ISSN: 2408-5405 (Print)
ISSN: 2635-3806 (Online)

NIGERIAN PSYCHOLOGICAL RESEARCH

Published by the Nigerian Psychological Association

PSYCHOPHYSIOLOGICAL SYMPTOM AS A PREDICTOR OF DEPRESSION AMONG INSTITUTIONALIZED PERSONS IN NIGERIA: THE MODERATING ROLE OF SOCIAL SUPPORT

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Abstract

Institutionalized persons seem to encounter negative life such as restrictions on freedom of movement, which may put them at risk to develop feelings of hopelessness, depression and anxiety. Such development caused by lack of freedom may result to psychophysiological symptoms. Thus, the need to ascertain the role of social support in mitigating any possible relationship between psychophysiological symptom and depression. The participants were drawn using available sampling technique from three institutions: Nigerian Correctional Service, Home for the Elderly and ESUT psychiatric hospital all in Enugu, Enugu State Nigeria. One hundred and eighteen (86 males and 32 females) whose age ranged from 18-70 years (mean age 37.93 and standard deviation 13.93) took part in the study. They responded to four instruments: Psychophysiological Symptoms Checklist, Self-rating Depression Scale and Multidimensional Scale of Perceived Social Support. The study adopted cross-sectional survey design and moderated regression for the data analysis which indicated a positive correlation between psychophysiological symptom and depression $\beta = 1.06$, $t(118) = 3.00$ $p<.001$. The results were discussed in relation to relevant literature. It was concluded that institutionalized persons with psychophysiological symptoms equally experience depression. Thus, psychophysiological symptoms should be checkmate among institutionalized persons in order to forestall the episode of depressive symptoms.

Keywords: ***Depression, Institutionalized Persons, Mental Health, Psychophysiological symptoms and Social Support.***

Received: 12th January, 2022
Revised: 15th March, 2022
Accepted: 15th May, 2022

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Introduction

Institutionalized persons are people who by one reason or the other find shelter outside their own homes especially in a formal or an informal institutions like the correctional centres, psychiatric hospitals or home for the elderly. These institutionalized persons seem to share some things in common such as submitting under the authorities in their places of shelters. Those in the correctional centres are usually taking by force to stay in the centre on the act of being disobedient to the constituted authorities and laws of the nation. Some may even find themselves in the correctional centres due to mental health challenges leading to violence to self or others as seen in the asylum units of the correctional centres. Some other people found themselves in psychiatric hospital as a result of mental health issues involving abuse of substances which often affect their contact with the reality. Other institution members found in the home for the elderly are usually aged and had no body to care for them in old age. However, all these people irrespective of their institutions seem to constantly nurse a feeling of lack of freedom which may predispose them to some psychological problems like depression.

Depression is a disorder characterized by at least two weeks of low mood that is present across most situations; it is often accompanied by psychophysiological symptoms, loss of interest in normally enjoyable activities, low energy, and pain without a clear cause (National Institute of Mental Health. 2016). The depressed may sometimes experience false beliefs or see or hear things that others cannot (National Institute of Mental Health. 2016). Depression may also be the result of healthcare, such as with medication induced depression. Several drugs of abuse can cause or exacerbate depression, whether in intoxication, withdrawal, and from chronic use. These include alcohol, sedatives (e.g. benzodiazepines), opioids (pain killers and illicit drugs such as heroin), stimulants (such as cocaine and amphetamines), hallucinogens, and inhalants (APA, 2013).

Life events and changes that may precipitate depression include (but are not limited to): childbirth, menopause, financial difficulties, unemployment, stress (such as from work, education, family, living conditions, lack of freedom, etc.), a medical diagnosis (cancer, HIV, etc.), bullying, loss of a loved one, natural disasters, social isolation, rape, relationship troubles, jealousy, separation, and catastrophic injury (Schmidt, 2005). Depression itself is when these feelings begin to dominate to the extent that someone cannot function properly (Artal & Sherman, 1998). Mostly, individuals with depression are reluctant to seek help from mental health professionals; rather they seek informal help from friends, family, and traditional healers before getting professional help as the problem gets more complicated (Nsereko et al., 2011). Peradventure the manifestations of depression hang on some factors like psychophysiological symptoms, there may also be an important need for some factors like social support for possible mitigation purpose.

In Diagnostic Statistical Manual fourth edition (APA, 1994), psychophysiological disorders are defined as any medical conditions which are adversely affected by psychological factors such as stress, headache, Migraine and muscle-contraction (also called tension). Common types of psychophysiological disorders are: migraine headache, tension headache, peptic ulcer, irritable bowel syndrome, insomnia, and essential hypertension. Psychophysiological symptoms are often caused by psychological or emotional problems rather than physical or organic issues usually expressed through some physiological pathology.

Against the above background, the researcher is interested in the moderating role of social support in psychophysiological symptoms as a predictor of depression among institutionalized persons.
Cohen and Wills (1985) opined that social support have direct “buffering” effect on stress, and its absence akin to stressor itself. There are enormous support for the relationship between social support with mental and

physical health for example, (Barth et al., 2010) found that even in our day-to-day living, people who have spouses, family members and friends, and receive psychological and material support from them have better mental and physical health. Social support is a social network's provision of psychological and material resources intended to benefit an individual's capacity to cope with stress (Cohen, 2004). Moreover, Turner (1999) defines social support as social bonds, social integration, and primary group relations. Different forms of social support have been identified to include: functional support, instrumental or material support, informational/cognitive social support and structural support often provided by family members, community, national and sub national governments, and the international community in times of adversity (Sippel et al., 2015). However, in this study, social support classification by (Zimet, et al., 1988): family, friends and significant other/government were adopted.

To this end, this study is anchored on the shattered assumption theory by Jannof-Bulman, (1992) which in this study is akin to stress reaction (psychophysiological symptoms). This theory is a socio-cognitive perspective that is rooted in the tradition of the individual's worldview or the assumptive world. The assumptive world helps in strengthening people in coping with challenges of daily existence, overcoming adversities and making strategic plans. Peradventure, these views turn negative as orchestrated by loss of freedom associated with old age and lack of primary caregivers, mental ill health or as a result of being unlawful as indicative of the participants sampled in this study. The above happenings may shatter the worldview of the participants which may predispose them to manifest some psychological symptoms especially depressive symptoms. At this juncture, in order for the world view to remain positive there is need for psychological buffers like social support.

Previous studies exert that a lack of social support is a determinant of mental health problem including depressive symptoms among Univeristy students (Bukhari & Afzal, 2017, Safree & Dzulkifli, 2010), and has a negative impact on quality of life for students (Dafeella et al., 2016). Some studies such as (Alimorade et al., 2014; Kugbey, 2015) found negative relationship between social support and psychological disorders including depression. Worfel et al. (2016) found that social support predict depression in university students. Social support affects a person's physical and mental health and behaviour patterns, and has a very close relationship with the generation, development, control, and prevention of depression (Peng et al., 2013; Thoits, 2011). A good social support can provide protection for an individual under stress and has common gaining function on maintaining an individual's good emotional experience (Maulik et al., 2011). Past studies revealed that psychophysiological symptoms (stress reaction) had relationship with depression, just as social support predicts depression and also moderates the relationship between stress and depression. Yet none of the studies reviewed captured the institutionalized persons which make this research ideal.

Specifically, the study addressed the following questions:

1. Will psychophysiological symptom predict depression among institutionalized persons in Nigeria?
2. Will social support significantly predict depression among institutionalized persons in Nigeria?
3. Will social support moderate the prediction of depression by psychophysiological symptom among institutionalized persons in Nigeria?

Hypotheses

The following hypotheses were tested:

1. Psychophysiological symptom will significantly predict depression among institutionalized persons in Nigeria.

2. Social Support will significantly predict depression among institutionalized persons in Nigeria.
3. Social support will moderate the prediction of depression by psychophysiological symptom among institutionalized persons in Nigeria.

Method

Participants:

The participants for this study were 118 (89 males and 29 females) drawn from three shelter institutions in Enugu. The participants whose age range from 18-70 years (mean age 37.93 and standard deviation of 13.93) were drawn through available sampling technique. Sixty-eight (68) participants were drawn from correctional centre Enugu, 33 from ESUT psychiatric hospital Enugu and 17 from home for the elderly Enugu. Seventy-eight (78) of the participants were within the first and fifth year in the institutions, 23 were within sixth to tenth year while the remaining 17 were within the eleventh year and above in their various shelter institutions.

Instruments

Self-rating Depression Scale (Zung, 1965)

A 20 – item inventory, self-rating depression scale (SDS) designed to access the cognitive, affective, psychomotor, somatic and social interpersonal dimensions of depression. The administration was done individually and also collectively.

Scoring: The values of the numbers shaded in all the 20 items were added together for example, one of my participants had items 7, 8, 9, 10, 11 the number shaded are 3, 2, 4, 1, 2 respectively, his score for the 5 items is 3+2+4+1+2 = 12.

Psychometric Properties: Zung (1965) provided the original psychometric properties for American samples while Obiora (1995) provided the properties for Nigerian samples.

Norms: The cut off points or mean scores established by Zung (1965) in categorizing 56 depressed patients and 100 normal are:

50-59	Mild depression
60-69	Moderate depression
70-79	Severe depression

For Nigerian samples, the norms or mean scores obtained by Obiora (1995) with a population of secondary school students are:

M(n=100)	F(n=100)
48.77	47.87

Reliability: A three day interval test-retest coefficient of reliability of 93 was obtained by Obiora (1995).

Validity: A coefficient of concurrent validity of 0.79 was obtained by Zung et al. (1965) between SDS and Hamilton Rating Scale (HRS) by Hamilton (1960), between SDS and the depression scale of Minnesota Multiphasic Personality Inventory (MMPI), the coefficient is 0.70.

Psychophysiological Symptoms Checklist (PSC) (Omoluabi, 1987/88)

This a 50-item test developed to measure stress reaction. There have been two versions of PSC. The original version and the current version have 50 items each, the difference between them is in the response format.

While the current version has a 5-point likert-type response format, the original version has a "Yes or No" response format.

Scoring:

The items are scored in two ways:

(a) Qualitative Score: Count the total number of items with "Yes" response in the original version or where "O" was not shaded in the current version. Clients' scores would range from 0 to 50.

(b) Quantitative Score (Current version). Add together the values of the numbers shaded in all the items.

Psychometric Properties

Omoluabi (1987/88) provided the psychometric properties for the original version while Omoluabi (1996) provided the properties for the current version.

Norms: The norms reported here are the mean scores obtained by the general population.

Original version: M&F(n=1,200) = 8.81 Current version: M(n=400) = 49.89 F(n=300) = 49.78

Reliability: Original version: K-R 20 coefficient = .835 Current version: Alpha coefficient = .784 Spearman-Brown Split-half coefficient = .879

Validity: Ebiai (1986) obtained concurrent validity coefficients by correlating PSC current version with the Social Readjustment Rating Scale (SRRS) by Holmes and Rabe (1967) M(n=180) = .47 F(n=180) = .41

Interpretation: The norms or mean scores are the basis for interpreting the scores of clients. Scores higher than the norms indicate high stress level or reaction. Scores lower than the norms indicate that the clients are coping adequately with existing stressors.

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988)

Multidimensional scale of perceived social support is a 12-item questionnaire that measures social support from three dimensional perspectives: Family, Friends and Significant Other/Government. The scale has 3 subscales, namely: social support from family (4 items), social support from friends (4 items) and social support from significant others or government (4 items). The instrument is rated on a 7-point likert format from 1 (very strongly disagree) to 7 (very strongly agree). Zimet et al. (1988) obtained a cronbach alpha of .78, .76 & .70 respectively. Ifeagwazi et al. (2014) validated MSPSS and obtained cronbach's alpha of .67.

Procedure

The researcher obtained necessary approval from Head Department of Psychology Enugu State University of Science and Technology (ESUT) Agbani, the Deputy Comptroller of Nigerian Correctional Services Enugu, Sister-in-charge home for the elderly Enugu and Chairman MAC Enugu State University of Science and Technology Teaching Hospital Parklane Enugu. The researcher collaborated with some workers in the institutions especially the psychologists who helped to organize the participants. Available sampling technique was used based on the fact that the participants presented by the workers at the time of the visits who gave their consent were drawn for the study. The researcher then employed the services of the 2021/2022 practicum in psychotherapy students of Psychology Department ESUT during their clinical visits to the above mentioned institutions in the distribution and collection of the questionnaires. One hundred and twenty (120) copies of the tests were distributed and collected, out of which 2 were discarded for improper filling while the remaining 118 copies of the tests correctly filled were used for data analysis by the researcher.

Design and Statistics

The study adopted a cross-sectional survey design because participants were selected from three institutions (correctional centre, psychiatric hospital and home for the elderly). Moderated regression analysis involving Statistical Package for the Social Sciences (SPSS), version 25.00 was employed as statistics to determine if social support moderated the prediction of depression by psychophysiological symptom. Other variables such as, age, gender, type of institutions and duration in the institutions were controlled in this study.

Results

Table 1: Means, standard deviations and inter-correlations of social support, psychophysiological symptom, age, gender, types of institutions, and duration in the institutions on depression.

Variables	Mean	SD	1	2	3	4	5	6	7
Depression (1)	54.22	13.36	1	.474**	-.111	-.488**	-.037	.159	.052
PS (2)	33.63	9.76		1	.074	-.263**	.094	.020	-.176
Social Support (3)	42.56	14.80			1	-.044	.034	-.167	-.147
Age (4)	37.93	13.93				1	-.045	-.107	.028
Gender (5)	1.27	.45					1	.309**	.040
Institution (6)	.57	.73						1	.342**
Duration of Stay (7)	.48	.74							1

NOTE: PS = psychophysiological symptom; SD = Standard Deviation; *Age (youth/middle age is coded as 1 vs. middle/old age 2); Social support (Government/significant others = 0, Family = 1, and Friends = 2); Gender (males = 1 and females = 2); Institution (correctional centre = 0, psychia = 2 and home for the elderly = 2); Duration of stay in the institution (0-5 years = 0, 6-10 years = 1, 11 and above = 2)* **p<.01,

Table 1 demonstrates the correlation matrix. The table revealed that psychophysiological symptom correlated positively with depression, indicating that participants who experience psychophysiological symptoms also experience depression r(118) = .474, *p* = .01. Additionally, age yielded a negative correlation with depression r(118) = -.488, p =.01. This indicates that participants who are in their youth/middle age manifest depression more than those in the middle/old age. Age equally had a negative correction with psychophysiological symptom r(118) = -.263, p = .01. This means that those in their youth/middle age manifests psychophysiological symptom more than those in their middle/old age. Gender had a positive correlation with the type of institution of the participants r(118) = .309, p = .01. This implies that males in home for the elderly suffer depression more than females, while females in the correctional centres suffer depression more than the males. Finally, type of institution correlated positively with duration in the institution r(118) = .342, p = .01. Thus, those in the home for the elderly who have spent 10 years and above experience depression more.
However, social support, gender, type of institutions and duration in the institutions were not related to depression.

Table 2: A table providing a summary of the moderated regression analysis on the moderating role of social support in the prediction of depression by psychophysiological symptom among institutionalized persons.

R	**R^2**	**MSE**	**F**	**df1**	**df2**	**P**
.51	.26	136.40	13.03	3.0000	114.00	.00
Model	**Coeff.**	**Se**	**T**	**P**	**LLCI**	**ULCI**
Constant	24.69	11.94	2.07	.04	1.03	48.35
PSC	1.06	.35	3.00	.00	.36	1.75
Social Support	.18	.28	.65	.51	-.37	.73
Interaction	-.01	.01	-1.17	.24	-.03	.01

a. Dependent Variable: Depression

Note: $R = .51$ $R^2 = 26\%$ $\Delta R^2 = .26$, $p < .001$

The moderated linear regression revealed that psychophysiological symptom contributed significantly to the regression model, $F(3,114) = 13.03$, $p < .001$). The relationship between variables were strong ($R = .51$) and accounted for 26% ($\Delta R^2 = .26$) of the variance in Depression scores. Hence, psychophysiological symptom had a positive statistically significant impact, $\beta = 1.06$, $t(118) = 3.00$, $p < .001$. The first hypothesis which stated that psychophysiological symptom will statistically and significantly predict depression was accepted. Thus, social support did not have a statistically significant impact, $\beta = .18$, $t(118) = .65$, $p > .05$. Hence, hypothesis two which stated that social support will predict depression was rejected. Next, social support failed to moderate the positive relationship between psychophysiological symptom and depression $\beta = -.01$, $t(118) = -1.17$, $p > .05$. Apparently, the third hypothesis which stated that social support will moderate the relationship between psychophysiological symptom and depression was rejected.

Summary of Findings

The findings were summarized as follow:

- There is a positive statistically significant prediction of psychophysiological symptom on depression among institutionalized persons, thus, the first hypothesis was accepted.
- Social Support failed to predict depression among institutionalized persons, the second hypothesis was rejected.
- Social support did not moderate the positive relationship between psychophysiological symptom and depression among institutionalized persons.

Discussion

The present research investigated the moderating role of social support in prediction of depression by psychophysiological symptom. The findings illustrated that psychophysiological symptoms positively predicted depression. Thus, the first hypothesis which stated that "psychophysiological symptom will predict the experience of depression" was accepted which implies that participants who manifest psychophysiological symptom also experience depression while those who do not manifest psychophysiological symptom do not experience depression. This finding is consistent with some past findings that a psychophysiological symptom (stress reaction) predicts depression (Maulik et al., 2011). There seems to be dearth of literature in relation to psychophysiological symptom and depression especially among the institutionalized persons in Nigeria which made this work timely in order to fill this gap.

The second hypothesis which stated that "social support will significantly predict depression" was rejected, indicating that social support does not either increase or decrease the experience of depression. This finding is not in line with almost all the studies reviewed, for instance, (Alimorade et al., 2014; Peng et al., 2013; Worfel et al., 2016; Thoits, 2011) who found that social support predicts depression in the their separate studies. The contrary nature of the findings of this study in relation to the past studies may depend on the unlikely availability of the social support to the institutionalized persons unlike as seen among non-institutionalized persons (university students).

The third hypothesis which stated that "social support will moderate the prediction of depression by psychophysiological symptoms" was rejected. This finding suggests that social support and psychophysiological symptoms jointly did not increase or decrease the manifestation of depression. The past findings indicate that social support moderates the relationship between stress (psychophysiological symptoms) and depression, for instance (Maulik et al., 2011) found that a good social support can provide protection for an individual under stress and has common gaining function on maintaining an individual's good emotional experience. This was in disagreement with the findings of this study which suggests that social support may differ between institutionalized persons and non-institutionalized persons in terms of availability. The data generated from the participants further proved that these institutionalized persons rarely receive social support from their families and friends except from significant others/government which was not significant in predicting depression or moderating stress and depression association.

Demographic (control) variables

The current findings revealed that whilst gender, type of institutions and duration in the institutions had no correlation with depression, age had a negative relationship with depression. The findings suggested that participants in their youth/middle age experience depression more than those in their middle/old age. Conversely, none of the studies reviewed in the work reported any findings on age and depression which made this finding very interesting.

Implications of the findings

The present finding of strong associations between psychophysiological symptom and depression provides an insight on the menace of psychophysiological symptoms among the institutionalized persons in Nigeria. Coupled with the findings that the manifestation of depression was found to be more among those in their youth/middle age (18 to 45 years). Theoretically, the findings supported the theoretical framework of this study (shattered assumptions theory of stress reaction) which asserts that the world is meaningful and the self is

worthy. Thus, when some people are taking into shelter homes, these worldviews are shattered although social support failed to render buffering effect in stress and depression in this study in order to restore these worldviews. Empirically, the findings will add to the existing literature especially on the association between psychophysiological symptoms and depression and also age and depression among institutionalized persons in Nigeria.

Of practical implication is that there is need to consider other factors since social support failed to moderate the relationship between psychophysiological symptom and depression indicating that social support may differ for institutionalized persons and non institutionalized persons especially in Nigeria. Future research should unveil the various indirect association found between age and psychophysiological symptoms, gender and type of institutions; duration in the institutions and type of institutions among the institutionalized persons in order to understand their behaviours better. The major limitation to the generalization of the findings of this study is the failure to control for the type of institutions (correctional centre, psychiatric hospital and home for the elderly). Also, the small number of the participants orchestrated by the nature of the institutions visited is another important threat to the generalization of the findings to other such institutions and even non institutionalized persons.

Conclusion

Psychophysiological symptom yielded a positive prediction of depression, thus the more the episode of psychophysiological symptoms the more the experience of depressive symptoms. Social support had no correlation with depression whereas, one of the control variables in this study (age) yielded a negative prediction of depression. Social support failed to moderate the positive relationship between psychophysiological symptoms and depression. Institutionalized persons who experience psychophysiological symptoms are prone to depression.

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