for mental illnesses. Participants who scored  $\geq 4$  on GHQ12, and 10% of those who scored  $< 4$  were administered Mini International Neuropsychiatric Interview, (MINI 6.0.0). Data was analysed using SPSS version 20. Chi chi-square test was used to determine the relationship between psychiatric illness and the marital status of the participants.

**Results:** Three hundred women (150 divorced, 150 married) aged 15-60 years participated in this study. Psychiatric illness was common among divorced women (58.7%) compared to married women (34.7%), ( $p < 0.001$ ) with OR 2.7 (1.7-4.3). Generalized Anxiety Disorders (GAD) was the commonest psychiatric diagnosis,

[divorced: 38 (25.3%), married: 27 (18.0%)], followed by depression, [divorced: 35 (23.3%) married: 16 (10.7%)] then comorbid GAD with depression, [divorced: 15 (10.0%) married: 9 (6.0%)],  $p < 0.001$ .

**Conclusion:** Psychiatric illnesses were more common among divorced women compared to married women. GAD was the most common psychiatric diagnosis followed by depression and lastly comorbid GAD with depression. Public health measures should be taken to address mental health needs of divorced women to improve their wellbeing.

**KEYWORDS:** Psychiatric illness, depression, generalized anxiety disorders, divorce, women, Nigeria

## INTRODUCTION

Divorced persons have been shown to exhibit higher admission rates in psychiatric clinics and hospitals than individuals with intact marriages, and they more often suffer from anxiety, depression, anger, feelings of incompetence, rejection and loneliness.<sup>[1,2]</sup> Divorce creates major crises for families,

bringing adults loss of intimacy, security, and expectations, often accompanied by fear, anxiety, loneliness, and guilt, especially when children are involved.<sup>[3]</sup>

There is ample evidence of a cross-sectional association between psychiatric disorders and rates of divorce/relationship dissolution.<sup>[4-6]</sup>

Psychopathology can both lead to and result from divorce, with growing evidence showing a bidirectional link between mental disorders such as depression and marital dissolution.<sup>[7]</sup>

Kessler *et al.* found that individuals reporting the onset of one or more psychiatric disorders before or during marriage were more likely to divorce than individuals without any psychopathology.<sup>[8]</sup> All psychiatric disorders, except for social phobia and simple phobia, were associated with increased odds of divorce during the first marriage.<sup>[9]</sup>

Divorced individuals had over twice the odds of lifetime and 12-month depression compared to others.<sup>[10]</sup> In Ethiopia, Tesera reported that divorced women had higher risk of having a diagnosis of depression compared to those who were still married.<sup>[11]</sup> Bruce and Kim found that

marital disruption was associated with higher prevalence rates of major depression in both men and women, but only men had a greater risk of a first-onset major depression.<sup>[12]</sup>

Shazia compared depression in divorced and married women, and found the rates of depression to be 35.2 and 26.43 in divorced and married women respectively.<sup>[13]</sup> Findings from a 30 years' longitudinal study on the relationship between separation and mental health problems, show that separation was associated with depression, anxiety, suicidal behavior and total mental health problems.<sup>[14]</sup> According to a multinational study of mental disorders, marriage and divorce, depression was found to be higher in divorced women compared to married women.<sup>[15]</sup>

Wittchen *et al.* reported that generalized anxiety disorder was relatively rare with a current prevalence of 1.6% and 5.1% life time rate affecting the US population aged 15 to 45 years respectively.<sup>[16]</sup> Generalized anxiety disorder was twice as common among women as men.<sup>[17]</sup> Shazia compared anxiety in divorced and married women, and found the

rates of anxiety to be 41.40 and 31.70 in divorced and married women respectively.<sup>[13]</sup>

This shows that divorced women have significantly higher anxiety as compared to married women.

Literature searches show scarce data on divorce among Nigerian women, who frequently face unfair treatment and discrimination across workplaces, social groups, religious settings, and communities.<sup>18</sup>

Divorced Igbo women, particularly those with children, face rejection, limited remarriage prospects, and psychological trauma. The study examines their psychiatric morbidity and hypothesizes higher and differing psychiatric patterns compared to married women

## METHODOLOGY

### Background of the Study Area

This study was conducted in the capital city of Kano, which is the commercial hub of Northern Nigeria. Kano state is the most populated state in Nigeria with 9.40 million people, 47% of which are women.<sup>[20]</sup> About

60% of Kano inhabitants live in the rural outskirts while 40% reside in urban areas. Kano is predominantly a Hausa-Fulani, Muslim state.<sup>[21]</sup> There were two study sites, the secretariat for the Association of Divorced and Widows in Kano and Sayyida Khadija Islamiyya School. The facility for the Association of Divorced and Widows has offices and conference hall where the divorced women observe their weekly meeting. It provides services to divorced women from Kano metropolis and the neighboring local government areas. Sayyida Khadija Islamiyya School is an adult Islamic school with about 250 students who are married having various educational levels ranging from those with informal education, and those with formal education (primary, secondary, and tertiary).

## Study Design

This was a comparative cross-sectional study, in which the mental ill health of divorced women and currently married women was

compared, by studying psychiatric morbidity in the two population.

## Study Population

The index group was recruited from divorced women registered with the Association of Divorced and Widows, while the comparator group was recruited from married women who are students of Sayyida Khadija Islamiyya School, Kano.

## Inclusion Criteria

1. Must be divorced woman registered with the Association of Divorced and Widows in Kano (Index).
2. Must be married woman who is a student of Sayyida Khadija Islamiyya (Comparator).

## Exclusion Criterion

1. Those who are widows in either of the two study groups or sites.

## Sample Size Determination

The sample size was calculated from formula for determining samples for grouped experiments with proportions and correlations

as measures of interest with  $\alpha = 0.05$  at a power of 90%.<sup>[22]</sup> A sample size of 83.57 was determined, and a non-responsive rate of 10% (8.357) was added to this sample size making it 91.927 (rounded up to a minimum of 92). However, a sample size of 150 for each group was used to increase the statistical power from 90.0% to 98.1%.

### **Ethical Consideration**

Ethical approval was obtained from AKTH (AKTH/MAC/SUB/12A/P3/VI/1159; 17 June 2013) and Kano State Ministry of Health (NHREC/17/03/2018; 25 Nov 2024). Approvals were also secured from the Association of Divorced and Widows and Sayyida Khadija Islamiyya School. Participants gave signed or thumb-printed consent. Confidentiality was maintained, and those with significant psychiatric issues were referred for specialist care.

### **Sampling Technique**

For the divorced women, a simple random sampling technique was used to select the participants that were interviewed. On each

day of their meeting, the list of those who attended was drawn. “Yes” and “No” was written on pieces of papers, which was then be rumpled and everyone was asked to pick. Those who picked “yes” were selected. This was repeated in every meeting; however, if anyone had been previously selected, she would be dropped for any subsequent selections. Having selected the participants from the divorced women, a list of married women at the Comparator study site was drawn. As much as possible, for each selected divorced woman, an attempt was made to select a married woman as close as possible in age ( $\pm 5$  years) to match the selected divorced woman.

### **Instruments and Measures**

The following instruments were used for data collection;

1. Socio-demographic questionnaire
2. The General Health Questionnaire (GHQ-12)

3. The Mini International  
Neuropsychiatric Interview  
(M.I.N.I.)

**THE GENERAL HEALTH  
QUESTIONNAIRE-12 (GHQ-12)**

The GHQ-12 is a short version of the original GHQ developed by David Goldberg for use in general medical practice. <sup>[23]</sup> It is the shortest version of the original 60-item questionnaire. Other versions include the 20-, 28- and 30-item versions. The GHQ can distinguish between psychological ill-health and well-being and can be used in the assessment of the symptoms of anxiety, depression and social dysfunction. It has been validated and used in Nigeria. <sup>[24]</sup> The GHQ-12 in this study was scored on a bimodal scale (0, 0, 1, 1) with a cut-off point of 3 ( $\leq 3$  - no psychological morbidity;  $\geq 4$  - psychological/psychiatric morbidity).

**MINI International Neuropsychiatric  
Interview, version 6 (M.I.N.I. 6.0.0)**

This is a brief structured clinical interview that enables researchers to make a diagnosis of

psychiatric disorders. <sup>[25]</sup> Each diagnostic category is represented as a module. It consists of sixteen modules; A-P. Overall MINI diagnoses were characterized by good kappa values. Sensitivity was 0.70 or greater for most of the diagnoses, specificities, negative predictive value (NPV) and efficiency scores were 0.85 or greater across all of the diagnoses. It can be used by clinicians, after a brief training session. Lay interviewers require more extensive training. <sup>[26,27]</sup> The MINI has been used in all the continents and has been used in Nigeria for various studies. <sup>[28-31]</sup> The instruments have been translated to Hausa, the predominant language in Kano. The researcher trained two Research assistants on the use and scoring of MINI.

**Study Procedure**

Data was collected in two phases: - (i) General/Screening and (ii) Diagnostic

**Phase I**

- (i) First, the study was explained to each selected potential participant.

(ii) Thereafter, consent was obtained (written, and signed or thumb printed)

(iii) The study interviews were conducted with:

- 1) Socio-demographic questionnaire
- 2) GHQ-12

## Phase II

All those who scored GHQ-  $\geq 4$ , and all the GHQ-negatives were administered MINI. An attempt was made to immediately score the GHQ and conduct the diagnostic interviews in one session. However, for those participants where this method was not possible, appointment for the diagnostic interviews was scheduled after scoring GHQ-12.

All interviews were in private. Depending on clear understanding and proficiency in English, either the English or Hausa version of the questionnaires was used. In every case, the questionnaires were read to participants and their responses recorded. The two trained research assistants who were resident doctors in the Department of Psychiatry, Aminu Kano

Teaching Hospital assisted in administering the study questionnaire.

## Data Analysis

The data obtained was cleaned and entered into Microsoft Excel. The Statistical Package for Social Science version 20 (SPSS version 20) was used for analysis. Statistical significance of differences in psychiatric illness between divorced and married women was tested using chi square. Level of significance was set at  $<0.05$ .

## RESULTS

A total of 300 participants (150 divorced and 150 married) were sampled in this study.

### Socio-demographic characteristics of the Participants

The mean ages of the divorced and married participants were 35.02 years ( $SD \pm 13.41$ ) and 33.63 years ( $SD \pm 9.24$ ) respectively.

There was no difference in age distribution between the divorced women and those who were still married ( $p = 0.840$ ) (table 1).

### Prevalence of Psychiatric Diagnosis among the Participants

Eighty-eight (58.7%) of the participants who were divorced were identified as cases using

GHQ, while only 52 (34.7%) of those who were still in marriage were identified as cases using the same instrument (figure 1).

Table 2 shows the Mini International Neuropsychiatric Interview (MINI) diagnosis of the participants. There was higher prevalence of psychiatric diagnosis among the divorced, 88 (58.7%) compared to the married, 52 (34.7%), ( $p= <.001$ ) and  $OR= 2.7$  (95% C.I= 1.7 – 4.3). Based on the study methodology, among those who were identified as non-cases using GHQ, 10% of divorced participants (6) and 10% of those who were still married (10) were also administered MINI. All of them were identified as non-cases using MINI.

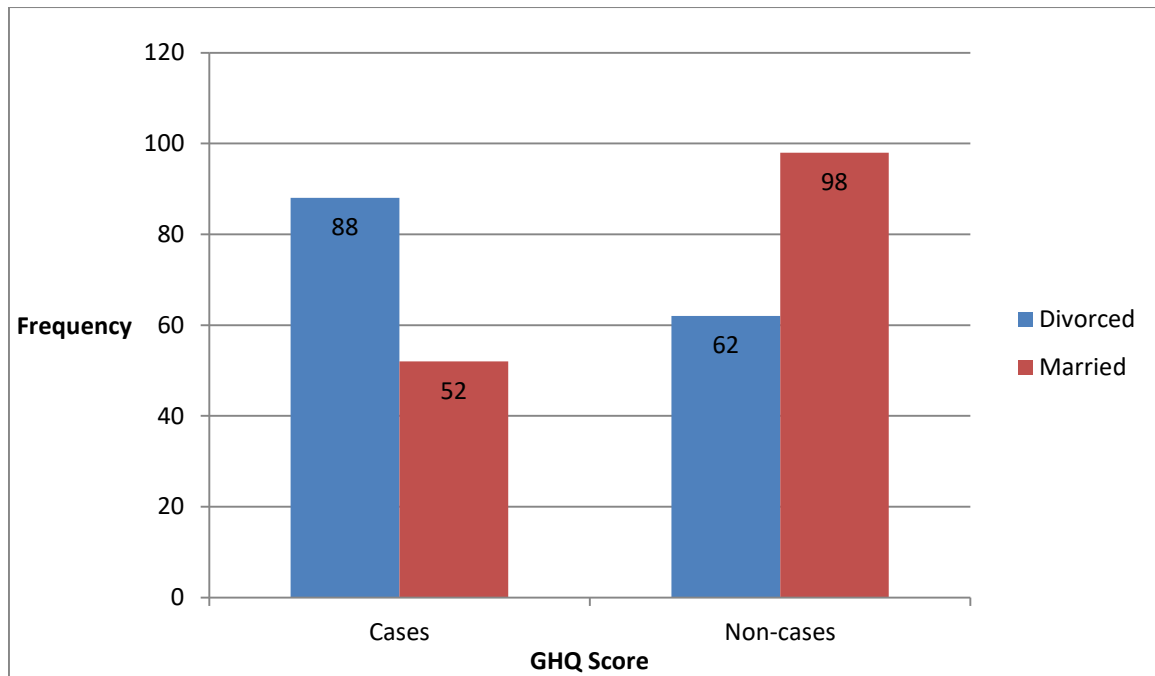
**Pattern of Psychiatric Diagnosis among the Participants**

Table 3 shows that the most commonly occurring psychiatric diagnosis was generalized anxiety disorders (GAD) which occurred in 38 (25.3%) divorced participants versus 27 (18.0%) married, followed by depression 35 (23.3%) divorced participants versus 16 (10.7%) married and lastly comorbid GAD with depression 15 (10.0%) divorced participants versus 9 (6.0%) married. Overall, participants who were divorced had more of any of these diagnoses compared to those who were still married ( $p= <0.001$ ).

**Table 1: Age distribution of the participants (n=300)**

	Marital Status			X <sup>2</sup>	P
	Divorced n (%)	Married n (%)	Total (%)		
<b>Age (years)</b>					
15-20	9 (47.4)	10 (52.6)	19 (6.3)	0.200	0.840
21-26	32 (52.5)	29 (47.5)	61 (20.3)		
27-32	25 (45.5)	30 (54.5)	55 (18.3)		
33-38	41 (52.6)	37 (47.4)	78 (26.0)		
39-44	23 (51.1)	22 (48.9)	45 (15.0)		
>45	20 (47.6)	22 (52.4)	42 (14.0)		





**Figure 1: GHQ scores of divorced participants compared to those currently married**

GHQ= General Health Questionnaire

**Table 2: The prevalence of psychiatric diagnosis in all the participants (n= 300)**

Marital status	Psychiatric Diagnosis (%)	Nil Psychiatric Diagnosis (%)	$\chi^2$ -value	p-value	O.R (95% C.I)
Divorced	88 (58.7)	62 (41.3)	17.36	<.001	2.7 (1.7 - 4.3)
Married	52 (34.7)	98 (65.3)			
Total	140 (46.7)	160 (53.3)			

O.R= odds ratio

C.I= confidence intervals

**Table 3: The pattern of psychiatric morbidity among the participants who were divorced compared to those who are married**

	Marital Status		Total
	Divorced n (%)	Married n (%)	
GAD*	38(25.3)	27 (18.0)	65 (21.7)
Depression	35 (23.3)	16 (10.7)	51 (17.0)
GAD* with co-morbid depression	15 (10.0)	9 (6.0)	24 (8.0)
NIL	62 (41.3)	98 (65.3)	160 (53.3)
<b>Test statistics</b>	$X^2 = 18.54$ ; p-value <0.001		

GAD= Generalized Anxiety Disorder

## DISCUSSION

The present study was carried out in a non-clinical setting with about 9 out of every 10 participants belonging to the Hausa ethnic group. The predominant religious affiliation of the participants was Islam. The prevalence of psychiatric morbidity in this study was 58.7%. Generalized Anxiety Disorder (GAD) was the most occurring diagnosis made, followed by Depression and then comorbid GAD with Depression.

The prevalence of psychiatric diagnosis among the divorced participants was 58.7%. This was higher than the prevalence among

participants who were still in marriage (34.7%). This is in agreement with previous studies that showed higher prevalence of psychiatric illness among divorced persons. Divorced women are three times more likely than their counterparts in intact families to come down with psychiatric conditions. <sup>[32]</sup> Divorce may have a cause-or-effect relationship to mental health problems. <sup>[33]</sup> A contributing cause to a divorce could be the mental problems of one of the marriage partners. The problem might be severe enough to make it impossible for the marriage to continue, or the mental health problem might be an effect of the divorce,

for example, the divorce might be so stressful that a person suffers psychological difficulties.<sup>[34]</sup> At 58.7%, the prevalence of psychiatric morbidity in this study is much higher than in the normal Nigerian female population finding 8.0%, as reported in the 2002–2003 National Survey of Mental Health and Wellbeing.<sup>[35]</sup> Whatever the relationship may be between divorce and mental disorders, it would appear that divorce carries high psychiatric morbidity and hence increased suffering for this study population.

The commonest psychiatric diagnosis was generalized anxiety disorders (GAD) which occurred in 38 (25.3%) divorced participants versus 27 (18.0%) married participants, followed by depression in 35 (23.3%) divorced participants versus 16 (10.7%) married and lastly, comorbid GAD with depression 15 (10.0%) divorced participants versus 9 (6.0%) married. Overall, participants who were divorced had more of any of these diagnoses compared to those who were still married. Shazia compared anxiety in divorced and married women and found the rates of

anxiety to be 41.4% and 31.7% in divorced and married women respectively. In all, divorced women have significantly higher anxiety as compared to married women.<sup>[13]</sup> Shazia also compared depression in divorced and married women, and found the rates of depression to be 35.2% and 26.43% in divorced and married women respectively.<sup>[13]</sup>

The present study reported a lower prevalence of depression and anxiety compared to the study by Shazia.<sup>[13]</sup> This finding in part may be attributed to the fact that the study by Shazia used the IPAT Depression scale and the IPAT Anxiety scale both of which are screening/rating scales for determining Depressive disorder and Anxiety respectively, while this current study made use of diagnostic instrument (MINI) after screening in the first stage with GHQ. Also, the study by Shazia used smaller sample size (30 divorced and 30 married participants) compared to the current study which used higher number of participants (150 divorced and 150 married). In a multinational study of mental disorders, marriage and divorce, the prevalence of

anxiety was found to be higher in divorced women compared to married women. [15] Bruce and Kim found that marital disruption was associated with higher prevalence rates of major depression in both men and women, but only men had a greater risk of a first-onset major depression. [12]

This study has some limitations. The cross-sectional design of the study would not permit any ascertainment of the direction of causality, for example between mental disorders and socio-demographic profiles. In addition, this is a community-based study conducted in a selected area of urban Kano and the results may not necessarily apply to the entire population of Kano or Nigeria as a whole. It is possible that some divorced women may not have been registered with the Association of Divorcees and Widows in the first instance due to multiple factors such as lack of awareness, financial constraints, etc. Despite these limitations, the present study goes beyond previous studies in using structured instruments to identify psychosocial characteristics that may be

associated with or perhaps even contributory to psychiatric morbidity. This provides a basis for the subsequent psychosocial interventional practices that are sensitive to the special needs of divorced persons, especially women. The prevalence of psychiatric problems among divorced persons is not likely to decrease soon.

## Conclusions

In this study, the prevalence of psychiatric diagnosis was higher among the divorced participants (58.7%) compared to participants who were still in marriage (34.7%), with the risk of psychiatric diagnosis in the former 3 times that of the latter. The pattern of psychiatric diagnosis differed between the two groups, with the most common diagnosis in each being Generalized Anxiety Disorder, followed by depression, and Generalized Anxiety Disorder co-morbid with depression in that order. Overall, the divorced participants had higher rates of each of the diagnoses compared to participants who were still married. Adequate measures are necessary to be taken to reduce the burden of

mental illness among the divorced populations through effective public health interventions.

### Recommendations:

1. Integrate psychological screening into primary healthcare and provide targeted counselling and psychotherapies for divorced women.
2. Establish community-based mental health support groups and provide public education on the consequences of divorce.
3. Enact policies to protect divorced women and conduct further research on divorce, including its effects on children.

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