# Personality Disorders in a Non-Patient Population in Nigeria: Screening and Diagnosis

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## SUMMARY

**Background**: Studies of the epidemiology of personality disorders in Nigeria are scanty**.** From clinical experience, diagnoses of personality disorders are hardly ever made in both out patients and inpatients in our mental health department. It is unclear whether the non-diagnosis of personality disorders in our psychiatric practice is an artifact of clinical omission or the genuine rarity of the disorder in our setting.

**Aim:** The major purpose of the present study was to estimate the rate of personality disorders in a non-patient population. A second objective was to explore the diagnostic value of using a two-stage technique in diagnosing personality disorders.

**Method:** Community dwelling residents 18 years and above were selected by convenience sampling from four communities at Nnewi (Eastern Nigeria). After proper explanation of the study and verbal consent by (potential) subjects, those who agreed to participate were administered the Personality Disorders Screening interview (PDS). The General Health Questionnaire (GHQ-12) was subsequently administered and thereafter a structured clinical interview using the Personality Assessment Schedule (PAS) was conducted.

**Analysis:** the SPSS 11.5 was used for analysis. Simple descriptive statistics were presented.

**Result:** Of the 108 subjects, 63.8% were females. The subjects were aged 18-55 years, mean, $31.7 \pm 8.6$ SD. At a cut score of 3 for the GHQ-12, 25% of the subjects had probable mental disorder. Sixty-two subjects (57.4%) scored $\geq 2$ on the Personality-Screening interview. On the PAS, 15.7% had personality disorders. The commonest personality disorders were schizoid, anankastic, passive – dependent and dissocial personality disorders.

**Conclusion:** All subjects who had personality disorder on the PAS scored e"2 on the screening interview. About 16% of the subjects had at least one type of personality disorder
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*KEYWORDS*:**Personality disorder, Community, Nigeria**.

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## INTRODUCTION

Epidemiological studies of personality disorders in Nigeria are scanty. From clinical experience, diagnosis of personality disorders in our Mental Health Department is hardly (if at all) ever made, either for in-patients or outpatients. It is unclear whether the non-diagnosis of personality disorder in our psychiatric practice is an artifact of clinical omission or the rarity of the disorder in our setting.

Some researchers seem to agree that the epidemiology of personality disorders has not been as extensively studied, as have other mental disorders, partly due to the controversies surrounding the diagnosis[1,2]. In developing countries such as Nigeria, psychiatrists are quite few and have very heavy clinical caseloads. In such situations, it is likely that emphasis is placed on the diagnosis of other major mental disorders rather than personality disorders. Yet it is generally reported that personality disorders commonly co-occur with other major (Axis I) mental disorders[3,4]. Tyrer and Simonsen[5] have argued that every individual who suffers from any form of mental disorder has a "personality" whose influence may be critical to understanding the treatment; they therefore recommended that personality must always be assessed. Reports have also been presented to show that evidence-based effective treatments can be described for specific personality disorders[6]. If a brief and sensitive screening technique could be used to identify personality disorders, it would add value to the competence of diagnostic clinicians.

### Aims of study.

The aim of the present study was to estimate the rate of personality disorders in a non-patient population. The utility of a brief personality-screening instrument was also evaluated.

### MATERIALS AND METHODS

**Setting and source population:** The major catchment area of Nnamdi Azikiwe University Teaching Hospital Nnewi is Nnewi itself (Eastern Nigeria) where the Hospital is located.

Nnewi has a population of nearly 200,000 and is divided into four principal quarters – (Otolo, Uruagu, Umudim and Nnewichi). The demographic distribution is the same pattern as the rest of (Eastern) Nigeria – slightly more females than males, good proportion of the population-young/very young. Nnewi is the largest spare parts (motor and motor –cycle) market in West Africa. The subjects for the present study were drawn from Otolo and Umudim. These two communities were selected by simple probabilistic random sampling.

**The subjects**: The 108 subjects comprised 69 females (63.9%)

and 39 males (36.1%), aged 18 – 55 years, mean age 31.7 ± 8.6 SD. Fifty – eight (53.7%) of the subjects were single and 50 (46.3%) were married. There were 18 professionals (16.7%), 5 associate professionals (4.6%), 10 clerks (9.3%), 33 market and sales workers (30.6%), 25 elementary workers (23.1%) and 17 students (15.7%).

**Instruments and measures.**
**Screening Questions for the presence of a DSM-IV Personality Disorder**.

This was first described by Pfohl[7] and later amplified as the Iowa Personality Disorder screening interview[8]. The original screening questionnaire (not the Iowa Questionnaire) was used because of its availability. The screening questionnaire is an extremely brief questionnaire containing only 6 items (the Iowa screening questionnaire has 11 items). The respondent is expected to answer 'yes' or 'no' to each question, which is couched to capture aspects of DSM-IV personality disorder. If there is a "yes" response to any question, the subject is asked to state the frequency of occurrence of such a symptom item. It takes less than 10 minutes to complete the mini – structured interview. A score of e"2 is said to suggest a better than 80% chance of a personality disorder being present[7]. Langbehn *et al*[8] reported a sensitivity of 92% and specificity of 79% using a subset of five screening items for the Iowa Personality Disorder screening interview

**The GHQ – 12:** The General Health Questionnaire (GHQ) is the instrument of choice for screening mental disorders in both community and patient samples (9). The GHQ – 12 has been widely validated and used across cultures. A great value of the GHQ – 12 is its non – inclusion of symptoms that are commonly present in subjects with entirely physical illness. A cut score of e"3 has been commonly adopted for detection of highly probable mental ill health in both developed and developing countries[9].

**The Personality Assessment Schedule (PAS).**

Tyrer et al were the first to describe the PAS (10, 11). It is designed to formalize the assessment of personality disorder. To the best knowledge of the authors, the PAS has not been used in Nigeria. However, the personality traits of the instrument and its questions have face validity, containing the same questions used in clinical practice. The original version was used without any modification. To cut costs, the instrument was not translated into Igbo and only persons who could understand English were to be recruited into the study. The schedule contains 24 personality variables, each to be rated by interview with the subject (and preferably, where practical and necessary other sources or informants). In case an informant is also interviewed, where there is a discrepancy between the subject and the informant, often more weight is attached to the informant's response. Where there is no informant, the subject's responses alone may be used for final scoring.

Ratings are made on a 9 – point scale for all variables, ranging from zero (personality variable/or trait absent) to 8 (personality variable/or trait completely dominates behaviour). Most normal variation is accounted for between the ratings of

zero and three.

**Computation and classification of personality disorder using the PAS**.

Scores are computed in the PAS to produce 13 personality groupings. Personality abnormality, severe personality disorder and personality difficulty are derived from the computed scores. Although the DSM IIIR and ICD-10 contain 10 and 8 personality disorders respectively, the 13 personality grouping of the PAS can be converted to the personality disorder equivalents in both the DSM III R and ICD – 10[12]. The PAS interview can be administered within 60 minutes.

**Procedure.** The study was done between March – October 2005. One hundred and eight subjects residing at home were selected by convenience sampling if they understood English Language very well. Because the study instruments were not translated into vernacular, we decided to interview only subjects who could use the original PAS.

At each house in two areas of Umudim (Umudimkwa and Uru) and Otolo (Okpuno Otolo), the study was properly explained to potential respondents. Subjects, who agreed to participate, gave verbal consent. (Signed consent forms were not used). First, data on social demographic information were collected. Then the GHQ – 12 was administered, and thereafter the personality-screening interview. Although the subjects were literate and both the GHQ-12 and PDS could be self-administered we aimed to ensure uniformity by letting the interviewer read out the questions to all the subjects – and coded their responses.
Finally, the interviewer (a clinician who has been in Psychiatric Residency programme for a little over 4 years) conducted the Psychiatric Assessment Schedule (PAS) interview.

All communication was in English Language, and the assessment of each subject lasted about 70 –80 minutes. Informant interviews were not done.

**Analysis**.

The SPSS 11.5 was used for analysis.

**RESULTS**
**GHQ Scores:** The GHQ scores ranged from 0 – 6, with a mean of 1.4 ± 1.8. Twenty-seven (25.0%) of the subjects scored e".3

**Personality Disorder Screen (PDS) Scores.** The PDS Scores ranged from 0 – 5, with a mean of 1.9 ± 1.3.

**Personality Disorders (PD)**.

Seventeen (12 females and 5 males) (15.7%) of the subjects had personality disorders on the PAS interview. The personality disorders comprised of Schizoid personality disorder (7 subjects or 6.5%), anankastic personality disorder (6 subjects or 5.6%), passive – dependent personality disorder (3 subjects or 2.8%), and dissocial personality disorder (1 subject or 0.9%). There were more single[12] than married[5] subjects with PD ($\chi^2$ = 125, p< 0.001).

There was no statistically significant difference between the age of the subjects with and without personality disorders (mean ages 32.73+5.6 and 31.96+6.2 respectively, t = .1.28, df = 106, p = 0.2, 95% C.I. = -7.4 – 1.6).

**Properties of the PDS.**

The Receiver Operations Characteristics (ROC) was used to establish the optimal cut score for the PDS. Area Under the Curve (AUC) = 0.67, P = 0.03, 95% C.I= 0.54 – 0.80). At the cut score of 2, the PDS had the following features: Sensitivity = 0.76, specificity = 0.46, Positive predictive value = 0.21, Negative predictive value = 0.91, accuracy= 0.51, Likelihood Ratio (LR for Positive cases) = 1.4, LR for Negative cases = 0.52.

**Association between GHQ and PDS.**

The GHQ scores were significantly correlated with PDS scores (r = 0.26, p = 0.05). The GHQ and PAS interview did not substantially identify the same cases of personality disorders. Estimating the agreement between the PAS and the GHQ in identifying subjects with PD, the Kappa (k) = 0.13. Seven (41.2%) of those with PD also had GHQ-Casenes. Using PAS case as dependent variable and GHQ, age, gender, marital status, occupation as independent variables, only the PDS score was significantly associated with PAS caseness. This is shown in table 2.

**Personality Difficulty and key traits.** On a dimensional scale, all subjects had key traits in the 13 personality groupings of the PAS interview. This is shown in table three. There are overlaps of personality traits in one single individual.

**Table 1: The pattern of scores of the 108 subjects on the Personality Disorder Screen. (Raw scores of the PDS).**

| Score | Frequency | |
|-------|-----------|------|
| Point | Female | Male |
| 0 | 6 | 7 |
| 1 | 26 | 6 |
| 2 | 17 | 19 |
| 3 | 11 | 13 |
| 4 | 6 | 4 |
| 5 | 3 | 0 |

**Table 2: Logistic Regression, with personality disorder case as dependent variable**

| Variable | B | Wald | P |
|----------|------|------|------|
| PDS | 0.69 | 4.9 | 0.03 |
| GHQ | -0.12 | 0.4 | 0.53 |
| Age | 0.00 | 0.00 | 0.99 |
| Gender | -0.14 | 0.04 | 0.85 |
| Marital status | -0.84 | 0.72 | 0.39 |

**Table 3**: Distribution of 108 subjects according to key traits on 13 personality disorders grouping.

| PD trait | Frequency | % |
|----------|-----------|------|
| Sociopathic | 7 | 6.5 |
| Anankastic | 11 | 10.2 |
| Schizoid | 17 | 15.7 |
| Explosive | 7 | 6.5 |
| Sensitive-aggressive | 19 | 17.6 |
| Passive – dependent | 12 | 11.1 |
| Histrionic | 17 | 15.7 |
| Asthenic | 22 | 20.3 |
| Anxious | 17 | 15.7 |
| Paranoid | 19 | 17.6 |
| Hypochondriacal | 17 | 15.7 |
| Dysthymic | 19 | 17.6 |
| Avoidant | 1 | 0.9 |

**NB**: The total is more than 108 because some subjects had traits on more than one PD group.

**DISCUSSION**

The estimated rate of personality disorders in the studied population was 15.7%. Apart from the study by Drake and colleagues[13] which reported a prevalence rate of 23% in a non-patient sample, other workers had found between 9% - 15% rate of personality disorders in community samples[14-17]. Our finding is comparable to these previous reports even though we used a small convenient sample. The exact rates of over all prevalence of personality disorders and individual personality disorders differ from one study to another. Variation in rates often occurs due to differences in source population, subjects, instruments of study and general methodology. We could not locate any local study in Nigeria with which to compare our work.

Although our sample was small, our finding also agrees with previous reports that personality disorders were commoner in single than married subjects; however, we did not demonstrate any significant age difference between the married and single in those with personality disorders. Because of the small numbers of occupational groups, we could not analyse (demonstrate) any differences between subjects with and without personality disorders within the different occupations.

There were more probable mental disorders (GHQ – 12 case nesses, 25%) than personality disorders (PAS case ness 15.7%). Over all, probable mental disorders (GHQ cases) occurred in 41.2% of those with personality disorders. Previous reports have shown upwards of 63% Axis I co morbidity with personality disorders[18,19]. The present study is consistent with these prior reports, although we did not make individual mental disorder diagnosis.

The specificity for the personality disorder screening was low (at the optimal cut sore); however the likelihood ratio (for positive cases) was more than unity. Psychiatrists are very few in Nigeria and often see a large number of patients in a clinic setting. Under the circumstance, there may be a tendency to assess only for Axis I primary mental disorders. Unless patients present with overt personality features (with a possible diagnosis of only personality disorder), personality assessment is not likely to be extensively done in our normal routine psychiatric clinic.

In such busy and crowded clinics, it may be helpful to employ an extremely brief personality disorder screening to direct further enquiry. The PDS may serve this purpose to many psychiatrists in developing countries, such as Nigeria. For research purposes involving large samples, improved sensitivity and specificity would be required to increase efficiency.

There are many limitations of the present study warranting very cautions interpretation of the results. First, although the subjects were selected from the community, the sample was not in any way representative. We simply aimed to study a non-clinical sample outside the hospital setting. Due to lack of funds, we could only recruit a few subjects. The personality disorder rate here reported cannot be said to apply (in totality) to either Nnewi or Nigeria. At best this may only be regarded as a preliminary and basic pilot report; studies of larger probabilistic samples will be required to make reasonable conclusions. Second, only the subjects were interviewed, without inputs from informants. The recommended gold standard for the assessment of personality disorders is the structured clinical interview, which equally involves informant reports. Our omission of informant interview was purely due to budgetary limitation. Even though the PAS interview is reliable, it is possible that the reported rate of personality disorder could be higher or lower if informant interview were considered in conjunction with the subject interview. In a more traditional way of administering the PAS interview, the authors recommend a scoring of both the subject and informant interview whenever practical and possible. A subject's-only interview was a compromise. Further studies will address these issues. Third, the original PAS, which we used, to our knowledge, has not been validated in Nigeria. We cannot say what the diagnostic and psychometric properties of PAS are in Nigerians.

A major strength of the PAS interview is its dimensional as well as categorical classification. It has been argued that personality classification should employ a dimensional rather than categorical classification[20]. All our subjects had a key trait for each of the thirteen personality groupings; there were also some trait overlaps in the same individual.

In conclusion, our report should be seen as a beginning point in personality disorders screening and diagnosis in a non-clinical sample in (Eastern) Nigeria.

## ACKNOWLEDGEMENTS

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