# FOLLOWING PSYCHOMETRIC PROCEDURES: THE DEVELOPMENT AND VALIDATION PRISON DISTRESS SCALE (PDS)

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Abstract: This study adopted qualitative and quantitative methods to develop and validate Prison Distress Scale as a tool for detecting onset of mental illnesses among convicted prison inmates. The study was conducted in two phases. During the first phase, the initial 51 items were generated through Focus Group Discussion (FGD) using 24 convicted inmates and Key Informant Interview (KII) using 3 convicted. They were purposively sampled from Agodi Prison. Two clinical psychologists and 1 rehabilitation psychologist validated the FGD and KII Guides. During the second phase, 5 clinical psychologists validated the initial 51 items leaving a total of 47 items. They were administered to 220 convicted inmates were purposively selected from Oyo and Oqbomoso prisons. Their responses were subjected to statistical analysis using SPSS Version 17 and 15 items were found reliable with Cronbach's Alpha coefficient of 0.84, Spearman Brown Co-efficient of 0.89, and Guttman Split-half Reliability of 0.85. Alpha for the splitted items (A= 0.91 and B = 0.85) were reliable. The scale was further analyzed using exploratory factor analysis and varimax rotation to address the dimensionality of the scale. The Bartlett Test, Measure of Sampling Adequacy (MSA), and Bartlett Test of Sphericity indicated that the correlation matrix had significant correlations can be factorized. Kaiser-Meyer measure of MSA and Exploratory Factor Analysis yielded five factors explaining a total of 65.26% of the total variance (KMO (91) = 1573.94) and factor loading for the items ranged from 0.58 to 0.78. Factors yielded include: Frustration (r= 0.76), Mental Distress (r = 0.70), Loss of Freedom (r = 0.74), and Socio-Emotional Deprivation (r= 0.62). They formed the sub-scales in the instrument. For the external convergence validity, overall distress was correlated with the Spielberger's State Anxiety Scale and the result demonstrated a strong convergent validity (r = 0.42, p<.05). The cross

validation of Prison Distress Questionnaire with Davidson Trauma Scale yielded low discriminant coefficient of -.32. With this, Nigeria now has a psychological instrument to measure distress among prison inmates.

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## BACKGROUND TO THE STUDY

The world prison population is steadily on the increase. Indeed, successive editions of the World Prison Population list which is based on between 214 and 218 countries, showed that the number of prisoners worldwide had risen from over 9.25 million in 2006\_to over 9.8 million in 2008, to over 10.1 million in 2011 (Walmsley, 2006; 2008; 2011),. This invariably has implication for quality and quantity of prison facilities as well as psychological wellbeing of inmates. Nigerian Prison Service has stated in its annual report that 25% of prisoners in the country are accommodated in units intended for fewer prisoners (NPS, 2009). This in essence implies that prison environment, particularly in most developing countries like Nigeria could predispose prison inmates to emotional distress. Prison inmates, in most developing countries of the world, are forced to undergo increasingly harsh policies and conditions of confinement in order to survive in prison. This prolonged adaptation to the deprivation and frustration of life inside prison often make prison inmates experience discomfort.

Imprisonment is basically associated with some challenges; inmates are often exposed to rigid and unyielding disciplinary measures, violent encounters, victimization by physical and/or sexual assaults, and the needs to negotiate the dominating intentions of others. There is harsh enforcement of rules which often subject inmates to chronic anxiety leading to breaking rules and the consequences of breaking the rules (Okunola, 2002). In other words, the psychological effects of incarceration vary from individual to individual and are often reversible. However, it is not everyone who is incarcerated is disabled or psychologically harmed by it; some remain\_unchanged or unscathed by the experience. At the very least, prison is painful, and incarcerated persons often suffer long-term consequences of having been subjected to pain, deprivation, and extremely atypical patterns and norms of living and interacting with others (Alabi, 2011). This often leaves prison inmates in mentally brutalized conditions with broken body and spirit. Yet, the psychological effects of incarceration vary from individual to individual and are often reversible. The ability to mentally cope with imprisonment has implications for institutional programmes that could be developed for reducing negative behavioural outcome that results from anxiety and depression among inmates (Wooldredge, 1999).

# Need for the Scale

There is widespread concern that the prison environment, with its attendant rules and regimes, may have a detrimental impact on the mental health of inmates (Birmingham, 2003). Result of several studies conducted in the last two decades have shown an increased prevalence of mental disorders among prison inmates compared with rates observed in the general population (Fazel & Lube, 2010; Fazel & Danesh, 2002;). The experiences of prison inmates in most developing countries, Nigeria inclusive, have been a tale of woe to the extent that the living condition of prison inmates is quite appalling and damaging to the physical and mental well-being of inmates (Oshodi, 2010). Ineme & Osinowo (2015) found that criminological factors such as type of crime committed, duration of stay, imprisonment status, history of imprisonment, family history of imprisonment, and use of psychoactive substances before imprisonment jointly predicted self-harm urges among prison inmates in Nigeria.

The prison culture of deprivation, torture, overcrowding and poor sanitation coupled with poor feeding, inadequate medical service and denial of adequate and prompt contact with families and friends falls short of United Nations Standards for the treatment of prison inmates (Adetula, 2011). The growing prison population therefore means that there are now more people in prison with mental illnesses more than ever before (Bradley, 2009). The fact that high percentage of persons presently incarcerated must have experienced negative life events or trauma means, among other things, that the harsh, punitive, and uncaring nature of prison life may represent a kind of "retruamatization" experience for many of them. It could be reasoned that mental illness. The failure of rehabilitation to ameliorate mental illness

among prison inmates at its earlier stage could be traced to absence of measuring device to identify early sufferers. In other words, the rate and level of mental illness could have been drastically reduced if the gravity of stress and emotional disturbance experience by inmates is detected early enough for quick intervention and rehabilitation. In a frantic bid to fill this gap in knowledge, this necessitated the development of the Prison Distress Scale (PDS) to assess the mental suffering being faced by convicted prison inmates. This is in response to results of several studies attesting to higher rate of mental illnesses among prison population (Fazel & Lube, 2010).

## THEORETICAL REVIEW

This study is based on three theories of prison distress: deprivation, importation and trauma theories.

## Deprivation Model

Deprivation model is one of the two basic theoretical perspectives on patterns of response to imprisonment by Cline (1968) cited in Thomas and Foster (1973). The major premise of this model is that adaptations made by inmates to prison settings are a functional response to the pain and deprivation of imprisonment. The value system which evolves in support of this adaptive behaviour, and the social roles which articulate these values are both linked to the immediate conditions of the prison situations. Put differently, deprivation theory is a model which accounts for variations in the response to imprisonment among inmate populations. It focuses attention on the pressures and deprivations which confront the inmates. Deprivation theory emphasizes the role of the prison environment. Evidences supporting the deprivation theory deal with social isolation, racism/discrimination, loss of control and social stigma. Deprivation theory suggests that institutionalization is responsible for self-destructive behaviour on the part of inmates and has been used to explain suicide by aboriginal women in Canada prisons, namely that suicide and depression appears to be deeply rooted in the margin between their status in the society and in the prison (Grossmann, 1992). In application to this study, deprivation theory explains that distress is as a result of the prison conditions but not a pre-incarceration experience or behaviour. The theory presumes distress is a reaction to the deprivation which characterizes the prison environment; typically, when inmates are deprived of their freedom, time, access to social amenities,

relationships, etc., they are bound to react in some ways. By this theory, the behaviour – adaptive or maladaptive, protective or destructive – of the inmates is most likely a response to the deprivation of certain benefits by the prison environment or system. This model has however, been criticized especially by the advocates of the "importation model" that lay so much emphasis on the immediate pressure of confinement, the deprivation model implies a closed-system paradigm and this fail to take into consideration the fact that the type of response made by the inmates may be influenced by both their past experiences and their anticipation of the future. In addition, this theory does not take into cognizance the roles of personality and biology in determination of behaviour – adaptive or maladaptive.

## Importation Model

This is the second basic theoretical perspectives on patterns of response to imprisonment by Cline (1968). Importation theory focuses on individual inmate's characteristics rather than the prison environment. The importation theory contends that an inmate's experience in prison results from factors external to the correctional facilities. The theory derives its strength from the "weakness" of the deprivation model. Criticizing the deprivation model, importation model suggests that the scope of an adequate explanation must give systematic attention to factors beyond the immediate prison situation. In a study to provide empirical tests of several major propositions implied by the importation model, Thomas and Foster (1973) obtained data from 276 adult felons confined in a maximum security institution, and the analysis clearly showed that adaptations to imprisonment are in part attributable to such extra-prison influences as social class, pre-prison involvement in criminal behaviour, frequency of contacts with individuals outside the prison yard, and the quality of the inmates' perceptions of their lives after imprisonment. Simply put the importation model accounts for the distinctive features of the system by reference to pre-prison characteristics and experience, particularly criminal, which inmates bring with them to the prison (Akers, 1977 cited in Burke, 2001). The strength of this theory lies in the fact that it acknowledges the influence of the pre-incarceration experience on behaviour within the prison. However, the theory could be criticized for its lack of considerations for effects of incarceration which could influence an already existing behaviour or lead to the onset of a new one. To hold that behaviour within the prison is solely a function of

experience before imprisonment may not be very authentic. In relation to this study, this theory tends to explain that emotional distress experienced by inmates may not have been connected to the nature of the prison yard but is most likely an experience that may have existed before incarceration. That is, a prison inmate who is sad and hopeless in prison may have been experiencing emotional disturbance or something similar to that before imprisonment.

## Trauma Model

Similar to the deprivation theory, the prison environment itself creates further potential for the development of mental illness. Indeed, research in the trauma and mental health literature has suggested that the cumulative effect of trauma greatly increases the likelihood of individuals developing a mental illness, such as psychosis. Empirical evidences have lent credence to the fact that when individuals experience more than one traumatizing event, the likelihood of experiencing psychosis increases in a dose response fashion, i.e., the likelihood of developing psychosis increases with each subsequent traumatic experience (Shevlin, Houston, Dorahy, & Adamson, 2008). Existing trauma histories, including both traumatic and abusive experiences, are common amongst prison inmates (Durcan, 2008). Thus, prison inmates import the negative and detrimental effect of trauma into the prison. When imprisoned, it is common for prisoners to experience additional traumas, such as assaultive violence and solitary confinement (Metzer & Fellner 2010). However, sufficient literature lends credence to the fact that mental health in prison is littered with reference to traumatic experiences in relation to perspectives on importation and deprivation models. In relation to this study, pre-existing traumatic experiences are common in both male and female prison inmates which are further exacerbated by traumas experienced within prison. This is supported by literature suggesting that the cumulative effect of trauma is likely to precipitate severe mental illness such as PTSD and psychosis (Shevlin, et al, 2008).

# METHOD

This study was conducted in two phases.

## Study Phase One: PDS Item Generation Design

The first part of the study adopted ex-post facto design. It is an explorative study that utilized Focus Group Discussion (FGD) and Key Informant Interview (KII) to collect qualitative data from selected convicted prisoners on prison distress.

# Setting

This phase of the study was conducted in Agodi <u>P</u>rison yard in Ibadan, Oyo State. Agodi is in Ibadan North-East Local Government of Oyo state. Ibadan is South-West Geo-political zone of Nigeria lying 73,878 (723'16.00N") within 38,964 (353'47.004E") longitude with a population of 1,338,659 people (National Population Commission, 2006). Ibadan is the capital of Oyo State. The Agodi Prison had an average of 968 inmates as at the time of this study. The prison yard is overseen by a Deputy Superintendent of Prison (DSP).

**Population**: The population of study consisted of all convicted inmates in Oyo state prison yards which comprised first-timers and recidivists. They were serving various jail terms for various offences within the prison yard.

## Participants

The participants for the FGD consisted of twenty-four convicted prison inmates. They were 21 males and 3 females; 15 were Christians, 8 were Muslims, while 1 was an Atheist; 10 were holders of HND/BSc, 6 had OND, while 8 had WAEC; 12 were singles, 6 were married, and 6 were separated. Their ages ranged from 23 years to 45 years, with an average age of 33 years. Sixteen of them were skilled workers while 8 were unskilled workers. Their offences included misdemeanor and felonies. Three prison staff also participated in the KII and generated useful\_information.

## Inclusion/Exclusion Criteria

Those included in the study were:

- i. Inmates convicted by competent courts of law; awaiting trial inmates were not allowed to participate in the study.
- ii. Only those without known or outstanding medical conditions and/or mental disorders; those with known medical conditions/mental disorders were not allowed to participate,
- iii. Inmates that can communicate in English or Yoruba language.

## Instruments

Four instruments were used in this phase of the study. They were the FGD Guide and the KII Guide. Each had 7 items and were both validated by two clinical psychologists and one rehabilitation psychologist. Pen and paper were also used to record the information from participants.

## Procedure

Firstly, a letter of introduction were obtained from the Department of Psychology, University of Ibadan, Bio-ethics Training Certificate in Human Research was also obtained from West African Bioethics Training Programme, and then ethical approval from VI/VCH Research Ethics Review Committee. On the strength of these, permission was obtained from the Controller of Prison, Oyo State Command to access the prison yard. A Deputy Superintendent of Prisons (ASP) was assigned to monitor and assist in the conduct of the study. The Deputy Controller of Prison\_(DSP) incharge of the yard assigned two members of staff (a male and a female) to serve as research assistants. This first phase involved developing interview guide intended to direct the Focus Group Discussion (FGD). Seven openended, structured and unambiguous questions were formulated, arranged and validated by two clinical psychologists and one rehabilitation psychologist; the items were designed and arranged to extract from the inmates, the level of distress experienced and their perception of life while in prison. Four sessions of FGD were held; each group comprising 6 convicted inmates. The FGDs were conducted in the office of the prison psychologist in Agodi Prison, Ibadan. Also Key Informant Interview (KII) was conducted with three prison staff who had worked the Nigerian Prison Service for a minimum of seven years. The responses from the FGD and KII aided the development of the initial items for the PDS.

Twenty-four convicted inmates were then randomly assigned to four groups of six each for FGD. Each session started with self-introduction, explanation of purpose of the research and assurance of confidentiality. Volunteers were then encouraged to take part in the discussions. All interviews/discussions were recorded and transcribed verbatim. The data were analyzed following the Interpretative Phenomenological Analysis (IPA) method so as to create a comprehensive account of themes and sub-themes that have significance in the original text (Smith, 1999). The first step in the analysis involved repeated reading of the transcripts and annotated descriptions on each transcript regarding key phrases and processes. These descriptions included summaries of contents, connections between different aspects of the transcript and initial interpretations. Within each transcript, the notes were condensed to produce initial themes, with care being taken to ensure that these themes were consistent with the data. When this process had been repeated with each transcript, the resulting sets of initial themes were examined to identify recurrent patterns across the transcripts producing a final set of super ordinate themes at the end of the process. The themes were further reorganized in such a way as to produce logical and coherent results.

## Summary of FGD and KII Reports

Analysis of data collected for FGD and KII revealed that 70% of the convicted inmates reported that they feel sad most of the time behind bars because of restrictions and negative treatment; 60% reported that they felt angry and exhibited verbal abuse on their colleagues often; 55% reported that they experienced intense fear in the evening; 30% reported incessant headache owing to sleeplessness; 25% reported having nightmare; while 20% reported loneliness. Out of these major themes obtained from the FGD and KII, the initial 51 items were generated for the PDS. The said items were generated from the thematic analysis of responses generated from FGD and KII. This was done by identifying and teasing out regular themes for the FGD and KII responses in form of direct and coded items which first appeared in "Yes" or "No" format.

## FGD findings

The behavioural outcome emanating from Focus Group Discussion (FGD) conducted with twenty convicted prison inmates showed diverse prison maladjustment experienced by inmates in the course of incarceration.

Analysis of qualitative data collected revealed that: 70% of the convicted inmates reported that they feel sad most of the time behind bars because of restrictions and negative treatment; 60% reported that they feel angry and exhibit verbal abuse on their colleagues often; 55% reported that they experience intense fear in the evening; 30% reported incessant headache owing to sleeplessness; 25% reported having nightmare while 20% reported loneliness. From the analysis of sampled prisoners, the prevalence index of distress in Agodi prison yard is approximately 50.6%, base on responses of depression, anxiety, headache, nightmare and sleeplessness.

# Study Phase Two: (Validation of the Prison Distress Scale) Design

This is phase of the study was cross-sectional survey utilizing ex-post facto design; it intended to ensure the validity and reliability of the Prison Distress Scale.

# Setting

It was conducted at Oyo and Ogbomoso prison yards in Oyo State. Participants in this phase of the study consisted of 5 experts with a minimum of M. Sc in clinical psychology and 22Oconvicts inmates. One hundred and fifty (150) were drawn from Oyo prison while seventy (70) were drawn from Ogbomoso prison.. Two hundred and fifteen (215) were males and five (5) were females. The least educational attainment of the participants is WAEC. Their ages ranged from 21 to 40 years with a mean age of 33 years. Out of this, one hundred and sixty (60) were married and sixty (160) were single. The offences committed by the participants included misdemeanors and felonies.

## Instruments

The instrument for this phase of the study was the initial 51-item Prison Distress Scale (PDS) developed during the first phase of the study to assess individual inmate's current subjective emotional response to imprisonment.

## Procedure

Firstly, the initial 51 items were presented to 4 clinical and 1 rehabilitation psychologists for face and content validity. Their independent assessments and responses left the scale with 47 valid items, measured in Likert format.

With the previous permission obtained from the Comptroller, Oyo State Command, the Deputy Controllers of Prison for Oyo and Ogbomoso Prison yards were contacted and they allowed access to their respective prison yards. The 47-item scale was administered to the selected inmates in their respective prison yards. A total of 230 instruments were administered but 220 were correctly filled and retrieved. The responses of the inmates were then subjected to reliability analysis using SPSS Version 17. The inmates used an average of 35 minutes to complete the instrument.

## RESULTS

Summary of the results of the analysis showed that 15 items were found reliable with a Cronbach's coefficient of 0.84, Split-half Reliability Spearman Brown Co-efficient of 0.89, and Guttman Split-half Reliability of 0.85. Alpha for the splitted items (A= 0.91 and B = 0.85) were reliable. The correlation between forms of 0.63 suggested a good internal homogeneity.

Further exploratory analysis of the scale using the Principal Factor Analysis and Varimax Rotation to address the dimensionality of the scale was conducted. The Bartlett test and Measure of Sampling Adequacy (MSA) and Bartlett test of sphericity supported that the correlation matrix had significant correlations that can be factorized. Kaiser-Meyer measure of MSA and exploratory factor analysis yielded four factors explaining a total of 65.26% of the total variance (KMO (91) = 1573.94) and factor loading for the items ranged from 0.58 to 0.78. Factors yielded included Frustration ( $\alpha$  = 0.69), Mental Distress ( $\alpha$  = 0.72), Loss of Freedom ( $\alpha$  = 0.81) and Socio-Emotional Deprivation ( $\alpha = 0.79$ ). These formed the four sub-scales of the Prison Distress Scale (PDS) (Appendix A). Also, by the independent assessment of more than 70% of the experts favoured that the Scale's items be measured on a 5-point Likert rating scale [5 = Strongly Agreed (SA), 4 = Agreed (A), 3 = Undecided(U), 2 = Disagreed(D) and 1 = Strongly Disagreed(SD)] rather than the initial "Yes" or "No" format. The criterion used to determine how many factors to retain was that of Kaiser (i.e. eigen values greater than 1 were retained). Items measuring factors loading was assessed for convergent and discriminant validity as well as construct's coefficients of reliability.

Furthermore, the PDS was translated into Yoruba language through a crosscultural adaptation and validation process. The original versions of the

instrument were given to two experts (Master degree holders) in the Yoruba language for forward translation. Both experts then compared their versions to identify discrepancies indicative of ambiguous wording in the original instruments. A third bilingual expert (holder of degrees in English and Yoruba languages) then mediated to develop a consensus version of the translated instrument. A fourth expert (holder of Master degree in Yoruba language) translated the new instrument back into English and compared it to the original instrument (Appendix B). However, the convergence validity of the prison distress with its sub-dimensions were conducted and summary of results is shown on Table 1.

Table 1:Inter-Correlation of Prison Distress and its Sub-Dimensions(Convergent Validity)

		1	2	3	4	5	
1.	Prison Distress		0.767	*** 0 .702	*** 0 .743	*** 0 .623	***
2.	Frustration			0.212	*** 0 .390	*** O .351	***
3.	Mental Distress				0.450	*** 0.331	***
4.	Loss of Freedom					0.428	***
5.	Socio-Emotional Deprivation						

\* p <05, \*\* p <01, \*\*\* p <001

As shown on Table 1, the summary of convergence validity analysis, showing the correlation of the prison distress with its sub-dimensions, the Pearson correlation analysis revealed that there was significant positive relationship between Prison distress, Frustration (r= 0.76), Mental Distress (r = 0.70), Loss of Freedom (r = 0.74), and Socio-Emotional Deprivation (r = 0.62). For the external convergence validity, overall distress was correlated with the Spielberger's State Anxiety Scale and the result demonstrated a strong convergent validity (r = 0.42, p.05). Further analysis to determine the usefulness of the scale as a measure of prison distress was conducted by cross validating the Scale with Davidson's Trauma (PTSD) Scale. The trauma scale developed by Davidson (1997) was standardized among incarcerated soldiers and it measures the degree of emotional disturbance suffered by soldiers under incarceration. The cross validation of Prison Distress Scale with Davidson's (1997) Trauma Scale yielded low discriminant coefficient of -.32 This in essence showed a negative relationship between Trauma Scale and Prison Distress Scale.

# Norm of the Scale

The norm of the Prison Distress Scale was set using the one standard deviation above the mean (1sd + Mean = 39.04). Scores above the mean indicate high prison distress while scores equal to or lower than the mean indicate low prison distress.

## Samples of items from sub-scale 1 (Frustration)

Occasionally, other inmates provoke me. Most time, I find it difficult to sleep well.

## Samples of items from sub-scale 2 (Mental distress)

Many at times, I feel like crying. I use to have guilty feeling.

# Samples of items from sub-scale 3 (Loss of freedom)

I will be happy with freedom. I am unhappy with what had brought me here.

## Samples of items from sub-scale 4 (Socio-emotional deprivation)

Most things I do are not what I like doing. I prefer being alone always

## DISCUSSION

The outcome of this study has brought into existence a psychological instrument to measure prison distress among convicted prison inmates in Nigeria. The development of prison distress scale followed the scientific method in terms of item generation, validation and reliability analysis. With this instrument, early detection of mental disorders among prison inmates could be made for possible intervention before it becomes full blown. This scale will serve as a screening instrument for emotional distress among prison inmates. With this Scale inmates who experience distress could be attended to in prison or referred to other centres for intervention. However, there is a serious need to measure distress among and help the awaiting trial inmates (ATMs). Therefore, further study may consider developing scales to measure distress among ATMs.

REFERENCES

- Adetula G. (2011). The Prison Subsystem Culture: Its Attitudinal Effects on Operatives, Convicts and the Free Society. *Ife Psychologia*. *18* (1)232– 251.
- Agnew, R. (1992). Foundation for a General Strain Theory of Crime and Delinquency. *Criminology, 30*, 47–87.
- Akers, R. (1989). Deviant Behaviour: *A Social Learning Approach* (3<sup>rd</sup> ed). Belmont, CA: Wadsworth Publishing Company.
- Alabi T. (2011). Pans of Imprisonment. *Journal of Research in the Peace Gender and Development. 1* (81), 235–241.
- Bayertz, K. (1999). Four uses of Solitary. *Solitary*. K. Bayerts. (Ed.). Bordrecht: Kluwer Academic Publishers. 3–28.
- Birmingham, L. (2003). Prevalence of Mental Disorder in Remand Prisoners: Consecutive Case Study. *British Medical Journal, 313* (7071), 1521–1524.
- Bradley K. (2009). The Bradley Report: Lord Bradley's review of people with mental health problems or learning disabilities in the criminal justice system. London: Department of Health.
- Burke, R. (2001). An Introduction to Criminological Theory. *Criminal Justice Review*, 377–381.
- Clemmer, D. (1940). The Prison Community. New York: Holt, Rinehart & Winston.
- Cline, H. (1968). Theoretical Perspectives on Alienation in Prison Society, an empirical test. *Pacific Sociological Review, 18*, 483–499.
- Davidson, J., Book S. & Colket J. (1997). Assessment of a new Self-rating Scale for Post-Traumatic Stress. *Psychological Medicine*, *27*, 153–160.
- Dhami, M.K., Ayton, P., & Loewenstein, G. 2007). *Theoretical Studies in Social Organization of the Prison* Inmate Social System 5–19 New York: Social Science.

- American Psychiatric Association (2000). *Diagnostic and Statistical Manual of Mental Disorders* (Fourth Edition, Text Revision).Washington, DC: American Psychiatric Association.
- American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders (Fourth Edition, Text Revision). Washington, DC: American Psychiatric Association.
- Durcan, G. (2008). 'From the inside: Experiences of prison mental health care'. London: Sainsbury Centre for Mental Health.
- Fazel, S. & Danesh, J. (2002). Serious Mental Disorder in 23000 Prisoners: a Systematic Review of 62 Surveys. *Lancet, 359*, 545–50.
- Fazel S., & Lubbe. S. (2010). Prevalence and Characteristics of Mental Disorders in Jails and Prisons. *Current Opinion in Psychiatry*, 18 (5), 550–554.
- Grossmann, M. G. (1992). Two Perspectives on Aboriginal Female Suicides in Custody. *Canadian Journal of Criminology, 34,* (4), 403–415.
- Ineme, M. E. & Osinowo, H. O. (2015). Criminological and Demographic Predictors of Self-Harm Urges among Prison Inmates. *Nigerian Psychological Research, 3,* 242–262
- Johnson, R. (2002). Hard Time, Understanding and Performing the Prison (1<sup>st</sup> ED.). Belmont, Calif: Kladsworth.
- McNulty, S. & Huey, D. (2005). *Adaptation to Imprisonment*.: NY: McGrawhill
- Metzer, J. L., & Fellner, J. (2010). 'Solitary Confinement and Mental Illness in US Prisons: A Challenge for Medical Ethics'. *The Journal of the American Academy of Science and Law, 38,* 104–108.
- Nigerian Prison Service (2009). Prison Population and Accommodation Briefing. Available at <u>http://www.nps.org</u>. Retrieved on July 1, 2010.
- Ohlin, L. (1956). *Sociology and the Field of Corrections.* London: Russell Sage Foundation.

- Okunola R (2002). "Prison as Social System" cited in Sociology: Current and Perspectives. edited by Uche C.A and Austin N.1(pp. 349–366), Ibadan: Malthouse Press Limited.
- .Oshodi J. (2010). "Nigerian Prisoners. An Open letter to Mr. President. Punch Newspaper of 10 August 2010. Available at <u>http://www.punch.ng</u>. Retrieved on July 1, 2010
- Paluch, J. (2004) *A life for a life*; life Imprisonment in America is other Death Penalty. Loss Angeles: Roxbury Publishing Co.
- Shevlin, M., Houston, J. E., Dorahy, M. J., & Adamson, G. (2008). 'Cumulative Traumas and Psychosis: An Analysis of the National Comorbidity Survey and the British Psychiatric Morbidity Survey'. *Schizophrenia Bulletin, 34,* 193–199.
- Smith, J. A., Jarman, M. & Osborn, M. (1999). Doing interpretative phenomenological analysis. In M. Murray, & K. Chamberlain, (Eds.). *Qualitative Health Psychology: Theories and Method* 218–240. London: Sage Publishers.
- Spielberger, C., Gorsuch, R., Lushene, P., Vagg, P. & Jacobs, A. (1983). Manual for the State-Trait Anxiety (STAI), CA: Consulting surveys. *Lancet, 359,*545-50.
- Thomas, C. & Foster, S. (1973). The Importation Model on Inmates Social Roles: An Empirical Test. *The Sociological Quarterly, 14*,23-43.
- Walmsley, R. (2006). *World Prison Population List* (8th ed). London: International Centre for Prison Studies.
- Walmsley, R. (2008). '*World Prison Population List'*. (8th ed). London: Home Office Research, Development and Statistics Directorate.
- Walmsley, R. (2011). '*World Prison Population List'*. (9th ed.). London: Home Office Research, Development and Statistics Directorate.
- Wortley, R. 2002. *Situational Prison Control: Crime Prevention in Correctional Institutions*. Cambridge: Cambridge University.

## Appendix A: Prison Distress Scale

	Component				
	Frustratio n	Socio Emotiona   Deprivati on	Mental distress	Loss of freedom	
1. Occasionally, other inmates provoke me	.849				
2. Most times, I find it difficult to sleep well	.800				
3. Most times I feel hungry	.699				
4. I find it difficult to have enough rest most times	.699				
5. The living condition here could make one fall sick	.683				
6. Most things I do are not what i like doing		.751			
7. I feel sad for missing my parents, friends and relatives		.722			
8. I prefer being alone always		.647			
9. Most times, I find it difficult to remember things		.047			
that had happened		.586			
10. Many at times, I feel like crying			.837		
11. Most times, I feel so much pain in my body			.723		
12. Most times, I lose interest in what i do			.650		
13. I use to have guilty feeling			.614		
14. I am unhappy with what had brought me here				.512	
15. I will be happy with freedom				.866	

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

# Appendix B Yoruba Version of Prison Distress Scale

	Component				
	Ibanuje	Ikehge nini emi edun iroloye	lponju	lpadanu ominira	
<ol> <li>Lékòòkan, àwọn efé wọn máa ń mú mi bínú</li> <li>Òpò ìgbà ni ó máa ń sòro fún mi láti sùn dáradára.</li> <li>Ní òpò ìgbà ni ebi máa ń pamí</li> <li>O máa ń sòro fún mi lạti ní ìsinmi tí ó tó ní òpò ìgbà.</li> <li>Bí enìyàn ti se ń gbé níbí le mú kí enìyàn sàìsàn.</li> <li>Púpò nínú ohun tí mo ń se kó ni mo ni ifé sí.</li> <li>Inú mi má ń bàjé nigbà tí mo bá rántí wí pé a ti pínminíyà kúrò láàrin àwọn ebí àti òré mi gbogbo.</li> <li>Ní gbogbo àkókò, o máa ń nira fún mi láti rántí àwọn nhkan tí ó tí selè.</li> </ol>	.849 .800 .699 .699 .683	.751 .722 .647 .586			
10. Ní ộpộ Ìgbà. Ó máa n dàbí kì í n sọkún. 11. Ní ộpộ Ìgbà, ni mô n ní Ìrora nínú agó ara mi.			.837 .723		
12. Ní ọpọ ìgbà ni mi ô ní nhkan tí mo ń șe. 13. Mo máa ń ní ìdálébi ọkàn.			.650 .614		
14. Ipò tí mo wà lówólówó yìí kì í mu inú mi dùn nígbà gbogbo.				.512	
15. Inú mi yóo dùn-ùn bí mo bá rí òmìnira gbà.				.866	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.