

Gender and Psychiatric Diagnosis: A 5-Year Retrospective Study in a Nigerian Federal Medical Centre

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Abstract

Background: The role of gender in psychiatry disorders is becoming increasingly important. This study is therefore, aimed at identifying gender pattern of admissions to a public mental health centre with regards to demographic characteristic, psychiatry diagnosis and length of stay on admission.

Method: In this retrospective study Hospital records of 388 patients admitted at the psychiatric section of the Federal Medical Centre (FMC) Makurdi, between January, 2004 and December, 2008 were studied for gender differences regarding demographic attributes, length of stay and psychiatry diagnoses.

Results: Findings revealed that more men than women were admitted overall. Most men (56%) were less than 30 years old whereas 60.6% of women were within 30-59 years aged bracket. For men the main diagnosis was schizophrenia (30.5%), followed by substance related disorders (16.5%) then depression (14.0%); for women the main diagnosis was also schizophrenia (30.3%), this was followed by depression (24.5%), only one woman was diagnosed with substance related disorder. A statistically significant association was also found between having a personality disorder and being a male ($p=0.009$). Most female were single and belong to the lowest occupational group. There was no significant difference in the gender distribution of patients with respect to length of stay on admission ($p=0.161$).

Conclusion: The results revealed how psychiatry diagnosis is significantly influence by gender issues. We therefore recommend that; for a more effective psychiatry formulation, it is imperative to pay attention to gender issues that may affect the development of psychopathology.

Key words: Admission, Gender, Psychiatry diagnosis, Length of stay

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Introduction

Regardless of specific psychiatric diagnosis, females are known to express psychological distress somewhat differently from males with many factors being postulated to explain some of the differences.

Age has been implicated as a key factor in differences between the two. In child mental health services, the patients are preponderantly males¹. Boys suffer more than girls from autism, hyperactivity syndromes, learning disabilities, conduct disorders and phobias¹. This all changes around the time of puberty², during which, rates of psychiatric illness suddenly change and after adolescence, virtually most of the major psychiatry disorders with few exceptions, become substantially more prevalent in females than in males.

Depression and anxiety disorders for instance, are twice as common in women as in men, a fact that cannot be explain by women's greater readiness to acknowledge and seek help for psychological symptoms. It has been argued that conflicting and addictive responsibilities at home and at work may contribute to today's high prevalence of anxiety, depression and psychosomatic disorders in females³.

Social factors like the economic disadvantage of women in relation to men is undoubtedly contributory, since the rate of most mental disorders rises sharply in the context of poverty, unemployment and economic hardship⁴. Another social factor postulated to be a disadvantage to women is their wide social network as compare to men. This theoretically, is expected to buffer stress, but the extended social circles is known to position women in proximity to large numbers of individuals with whom they identify and whose personal problems become their own⁵.

As a subset of social agents, family members have long been suspect in their role as both triggers and buffers of psychiatric symptoms. Family ties are perceived and experienced differently by men and women. Marriage, for instance, has repeatedly been found to shield men

against psychiatric disorders; intriguingly, the opposite is true for women⁶.

Gender specific hormonal factors play important role in gender differences in psychiatric disorders. During development, gonadal steroid receptors are expressed in areas of the cerebral cortex that mediate cognition and affect. The female hormone estrogen is also known to regulate neuronal function in a number of important ways, essentially to prevent cell death and to promote the growth of cell connections and thus enhancing neuronal communications⁷.

Optimal treatment of psychiatric disorders is also known to differ by sex. Example, interpersonal interventions and safety during the provision of psychiatry services are issues of concern to women⁸. Gender issues are also relevant in pharmacological interventions where the optimal dose range of a therapeutic medication may not be the same for female as for men⁹.

This overview has addressed general factors that affect the experience of psychiatric disorders in men and women. Such differences as do exist between the sexes may offer clues to the origin and perpetuation of specific psychiatry disorders; for this reason, it is important to identify them. Also, beyond the need to better understanding of psychiatry disorders is the clinical responsibility to provide individualized, optimally effective gender-specific care to all patients. This retrospective study is therefore, designed to study gender pattern as regards psychiatry diagnoses and other demographic variables.

Methodology

This was part of a larger study that involves a retrospective review of all consecutive admission at the psychiatric unit of Federal Medical Centre, Makurdi, during the period of January, 2004 to December, 2008. Data was obtained from hospital records, a total of 388 admissions were included in the study, and twenty-two files were excluded because of insufficient data. Information regarding socio-demographic characteristic was recorded using a proforma designed by the authors. Where necessary, diagnoses were reassigned base on the 4th edition of Diagnostic and Statistical Manual of Mental Disorders (DSMIV) [10] using recorded information from the files. Patients' occupations were classified using the system of Boroffka and Olatawura¹¹ as follows; Group I consist of professionals with university degrees (doctors, lawyers, teachers, scientists, and high government

officials). Group II consists of professionals with out university degrees (teachers, administrators, higher clerical and supervisory personnel, large-scale farmers, entrepreneurs and armed force officers). Group III consists of clerks, motor vehicle drivers, mechanic, tailors, butchers, policemen, soldiers and small scale entrepreneurs. Group IV consists of cooks, barbers, domestic servants, gas station attendants, palm wine tapers, and small scale farmers. Group V consist of laborers and petty traders. Group VI includes full time house wives, unemployed educated youth and apprentices.

This classification has been used on Nigerian subjects¹².

Statistics; Data was coded and analyzed using Statistical Package for Social Sciences SPSS 15. Frequency statistics, cross tabulation, chi square and t-test were used to compare variables. The level of significance was set at $p < 0.05$

Results

Hospital records of 388 subjects included in the study show that, 200 (51.5%) were male and 188 (48.5%) were female. Majority of the male subjects aged <30 years old with a mean age of 29.07 ± 11.19 years while most females were reported to be >30 years old with a mean of 31.78 ± 11.65 . A statistically significant relationship was found between age distribution by gender status ($p = 0.020$) as shown in Table I.

Table I also shows the relationship between gender status and length of stay on admission. For men, the mean length of stay was 28.14 ± 16.80 days while for females it was 25.65 ± 17.43 days. There was no significant association between gender status and duration of stay on admission ($p = 0.161$).

Table II revealed that; 105 (52.5%) of the male patients were single, separated or divorced at the time of admission whereas 119 (63.3%) of the women under study were single, separated or divorced. This difference was statistically significant ($p = 0.001$) as illustrated in the table. Similarly, it was demonstrated in table II that 127 (63.5%) of men belongs to the lowest occupational group V and VI while 150 (80%) of the females belong to these lowest occupational group.

Table III shows the distribution of psychiatric diagnosis by gender status. For men, the main diagnosis was schizophrenia (30.5%), followed by substance related disorders (16.5%), then brief psychotic disorder (14.5%) and depression (14.0%). For women, schizophrenia again was the reported main diagnosis (30.3%), but this

was followed by depression (24.5%), then brief psychotic disorders (16.5%). Only one woman was diagnosed with substance related disorder. As shown in this table, there is a statistically significant association between gender status and psychiatric diagnosis.

As shown in table IV, 23(11.5%) of men were diagnosed as having a co morbid axis-II disorder notably antisocial personality disorder. But only 8 (0.04%) women received a co morbid diagnosis of an axis-II disorder, hence the observed significant association of being a male and having an axis-II diagnosis (p=0.009).

Table I: Analysis of Variance (ANOVA)

Variables	Male	Female	p-value
Age (years)	29.07 ± 11.19	31.78±11.65	p=0.020
Length of stay(days)	28.14±16.80	25.65±17.43	p=0.161

Table II: Relationship between Marital and Occupational Status with Gender Distribution of Subjects

Variables	Male	Female	Total	Statistics
Marital status: Single				χ²=20.350 p=0.001
Married	66	97	163	
Separated/divorced	95	49	144	
Total	39	42	81	
Occupational status: Group				χ²=42.011 p=0.000
Group II	5	2	7	
Group III	5	4	9	
Group IV	17	13	30	
Group V	46	19	65	
Group VI	33	6	39	
Total	94	144	238	
	200	188	388	

Table III: Gender and Psychiatric Diagnosis

Diagnosis	Male	Female	Total
Schizophrenia	61	57	118
Depression	28	46	74
Other mood disorders	17	17	34
Brief psychotic disorders	29	31	60
Schizoaffective disorders	11	9	20
Substance related disorders	33	1	34
Post partum disorders	0	18	18
Anxiety disorders	13	4	17
Other disorders	8	5	13
Total	200	188	388

χ²=58.040, p=0.001

Table IV: Gender and Axis-II Diagnosis

Gender	Axis-II Present	Axis-II Absent	Total
Male	23	177	200
Female	8	180	188
Total	31	357	388

χ²=6.919
p=0.009

Discussion

Men represented 51.5% of the admissions, a finding that conform with other studies for instance, in Ethiopia, Abebaw et al,¹³ found most patients on admission to be men. Also, in England, Thompson et al¹⁴ found an excess of male over female admissions, a trend that was confirmed by Payne¹⁵ and Bartlet et al¹⁶ in more recent studies. However, this finding represent a reversal of the gender differences in psychiatry

admissions as earlier found in a Nigerian Teaching Hospital by Baba et al¹⁷, who reported most (51.8%) of their in-patients were females. The following factors have been elucidated to explain the lower admission rate among women in our findings; the general prevalence rates of some psychiatric disorders like substance abuse, antisocial personality disorder and mental retardation which are more prevalent in male. Secondly, quicker recovery from mental disorders by females (as proposed in schizophrenia) may also contribute to this finding. The ability of care givers to tolerate behavioral disorders from women at home, lack of family support, higher mortality rate and lesser economic power among women may all contribute to explain the low admission rate of women as found in this study.

Most men on admission were younger than the female counterpart. This finding has supported the fact that age is a key factor in gender pattern of psychiatric disorders as earlier explained¹. Before adolescent, rates of psychiatric disorders are reported to be more in boys, a pattern that changes following puberty. After puberty, most major psychiatric disorders (exceptions are substance abuse, schizophrenia and impulse control disorders) become substantially more prevalent in females than in male². Schizophrenia a common psychiatric disorder among in-patients as found even in this study is known to have an earlier onset in men than women¹⁸. This may explain the preponderance of young male group in this study.

Marriage is generally known to offer protection against mental disorders¹⁹, we found 63.3% of women to be single, separated or divorced as against 52.5% of the male subjects. This pattern of distribution can be explained by the vulnerability of women to divorce by their spouses in event of having a psychiatric illness, possibly because of their social disadvantage being worsened by mental disorders. The overrepresentation of women in the lowest occupational group as revealed in this study may put them at danger to marital discord and social difficulties that may eventually lead to separation or divorce.

Rates of schizophrenia were reported to be the same in both men and women. A pattern that has been found in other previous studies; for instance, Abebaw et al¹³ in Ethiopia found a similar pattern. But this may be a reflection of gender pattern of the disorder in the general population where the male to female ratio is put at 1:1¹⁸.

Depression was common among the female group studied, with a female to male ratio of 2:1. A pattern that

is in tandem with the widely reported notion that depression is more prevalent in women than men. This pattern has also been reported in depressed diabetic out patients in this environment¹². Several factors have been elucidated to explain the propensity to women for depression; gender specific issues like menstrual cycle changes, pregnancy, miscarriage, post partum period, pre menopause and menopause may all interact to explain this finding. Secondly, many women are face with additional stresses such as responsibilities both at work and at home, single parenthood, caring for children and for aging parents. And lastly, the issue of high divorced rates and unemployment as found in this study could all put women at a greater risk of coming down with depression.

Other gender distribution of psychiatric disorders as reported in substance related disorders and axis-II disorders may be a true reflection of the pattern in the

general population where young men are reported to be more likely to have a diagnosis of substance related disorders. A similar pattern of distribution was observed among patients with HIV infection in Jos where young males were overrepresented among HIV infected patients in Joss¹⁹.

Axis-II disorders particularly antisocial personality disorder were reported more in men. This finding is similar to gender pattern of these disorders as seen in other studies²⁰.

In summary, gender issues are therefore recommended to form our formulation for a more effective patient's care.

It is pertinent to state that the study was limited by its retrospective nature, it is also hospital based. We therefore recommend for a wider community-based prospective study to generalized findings in this study.

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