

Lifetime Prevalence of Psychiatric Disorders among Correctional Officers in a Prison Formation in Abeokuta Ogun State Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author OAS designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors POO and AO managed the analyses of the study and the final draft of the manuscript. Author POO managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Earlier studies of Correctional Officers have already shown the relationships between work environment and mental health. However, most have not evaluated the prevalence of specific psychiatric morbidity among officers who work in the prison environment. The aim of this study was to determine the prevalence of DSM-IV/ICD-10 Axis I psychiatric disorders among correctional officials in Abeokuta, Ogun state, Nigeria. A census of all Correctional Officers was conducted at the first stage, during which they were screened for psychiatric morbidity. Those screened positive and 15% of those who were negative were evaluated for definite psychiatric morbidity. The most common mental health disorder was Generalized Anxiety Disorder followed by Major Depressive Disorder, while the least common disorders were Bipolar Disorder (Mania), and Social Phobia. Correctional Officers are at risk of experiencing psychiatry morbidity and as such mental health strategies including education and screening should be integrated into the health management culture of the prison organization for the purpose of prevention and early intervention.

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1. INTRODUCTION

Prison is a place for punishment for the behavior of an individual whose life pattern is not in line with accepted norms, values or behaviors of the society as dictated by the law of the land. The essence of such punishment is for reformation or correction of deviant behaviors and a deterrent to would-be offenders of such laws [1]. The role of prison officials, among others, includes identifying the causes of the prisoners' anti-social dispositions, setting in motion mechanisms for their treatment and training for eventual reintegration into society as normal law-abiding citizens after their release from prison. Farkas et al has suggested that the tendency towards professionalism in prison administration has resulted in an ideological shift where prison officers are now expected to perform dual and seemingly conflicting roles of custody and rehabilitation of prison inmates. These conflicting roles have been suggested to impact negatively on the mental health of Correctional Officers [2].

The World Health Organization (WHO) defines mental health as "A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make contributions to his or her community" [3]. WHO included the ability to work productively as a measure of health and this can be related to the definition of occupation which refers to a specific chunk of activities in relation to a specific setting and culture [4].

Earlier studies of Correctional Officers have already shown the relationships between work environment and mental health. In Australia, Webster et al [5,6] showed that sleeping pills consumption was higher among Correctional Officers than among the general population and that more prison officers were more vulnerable to psychological distress. In New Zealand, Long et al [6,7] reported that Correctional Officers were more stressed than army personnel, and that the degree of psychological distress correlated with the unit the individual served in the work place. Furthermore, in Great Britain, the study by Rutter & Fielding opined that the following were instrumental in the development of psychological distress: the organization of work [6,8] and relationships with the inmates [6,9]. A study conducted in Finland [6,10] also showed that the risk of psychological distress among correctional

personnel is linked to the organization of work and to prison characteristics i.e. category and size. Two studies done in the United States of America on Correctional Officers [6,11,12] revealed the preponderance of occupational over individual characteristics in causing psychological distress.

The aim of this study was to determine the prevalence of DSM-IV/ICD-10 Axis I psychiatric disorders among correctional officials in Abeokuta, Ogun state, Nigeria.

2. METHODOLOGY

2.1 Study Site and Sample Size

The study was done in Abeokuta the Ogun state capital in Nigeria. It occupies an area of 57.35 sq km with an estimated population of 3,751,140 according to the 2006 population census interim report [13]. The prisons used in this study included the following: The Abeokuta prison Oba and the Ibarra Federal Prison.

The Abeokuta prison in Oba was one of the prison formations under the Ogun State Command. It is situated on the east bank of the Ogun River. It had staff strength of 65 Correctional Officers and a lock up population of 545 with an official capacity for one thousand (1000) inmates. The prison at Ibarra had a staff strength of 126. It had a lock up population of 562 with an official capacity for 400.

2.2 Study Design

This study is a descriptive, cross sectional study of psychiatric disorders among Correctional Officers in a prison formation in Abeokuta, Ogun State, Nigeria.

2.3 Data Collection

The study was done in two stages. The first stage involved eliciting participants' socio-demographic data and screening of participants for psychiatric morbidity using the 28-item version of the General Health Questionnaire (GHQ-28). The second stage involved clinical interview with the M.I.N.I International Neuropsychiatry Interview-Plus (MINI-PLUS) of all the participants who are GHQ-positive and randomly selected 15% of those who were GHQ-negative.

2.4 Data Analysis

Data were analyzed using the Statistical Package for Social Science (SPSS version 21) Computer Software. While the prevalence of psychiatric disorders were evaluated after the data was weighted using the Horvitz-Thompson estimator [14]:

$$\hat{\pi} = \sum w_i y_i / \sum w_i$$

Where $\hat{\pi}$ = estimate of prevalence (weighted prevalence).

\sum = "the sum of".

w_i = ith subject's sampling weight.

$y_i = 1$ (when the ith second stage subject is a 'true' case, 0 otherwise).

Further explanation can be found in the work of Dunn et al. [14].

2.5 Ethical Consideration

Ethical approval was sought from the Research and Ethics Committee of the Neuropsychiatry Hospital, Abeokuta, and permission was obtained from the management of the different prison formations in Abeokuta Ogun state. Informed consent was obtained from each subject, who was assured of confidentiality. This study had no adverse consequent on the participant physical or otherwise but rather those in need of psychological treatment were assisted by the Prison management to access treatment as advised.

3. RESULTS

This was a two-stage study. In the first stage, a total of 191 participants completed the General Health Questionnaire version 28 (GHQ-28) and a questionnaire designed to elicit the socio-demographic characteristics of the participants. Out of these 191 Correctional Officers that were surveyed, 51 (26.7%) participants who were GHQ-positive were to be interviewed in the second stage of the study with the Mini International Neuropsychiatric Interview (M.I.N.I. PLUS). Also, 21 (15%) of participants who were GHQ negative were randomly selected and were to be interviewed in the second stage. The response rate in the second stage of the study was 64% (n=46). Thirteen (6.8%) participants could not be traced, 7 (3.7%) declined the interview and 6 (3.1%) had been transferred permanently outside Abeokuta prison formation within the 2-week interval of the first and second stage of the study. (See Fig. 1).

3.1 Socio-Demographic Characteristics of Respondents

Table 1 shows the socio-demographic characteristics of the participants. The ages of the participants ranged between 24 to 60 years, with a mean of 40.27 years (S.D. \pm 7.73). Most of the participants were in the age bracket of 35-40 years (30.9%), were males 77%, married 91.1%, had one wife/husband (91.1%), and had three or more children 51.8%. The mean length of service was 14.95 years (S.D \pm 9.92).

3.2 Specific Psychiatric Disorder

In this study, the most common mental health disorder was Generalized Anxiety Disorder, 18 (39.1%) followed by Major Depressive Disorder 12 (6.3%) while the least common disorders were Bipolar Disorder 1 (2.2%), Social Phobia and Suicidality 1 (2.2%). The remaining specific psychiatric disorders can be found on Table 2.

3.3 Prevalence of Respondents with More Than One Mini-Plus Diagnosis

In this study, it was observed that anxiety disorder was the most prevalent (in combination with another psychiatric disorder) comorbid psychiatric morbidity among Correctional Officers. Anxiety and Affective (Depression and Mania) disorders was the most 9 (19.6) comorbidity among Correctional Officers. Other details are highlighted on Table 3.

4. DISCUSSION

4.1 Socio-Demographic Characteristics

The mean age (40.27 years) of participants in this study is comparable to that of similar studies conducted in Nigeria among police officers (39.8 years) as well as one study among Correctional Officers in France with a mean age of 37 years [15–17]. This may suggest that a predominantly young and middle aged work force is desirable for the demands of prison service and perhaps other relevant sections of the criminal justice system.

Furthermore, more than three-quarters of the participants were males, similar to what was reported in a study among Correctional Officers in Edo State, Nigeria [18]. This is consistent with the argument of Wells et al. who suggested that traditionally, the prison service is a

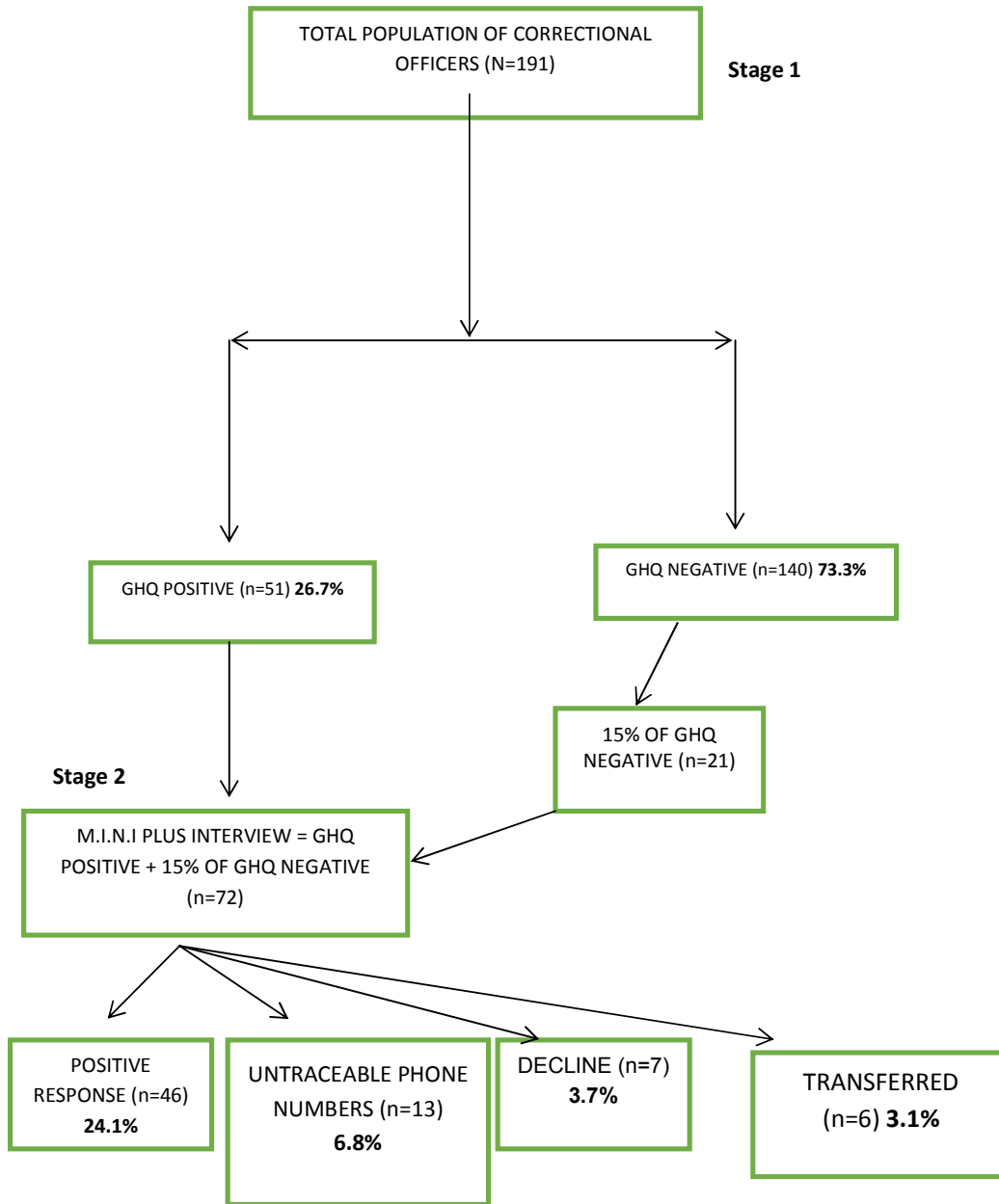


Fig. 1. Flow chart showing the different stages of the study and the distribution of participants according to those stages

male-dominated profession in need of aggressive masculine skills [19,20]. A French study among Prison Officers also found a preponderance of males [17].

Most of the participants were married while only a tenth were divorced/ separated, widowed or never married. A study among civil servants also reported a comparable percentage of married

participants (more than three-quarters) [21]. While the number reported in the study among civil servants may not be directly applicable to officers in a correctional environment, an indirect inference may be made since as government employees they could be regarded as public servants as well. Nine out of ten participants had one wife while the remaining one-tenth represented participants that had no wife or

those that had more than one wife. This was suggestive of a predominant monogamous setting. The reasons for this predominance may be because this present study was conducted in the south-western part of the country where Christianity is the predominant religion [22] and monogamy appears to be the normative matrimonial disposition of adherents of the Christian faith. Participants who had two children or fewer were slightly less than half of the survey participants, while more than half (51.8%) had three children or more. This is similar but slightly lower than what was found by Yussuf et al in a study involving a different Nigerian occupational group (bankers) among whom they observed that two-thirds of the participants in their survey had three or more children. The reason may be that it is admirable in Nigerian cultures to have fairly large nuclear families although the trend may be gradually drifting towards a more conservative number of children as found in deeply westernized societies [23,24].

A predominantly monogamous setting might be indirectly suggestive of essentially nuclear family settings which appeared to be the common family type in this study. However, one-third of the participants had five or more dependents. The reason for this may be that extended family system could account for the higher number of dependents and is still a common practice in Nigeria. Furthermore, studies among other occupational groups have also shown a third to two-thirds of participants in those studies had five or more dependents subject to their economic status [24–27].

The mean years in service revealed that most individuals had spent more than a decade in service. These findings are similar to those obtained from other studies done among Prison Officers in Ibadan, Oyo state and Edo State where from two-thirds to three-quarters of Prison Officers had spent more than a decade in service [15,16,18]. This may suggest that the Prison Service provides a somewhat stable employment on the one hand, or that Correctional Officers find it difficult to change their career and inadvertently remain on the job, on the other hand [28].

The Prisons are Federal Government Institutions. Thus, the finding of nine out of ten officers with tertiary education is generally consistent with reports of studies among Federal Government Workers in Nigeria among whom it has been suggested that a stable and more financially rewarding employment with the Federal

Government is more likely if they possessed a tertiary education [29].

Table 1. Socio-demographic variables of respondents

Variables	n	(%)
Age		
24-34	47	(24.6)
35-40	59	(30.9)
41-50	65	(34.0)
51-60	20	(10.5)
Means(S.D.)year	40.27	(7.73)
Gender		
Male	147	(77.0)
Female	44	(23.0)
Marital status		
Married	174	(91.1)
Divorced/separated/widowed/ Never married	17	(8.9)
Number of wives/husband		
0	11	(5.8)
1	174	(91.1)
2	6	(3.1)
Number of children		
0-2	92	(48.2)
3-7	99	(51.8)
Length of service		
0-10	82	(42.9)
11-20	46	(24.1)
21-35	63	(33.0)
Mean (S.D.)years	14.95	(9.92)
Level of education		
Primary and secondary education	19	(9.9)
Diplomas (OND and HND)*	103	(53.9)
Degree and other higher education	69	(36.1)
Rank		
Assistant cadre	62	(32.5)
Inspectorate/superintendent cadre	83	(43.5)
Controller cadre	46	(24.1)

Seven out of ten Correctional Officers were of the junior and middle officers' ranks. This agrees with figures from an earlier study by Jurik among Prison Officers in the US where nine out of ten of them were either junior or middle ranked officers [30]. A higher proportion of the participants in this study are middle ranking staff. Previous studies have suggested that the higher proportion of these cadres in the Prison Service is because these officers may be considered the back-bone of the work force since they are the cadres usually called upon to 'act down' as well as provide support for the senior officers in their executive and administrative capacity [31].

Table 2. Specific psychiatric morbidity

Psychiatric morbidities (Mini plus)	N (%)
Major Depressive Disorder	12 (26.1)
Dysthymia	2 (4.3)
Mania	1 (2.2)
Panic Disorder	8 (17.4)
Agoraphobia	2 (4.3)
Social Phobia	1 (2.2)
Specific Phobia	7 (15.2)
Obsessive-Compulsive Disorder	10 (21.7)
Generalized Anxiety Disorder	18 (39.1)
Substance Dependence	8 (17.4)
Psychotic Disorder	5 (10.9)
Anorexia Nervosa	-
Bulimia Nervosa	-
Posttraumatic Stress Disorder	3 (6.5)
Suicidality	1 (2.2)
Antisocial Disorder	-
Somatization Disorder	3 (6.5)
Hypochondriasis	2 (4.3)
Body Dysmorphic Disorder	3 (6.5)
Pain Disorder	-
Conduct Disorders	-
Adjustment Disorders	-
Pre-menstrual Dysphoric Disorder	-
Mixed Anxiety Depressive Disorder	-

Table 3. Prevalence of respondents with more than one mini-plus diagnosis

Comorbidity	n (%)
No Disorder	20 (43.5)
No Comorbidity	9 (19.6)
Anxiety and Somatoform Disorders	2 (4.3)
Psychotic Disorder and Substance Abuse	2 (4.3)
Anxiety and Affective Disorders	9 (19.6)
Affective Disorder and Substance Abuse	1 (2.2)
Anxiety and Substance Abuse	2 (4.3)
Anxiety and Psychotic Disorder	1 (2.2)

4.2 Prevalence of Psychiatric Morbidity

Several studies have reported differing prevalence rates of psychiatric morbidities among different occupational groups which was similar to what was found in this study. It was observed that more than a quarter of participants were GHQ positive, with this implying probable psychiatric morbidity. The prevalence of probable psychiatric morbidity among doctors at the university of Benin teaching hospital was reported to be 14% [32]. Yussuf et al conducted

a number of studies on psychiatric morbidity among workers and found that two out of ten tertiary hospital consultants had probable psychiatric morbidity; about the same proportion was observed to have probable psychiatric morbidity among bank workers in a northern Nigerian setting [24,33]. Interestingly, a similar proportion of nursing staff of a Nigerian University Teaching Hospital reported probable psychiatric morbidity [34]. In a comparative study also conducted by the same authors, they reported that Resident Doctors had a higher prevalence of probable psychiatric morbidity than Nurses and Consultants while a quarter of Resident Doctors had probable psychiatric disorder [25].

In the main, the findings from this are similar to what was published by Fitzgerald et al in Australia, where over 33% of Correctional Officers had probable psychiatric disorder [35]. While it may be said from the foregoing that the rate (26.7%) of probable psychiatric morbidity among the Correctional Officers in this study is comparable to that in some other occupational groups, the rate is nevertheless higher than rates (14% among doctors in Benin; 18% among Bankers) generally reported in Nigeria. One plausible reason for the this slightly higher rate is the impact of the demand that comes with working under pressure within the prison correctional settings and the various forms of danger that the Correctional Officers involved in this study are exposed to and which they are likely to experience on a regular basis [35]. However, it is important to noted that Fitzgerald et al noted that prison location [36] level of security of the prison [37] and respondent prior psychopathology before assumption of work [37] as a Correctional Officer may be cofounders which are beyond the scope of this study [35,36].

4.3 Prevalence of Major Depressive Disorder

The weighted lifetime prevalence of major depression among Correctional Officers in this study was 26.1%. This prevalence is however similar to the range reported by most studies (4 - 30%) which also include military personnel as observed by Cowen et al. [38,39]. Prison officers who also have some form of paramilitary training may be exposed to similar stressors as seen among deployed military personnel and this might explain their similarities in terms of the prevalence of Major Depressive Disorder. The cross-national epidemiology of major depression

done by Gonzalez et al in the united states of America showed a lifetime prevalence of 14.6% and a 12 month prevalence of 5.5% and that reported among African-American foreign-born by Bromet et al. was 13.4% [16,40,41]. The authors opined that Blacks and Latinos appears to have a higher disease burden related to a lack of consistent access to care. In addition, the predominant male gender, extension of work time without commensurate compensation in the light of the recent security challenges [16] in the country are likely cofounders that may have affected the rates observe in this study [16]. Furthermore, Correctional Officers are more likely to experience loss of life due to jail breaks and assault from criminals [42]. The ban on employment by the Federal government [42] coupled with inability to protest against poor condition of service [42] and prolonged delay in promotion when compared with other civilian public servants [42] may support a form of learned helplessness [42] among Correctional Officers. The above may serve as predisposing, precipitating and perpetuating factors for a depressive disorder in this occupational group.

4.4 Prevalence of Dysthymia

The weighted lifetime prevalence of dysthymia among Correctional Officers was found to be 5.3%. The prevalence rate in this study is however higher than the 4% reported by Alonso et al in six European countries [43]. This difference may be driven by cultural factors. Research has suggested that 'idiom of distress' in the context of mood disorders tend to vary among cultures [44]. It is quite possible that the Correctional Officers may be culturally conditioned to reflect emotional distress in less psychological ways such that they might be more prone to report such symptoms as might be suggestive of dysthymia.

4.5 Prevalence of Anxiety and Obsessive-compulsive Disorder

The following anxiety disorders were elicited from the participants in the study: Panic disorder, agoraphobia, social phobia, and specific phobia. The weighted lifetime prevalence of panic disorder was higher than that reported by Gureje et al (0.2%). The authors conducted their study in the general population unlike this study that examined only Correctional Officers. In addition to fairly general 'threats' in everyday life, Correctional Officers are likely to experience more threatening stimuli in the prison

environment. This becomes more relevant with the possibility of their re-deployment to prisons located in states facing the recent wave of insurgency and religious fundamentalism in Nigeria [6].

The weighted lifetime prevalence of generalized anxiety disorder found in this study was 39.1%. The prevalence of generalized anxiety disorder is higher than the range reported by Gureje et al and Cowen et al which was 4.1% to 5.75% and 0.8% to 6.4% respectively in a general population settings. The high prevalence of generalized anxiety disorder among Correctional Officers may be associated with the increased personal safety concerns that may arise as guards of criminals. In addition, the possibility of jail breaks [18] which had been worsened by the prevailing political climate in the country may also have contributed to the rate observed among them [18].

The weighted prevalence of specific phobia among Correctional Officers in this study was 15.2%. This was lower than that reported by Guliekin (16.6%) and that reported by Cowenet.al. (7% for men and 17% for women) [38,45,46]. The difference may be explained by the socio-demographic characteristic such as gender distribution (predominantly female), differential age of onset and cultural differences associated with specific phobia [46]. The weighted lifetime prevalence of obsessive-compulsive disorder in this study was 21.7%. The prevalence of OCD in this study was however higher than that reported by Gureje et al who reported a lifetime prevalence of 0.1% and 12 month prevalence of 0.1% [45]. The prevalence of OCD in this study was also higher than the range reported by Michael et al who reported a range of 0.5-1.6% for lifetime prevalence and 0.5-1.0% for 12 month prevalence [47]. Studies [48-51] done among Prison officers have suggested that higher prevalence of OCD may be explained by the heightened emotions that are related to the personnel safety in the prison environment. It is likely that Correctional Officers are more likely to double check and count prisoners and also lock doors and gates repeatedly in order to ensure safety. Furthermore, obsessive compulsive traits may be seen as an amiable professional quality which may reduce the chances of been framed or punished for negligence. They also opined that the training and work culture of Prison officers may be a risk factor to the development of psychological disorders which may be related to OCD [18,52].

4.6 Prevalence of Mania

The lifetime prevalence of mania among Correctional Officers in this study (2.2%) was comparable to the lifetime prevalence reported by Cowen et al [38]. They reported a range of 0.3-1.5% in community surveys. The chronic relapsing nature of manic disorders and the absence of gender difference in mania may explain the similarities observed in these studies.

4.7 Prevalence of Substance Dependence

The weighted lifetime prevalence of substance use disorder in this study was 17.4%. A study among military officers in the United States of America revealed that the prevalence value in this study was higher than 12% reported by the authors. In the same article, it was explained that substance use is associated with the cultural acceptability and the amount of pressure that may result from the demand associated with guarding or interacting with criminals [45,53].

4.8 Prevalence of Psychotic Disorder

The weighted lifetime prevalence of a psychotic disorder (schizophrenia, schizoaffective psychosis, and schizophreniform disorder) in this study was 10.9 %. A study [54] done among Correctional Officers in the United States of America reported a prevalence of 0.58% which is lower than what was observed in this study. They noted that a relatively lower number of Correctional Officers participated (28%) in their study which when compared with this study was considerably higher (100% and 73% participated in the first and second stage respectively). The instrument used in the study done in America was self-administered while in this study it was interviewer based. Furthermore, because the age of onset for psychotic disorder is lower in males it may explain why Correctional Officers in this study have a higher prevalence [55].

4.9 Prevalence of Posttraumatic Stress Disorder (PTSD)

The weighted lifetime prevalence of Posttraumatic Stress Disorder in this study was 6.5%. A study [56] was conducted in Jos, a city prone to ethno-religious conflicts. These communities had a higher rate (46.1%) when compared to Correctional Officers. This was reasonable so because the prison officers are a largely stable occupational group and may not have experienced a similar traumatic event as seen in Jos [56]. Furthermore, the prisons in

Abeokuta where the study was done has not experienced any form of crisis in recent times and this might explain the lower rates observed among Correctional Officers in this study. It is likely that the temporal relationship of the traumatic event would affect the proportion of participants that may be observed to have PTSD leaving a sizeable number of participants that have recovered from PTSD.

4.10 Prevalence of Suicidality

The lifetime prevalence of Suicidality (attempt) among Correctional Officers in this study was 2.2%. It was however lower than (2.9%) what was reported in a study [57] that looked at suicide-related outcome in South Africa. In Joe and his coworkers submission, they opined that the rates may be related the effect of apartheid on the particular population that was studied. The period of apartheid was associated with oppression, lack of growth and social opportunity, severe hardship and poor quality of life.

4.11 Prevalence of Somatoform Disorders

The following somatoform disorders were observed among Correctional Officers, namely: somatization disorder, body dysmorphic disorder and hypochondriasis. The lifetime prevalence of Somatization disorder in this study was 6.5%. This was lower than what was observed among teachers in Abeokuta which was 7.38%.[16] It appears that teaching being a predominantly female profession was more likely to have respondents who tended to express their psychological distress as a somatoform disorder. This was opined by the author to be a possible reason for the higher rates. It was also noted that eliciting lifetime symptoms will depend on accurate recall of symptoms that may have occurred over 20-30 years. This may have accounted for the lower rate observed in this study.

The lifetime prevalence of hypochondriasis in this study was 4.3%. . It was lower than the primary care survey reported by Cowen et al who reported lifetime prevalence of around 8% [38,58]. One of the limitations indicated by the authors is the difficulty in comparing rates around the world. Different instruments have been used with different definitions of hypochondriasis. Moreover, different study sites (e.g. primary health care centers and specialist hospital) along with the method of analysis may have accounted for the discrepancy observed. They also believe

that some of the symptoms may have been explained away as medically unexplained symptoms. This may have suggested why a lower rate was observed in this study.

The lifetime prevalence of Body Dysmorphic Disorder (BDD) in this study was 6.5%. This was higher than what was reported (1.7%) in a population based study in the United States of America [59]. Rief et al were of the opinion that self-rating scales might be associated with less restrictive case definition. This was not the case in this study thus explaining the difference. Moreover, some of the participants had concerns about unattractive body part but did not fulfill the criteria for BDD. In addition, the authors however noted that the prevalence rate varied with the population and that the prevalence also changed within the same population depending on whether a self-administered or clinical interview questionnaire was used. They were of the opinion that clinically administered questionnaire were associated with higher rates [60].

4.12 Prevalence of Psychiatric Comorbidity

The rate of comorbidity among Correctional Officers was higher than what was found among civilians who do not work within the criminal justice system but similar to what was reported among Correctional Officers in the United States [61–66]. The prison service may foster a sense of helplessness and this may account for mood and anxiety disorders which were the most prevalent comorbidity in this study. It has been opined that the rigid quasi-military work environment may have iatrogenic role in the development of anxiety, somatoform and mood disorders [54].

5. CONCLUSIONS AND RECOMMENDATIONS

Despite the usual limitations of cross-sectional studies done with the aid of a questionnaire, our survey corroborated some of the results already reported and enabled us to define the prevalence of psychiatric morbidity among Correctional Officers in Abeokuta Ogun State Nigeria. Mental health preventive strategies including education and screening should be integrated into the health management culture of the organization such that intervention needs to be focused on as early as the screening stage of employment. Tackling work-related mental health issues can be challenging, however, it can also serve as a vehicle for positive change.

This study has shown the burden of psychiatric morbidity and that it may be beneficial to have mental health professionals in the prison system who will be able to screen and plan interventions for officers who may experience mental disorders post-crisis exposure in order to mitigate the effects of such crisis in the short and long term. Finally, it is recommended that future studies consider mental health management intervention and support among Correctional Officers.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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