

Depressive Symptoms in Rural School Teachers: Role of Stress, Gender and Age

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Abstract

Using a cross-sectional survey design, this study investigated the role of stress, gender and age in depressive symptoms in a sample of Nigerian rural school teachers. Three hundred and fifteen rural secondary school teachers (134 males and 181 females; $M_{age} = 44.49$, $SD = 6.47$) in Nsukka Educational zone of Enugu state completed the Role-based Stress Inventory and Centre for Epidemiological Studies Depression Scale (CES-D). Results of a 3-way analysis of variance (ANOVA) tests of between subject effects showed that teachers who had high stress reported significantly higher depressive symptoms than teachers who had low stress, $F(1, 314) = 6.60$, $p < .05$. Male and female teachers did not significantly differ in self-report of depressive symptoms, $F(1, 314) = .22$. Younger teachers reported significantly higher symptoms of depression than older teachers, $F(1, 314) = 16.87$, $p < .001$. Stress, gender and age had a significant interaction effect on depression, $F(1, 314) = 4.56$, $p < .05$. It was suggested that structural changes and systemic interventions are fundamental mechanisms of alleviating rural teachers' depressive symptoms because productive and mentally healthy teaching staff represents both a competitive advantage and a critical strategic asset in promoting functional education in rural communities.

Keywords: Stress, age, gender, depressive symptoms, rural dynamics.

About 52.1% of global population and 60.4% of sub-Saharan Africa's population would be rural dwellers by 2015 (UNDP, 2008) and of all the regions of the world, the proportion of rural population is presently the highest in sub-Saharan Africa. It will be about thrice the population in developed countries by 2015. The development challenge in the coming years will, therefore, continue to be related to trends and conditions in rural areas. Specifically, achieving Education for All (EFA) targets of Millennium Development Goals (MDGs) by the year 2015 will require particular emphasis on rural education. Consequently, the promotion of effective teaching and learning in rural areas of sub-Saharan Africa has been described as a complex and urgent challenge because without quality education majority of the people will be deprived of quality of life (Adedeji & Olaniyan, 2011).

In Nigeria, the relevance of teachers in the implementation of all educational plan is documented (Federal Government of Nigeria, FGN, 2004; Anuforo, 2007; Nakpodia, 2011). Quality education cannot be achieved in rural communities without productive teachers. Therefore, given the dynamics of rural education, productive and mentally healthy teaching staff represents both a competitive advantage and a critical strategic asset in national transformation. Hence, the sharp rise in serious mental health problems among school teachers necessitated calls for the promotion of mental health status of teachers (Channel 4 News, 2011, June 16). The mental health problem of depression, particularly, is a general public health concern which is very common, costly and debilitating in rural areas (Douglas, Gehlert, Hade, Reiter, Ruffin & Paskett, 2013). Teachers are also one of the professionals who are more depression-prone than others (Dovos, Dupriez & Paquay, 2012; "10 Careers", 2012). Depression and its risk factors among rural teachers have remained relatively unexamined by researchers. Most of the existing studies on rural school

teachers have focused on stress and burnout (e.g., Abel & Sewell, 1999; Blum & Diwan, 2007). Therefore, in response to Steyn & Kamper's (2006) challenge of researchers in Africa to strive towards making significant and practical inputs into the health and wellbeing of educators in the education system in which they are functioning, the present research investigates the roles of stress, gender and age in depressive symptomatology among rural school teachers. First, the direct effects of stress, gender and age in depressive symptoms will be determined. Second, since distinct risk factors interact in the aetiology of psychopathology (Kendler, Kuhn & Prescott, 2004), the interactive roles of stress, gender and age in depressive symptoms will be investigated. The additional knowledge to be gained from the study would help in mental health promotion and psychosocial interventions aimed at improving the quality of life of school teachers in rural areas.

Depression is the leading cause of disability as measured by years lost due to disabilities (YLDs). By the year 2020, depression is projected to reach second place in the ranking of Disability Adjusted Life Years (DALYs) calculated for all ages and among both sexes (WHO, 2003; 2008). The cluster of depressive symptoms include: low mood, loss of interest or pleasure in usual activities, poor or increased appetite, weight loss or weight gain, insomnia or hypersomnia, psychomotor agitation or retardation, loss of energy/fatigue, feelings of worthlessness, guilt or self-reproach, poor concentration/indecisiveness and thoughts of death or suicide (American Psychiatric Association, APA, 2004). These symptoms can range from occasional normal "down" periods to episodes severe enough to require hospitalisation (Beinstein, Penner, Clarke- Stewart & Roy, 2006). If the symptoms become recurrent or chronic, it can lead to substantial impairment in an individual's ability to function effectively (WHO, 2008). As a result, depressive symptoms in teachers not only affects their quality of life, but also negatively impacts on the wellbeing of their families and retards the progress of the educational system. Recurrent symptoms of depression, even without hospitalisation, would make teachers ineffective and enthusiastic to transmit knowledge, thereby reducing teachers' commitment to the fundamental objectives of FGN's (2004) and Federal Ministry of Education's (2009) National Policy on Education. Additionally, the rural school teacher is the most important agent in the realisation of MDGs' target on education because functional education in rural communities cannot be achieved without qualitative teaching. One way to improve the quality of outcomes in rural education is to advance policies and programmes that will enhance the mental health status of rural teachers, which necessitated this research.

In occupational health, role-based stress describes the physical, mental and emotional wears and tears brought about by incongruence between the requirements of one's job and capabilities, resources and needs of the worker to cope with the demands (Agrawal, Malhan & Singh, 1979; Akinboye, Akinboye & Adeyemo, 2002). Teacher stress is one of the universally recognised role-based stresses (see Laughlin, 1984; Borg & Riding, 1991; Kyriacou, 1998; Jacobsson, Pousette & Thylefors, 2001; Naylor, 2001; Mearns & Cain, 2003; Hanizah, 2003). It refers to the experiences in teachers of unpleasant negative emotions, pressure, anger and conflict resulting from some aspect of their work (Kyriacou, 2001, 2002). While most teachers agree that teaching is intrinsically rewarding, it can be a difficult career because of inadequate resources, crowded classrooms and low salary (Strauss, 2007; Agbatogun, 2012). Work-related factors which produces stress for teachers include: heavy workload, relationship with colleagues, unrealistic expectations from parents and community, innovation and change in educational system, bottlenecks in school administration/supervision, unfavourable institutional climate, stagnation and lack of variety on the job (Powell & Enright, 1990; Pestonjee, 1992; Brown & Ralph, 1998; Cooper & Payne, 1998; Olaitan, Oyerinde, Obiyemi & Kayode, 2009; Inuwa & Yusof, 2012). Okebukola and Jegede (1989) summarised the stressors for Nigerian teachers as student factors, school working environment, administrative procedures and working conditions.

Teaching is traditionally considered to be one of the most stressful occupations (Durham & Varma, 1998; Cooper, 2000; Smith, Brice, Collins, Matthews & McNamara, 2000; Health and Safety

Executive, 2000; Kyriacou, 2001), and the stress can become more complex among rural teachers (Civil Society Coalition on Education for All, CSCEFA, 2013), especially among teachers in rural secondary schools (Pettigrew & Wolf, 1982; Ray & Miller, 1991; UNESCO, 2010 in Anih, 2010). The challenges of teaching in a rural school are enormous and literature provides evidence indicating that rural teachers face circumstances which are both difficult and unique (US Department of Health, Education and Welfare, 1980; Guenther & Weible, 1983; Abel & Sewell, 1999; Adedeji & Olaniyan, 2011). For instance, the existence of more teachers in urban schools compared to rural schools is an indication of the lopsidedness in the distribution of teachers to schools (Ijaiya, 1998; Onoja, 2005; Adeyemi, 2009). The teacher-student ratio in rural schools is outrageous, with recent estimates of about 1:100 (Awoyinfa, Oluwole, Atoyebi & Aboluwade, 2013). Rural schools in developing countries usually face significant shortages in terms of teaching and learning resources as well as basic amenities (Blum & Diwan, 2007). A general overview of some of these problems shows that teachers in rural schools generally receive lower fringe benefits, teach in areas of limited expertise, lack adequate career development opportunities and face undue administrative bottlenecks which make them feel neglected and treated unfairly by the authorities (Guenther & Weible, 1983; Adedeji & Olaniyan, 2011). It has also been observed that in most of the rural schools, classes are assigned to school teachers purely on the basis of the vacancies and needs rather than their interests and educational background.

Theoretically, a widely used paradigm of teacher stress is the transactional model of stress (Lazarus & Folkman, 1984) which hypothesises that when life's challenges are encountered, there is a subjective transaction, in which the individual weighs perceived demands of the event against perceived coping abilities. If the demands of the situation outweighs available resources to meet the challenges, stress responses which can trigger psychopathological symptoms like depression occurs (Saplosky, 1998; McCarthy, Kissen, Yadley, Wood & Lambert, 2006). Another influential theory of role-based stress is the Person-Environment (PE) fit theory (Edwards & Cooper, 1990; Spielberger & Vagg, 1999; Brewer & McMahan, 2004). It upholds that the interaction between an individual and his/her environment determines whether or not there will be psychopathogenic stress responses. There is incompatibility when job demands exceed one's resources. Apparently, the dynamics of rural education entails that there could be excessive demands beyond the resources of the teacher. For instance, current teaching realities may be inconsistent with the training and available resources of the rural school teacher.

The prevailing Diathesis-Stress Model of depression (Monroe & Simons, 1991; Monroe & Hadjiyannakis, 2002; Zuckerman, 1991) is that some individuals, due to a vulnerability (which includes behavioural states and social conditions), are disproportionately or even exclusively likely to be affected by environmental stressors. This proposition of Diathesis-stress provides a heuristic device to address the link between environmental stressors, situational stressors and risks in the work of a rural teacher as an antecedent to depressive symptoms. The cognitive model (Beck, 1971) and behavioural model (Lewinshon, 1974; Hoberman & Lewinshon, 1985) are useful theoretical foundations for the present research. In a most simplified form, the cognitive view proposes that an individual's interpretation of events has substantial influence on mood and behaviour (Davey, 2008). If a teacher's interpretation of experiences in the course of his/her work is distorted, it results in emotional problems and poor functioning. Negative perceptions of the rural teaching experience may trigger depressogenic manifestations. The maladaptive thought processes are manifested in Negative Automatic Thoughts (NATs), dysfunctional assumptions and core beliefs of personal inadequacy (Beck, et al., 1979; Davey, 2008). Based on the behavioural model, depressive symptoms is a function of insufficient reinforcement. There may be inadequate positive reinforcement for the rural teacher which results in lower overall output and quality of life. As the teacher engages in more unresponsiveness and self-absorption, it further drives people away from the individual leading to a vicious circle of negative affect (Lemma, 1996).

Extant literature and recent research have shown that teacher stress influences burnout (Abel & Sewell, 1999; Ullrich, Lambert & McCarthy, 2012), intention to leave the profession (McCarthy, Lambert, Crowe & McCarthy, 2010; McCarthy, Reiser, Lineback & Lambert, 2013) and career plans (Lambert & McCarthy, 2012). Evidence of the influence of stress on depression among teachers exists (Schonfeld, 1996; Jurado, Gurpegui, Moreno & Luna, 1998; Tenant, 2001; Zhong, You, Gan, Zhang & Lu, 2009). Ferguson, Frost and Hall (2012) identified specific stressors, namely, workload and student behaviour as predictors of depression among teachers in a variety of school settings. Using teachers from primary and secondary schools, Jurado, Gurpegui, Moreno, Fernandez, Luna and Galvez (2005) found that school ownership (public or private), grade level of teaching, assignments and teaching experience was associated with increased levels of depressive symptomatology. Work stress has predicted depression in specific teacher populations, such as trainee or new teacher (Parkes, 1990) and first-year teachers (Schonfeld, 1992). Most researches in Nigeria have investigated teacher stress without empirically examining the link with depression (e.g., Devi, 2007; Hadi, Naing, Daud, Nordin & Sulong, 2009; Olaitan, et al., 2009), with the exception of Okafor (2007) who reported that elevated stress predicted onset of depression among teachers. To the knowledge of the present researchers, no previous study has specifically examined the role of stress in depressive symptoms of rural school teachers, especially in Nigeria. It is hypothesised that teachers with elevated stress levels would report significantly higher depressive symptoms than teachers with low levels of stress (H_1).

Theoretical perspectives on gender imbalances in depression advances that women predominate in internalising disorders such as depression (Miller & Eisenberg, 1998). Within the social causality perspective, there are two major explanations: labelling model and social vulnerability viewpoint. Women are more likely to be labelled as psychologically distressed (Ussher, 1991). If a female teacher displays behaviour such as reduced interest in usual pleasurable activities, it may be labelled as pathological. The social vulnerability viewpoint maintains that women's experiences and their roles in a patriarchal society predispose them to depression (Smith, 1991; Koss & Kilpatrick, 2002; Nolen-Hoeksema, 2002). It may be assumed that female teachers have more problems in classroom management, student discipline, have more workload and face undue pressure from school administrators. Earlier studies (Nolen-Hoeksema, 1990; Nolen-Hoeksema, Girus & Seligman, 1991; Kessler, McGonagle, Schwartz, Glazer & Nelson, 1993; Kendler, et al., 2001) have discussed gender differences in depression among the general population. Among teachers, a recent study in a sample of Nigerian urban school teachers reported that gender was a significant predictor of depression (Obi & Iroegbu, 2013). Studies on gender differences in depression among school teachers were scarce and relatively non-existent for rural teachers. The present research addresses this gap in literature by examining the role of gender in depressive symptoms among rural school teachers. It is hypothesised that female teachers will report more depressive symptoms than male teachers (H_2).

Age is another variable which can influence depressive symptoms. The consideration of age as a factor in depression is informed by the socio-cultural view of depression, as popularised by Klerman and Weissman (1989). It suggests that younger generation are more at risk for depression because of the rapid changes in social values and the gradual weakening of the family unit. The older and more experienced teachers in rural schools may attach greater value to the teaching profession. They may have also attained reasonable stability in their occupational trajectories unlike the younger teachers who may be battling with the challenges of occupational and geographical mobility. There is an apparent lack of evidence-based consensus in literature on the directionality of age-depression relationship among teachers. While some studies reported that depressive symptoms increased significantly with age (Jurado, Gurpegui, Moreno & Luna, 1998; Ahmadzadeh, Ghaseni & Karami, 2003), a relatively recent research (Seedat, 2009) found higher depressive symptoms in younger teachers which were attributed to unfavourable life conditions and workload. Although older adults were found to report higher negative affect (Mroczek & Almeida,

2004), earlier research (Mundell, 2002) showed that there could be a mellowing down effect in life's hassles among older adults which leads to reduced negative responses. Age differences in depressive symptoms of rural school teachers have not been examined, to the knowledge of the present researchers. It is hypothesised that younger rural teachers would report significantly higher depressive symptoms than older teachers (H₃). Evidence of the interactive roles of stress and gender in depression among teachers has been documented (Kendler, et al., 2004). In Seedat's (2009) study, age was found to interact with stress in depression. Stress, gender and age interacted significantly as antecedents to depression in Farabaugh, Mischoulon, Fava, Green, Guyker & Alpert's (2004) study. The interactive roles of these antecedents of depression will also be examined in the current research.

METHOD

Participants

Three hundred and fifteen teachers participated in the study. They were drawn from 11 randomly selected rural secondary schools in Nsukka Educational Zone of Enugu state (See Appendix A for the list of selected schools). Nsukka Educational Zone comprises 4 local government areas in Enugu state: Igboeze North, Igboeze south, Nsukka and Uzo-Uwani. Mean age of the teachers in this study was 44.49 (SD = 6.47), comprising 168 younger teachers (below 45 years) and 147 older teachers (above 45 years). Young adults were categorised as younger teachers while teachers in middle adulthood were older teachers. There were 134 males and 181 females. Using the mean stress score of 62.10 as cut off, 164 teachers had low stress while 131 teachers had high stress. They were all Igbos and majority (93%) were Christians.

Instruments

The instruments used in the study were the Role-Based Stress Inventory (Rizzo, House & Lirtzman, 1970) and Centre for Epidemiological Studies Depression Scale (CES-D). Also included in the questionnaire for the study was a section for provision of relevant demographic characteristics.

Role-Based Stress Inventory (Rizzo, et al., 1970) is made up 20 items designed to measure the degree of stress experienced by workers in the course of discharging their duties in the workplace. The items are scored using a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1). Positively worded items are reverse-scored and higher scores indicate higher levels of stress. Sample items from the measure include: I have too much heavy work that I cannot possibly finish during the normal working day; there are unreasonable pressure for better performance; something new and creative is constantly required such that there is hardly any way of meeting expectations. Reliability and validity of Role-based Stress Inventory across several studies have been shown by Ugwu (1995) and was used in a recent study by Uzundu and Ugwu (2012) to measure occupational stress. In the current sample, the reliability of the measure was .74, which was adequate.

Centre for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977), have been used by researchers for about 4 decades as a sound measure of depressive symptoms in many countries (For reviews, see Eaton, Smith, Ybarra, Muntaner & Tien, 2004; Carleton, Thibodeau, Teale, Welch, Abrams, Robinson, & Asmundson, 2013), including Nigeria (e.g., Ifeagwazi, 2006). It measures current level of depressive symptomatology as defined by APA's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). For each statement, the respondent indicates how often he/she has felt that way within the past one week by selecting the option he/she most agree with, from rarely (0) to always (3). High internal consistency has been reported with Cronbach's alpha coefficients ranging from .85 to .90 across studies (Radloff, 1977). The internal consistency (Cronbach's alpha) of CES-D in community samples was .85. Split-half reliability ranged from .77-.92. (Radloff & Locke, 1986). Convergent validity of the CES-D with other similar self-rating measures of

depression such as Zung (1965) self-rating depression scale and Hamilton Rating Scale for depression have also been found to be .65 and .57 respectively (Shinar, et al., 1986) while correlations of CES-D with Symptoms Distress Checklist (SCL-90) depression scale ranged from .73-.89 (Radloff & Locke, 1986). A Cronbach's alpha of .64 was reported by Ifeagwazi, Obi, Udensi and Chukwuorji (In review). In the current sample, the Cronbach's alpha reliability of internal consistency was .83. Although, factor models for the CES-D has been advanced (Beals, Manson, Kean & Dick, 1991), in most studies, researchers employ a total depressive symptoms score by summing the responses on all 20 items of CES-D (Ensel & Linn, 1991; Lewinsohn, Rhode, Seeley & Fischer, 1991). Scores ranged from 0 – 60 with higher scores indicating more symptoms of depression.

Procedure

The schools were visited by the third author and 3 research assistants. Approval to approach the teachers and request their participation in the research was obtained from the principal or any other highly placed school authority who was present in the school at the time of the visit. Teachers were met in the staff rooms or offices for the purpose of completing the questionnaires. After explaining the purpose of the visit to the teachers, those who were willing to take part in the study were given the questionnaires for completion. There was no reward or any other form of compensation for participating in the research. It took about 8 weeks to collect the data. Of 354 questionnaires distributed, 338 were returned and 315 were duly completed and used for data analysis.

Design/Statistics

A cross-sectional survey design was adopted in the study. A 2-way analysis of variance (ANOVA) was employed in data analysis. There were two levels of stress (high and low), gender (male and female) and age (younger and older).

RESULTS

Table 1: Mean (M) and Standard Deviations (SDs) of Depressive symptoms scores by stress levels, gender and age.

Factor	Group	Mean	SD	N
Stress	High	19.29	6.32	6.32
	Low	17.56	5.87	5.87
Gender	Male	18.10	6.07	6.07
	Female	18.77	6.25	6.25
Age	Younger	19.64	5.63	5.63
	Older	17.12	6.48	6.48

Table 1 shows that teachers with high stress obtained a mean score of 19.29 (SD = 6.32) while teachers with low stress obtained a mean score of 17.56 (SD = 5.87) on depressive symptoms. Male teachers had a mean depressive symptoms score of 18.14 (SD = 6.07) while female teachers had a mean score of 18.77 (SD = 6.25) on depressive symptoms. Younger teachers' mean scores on depressive symptoms was 19.64 (SD = 5.63) while older teachers' mean depressive symptoms score was 17.12 (SD = 6.48).

Table 2: ANOVA Tests of between subject effects of stress, gender and age on depressive symptoms.

Source	Type III SS	DF	MS	F	Eta ²
Stress	234.11	1	234.11	6.60*	.02
Gender	17.72	1	7.72	.22	.00
Age	597.07	1	597.07	16.84**	.05
Stress X Gender	16.09	1	16.09	.45	.00
Stress X Age	106.79	1	106.79	3.01	.01
Gender X Age	1.75	1	1.75	.05	.00
Stress X Gender X Age	161.80	1	161.80	4.56*	.02
Error	10883.60	307	35.45		
Total	119316.00	315			

* $p < .05$; ** $p < .001$.

The ANOVA results in Table 2 shows that there was a significant difference in depressive symptoms between teachers with high stress and teachers with low stress, $F(1, 314) = 6.60$, $p < .05$. Teachers with high stress reported significantly higher depressive symptoms than teachers with low stress. The effect size (Eta²) of stress on symptoms of depression was .02, indicating that 2% of the variance in depressive symptoms was explained by stress. There was no significant difference in depressive symptoms between male and female teachers, $F(1, 314) = .22$. The Eta² was .00 which shows that there was no variance in symptoms of depression on account of gender. There was a significant difference in symptoms of depression between younger and older teachers, $F(1, 314) = 16.87$, $p < .001$. Younger teachers reported higher symptoms of depression than older teachers. The effect size of .05 shows that 5% of the variance in symptoms of depression was explained by age. The interaction effect of stress and gender on symptoms of depression was not significant, $F(1, 314) = .45$. Male teachers who had high stress did not differ in depressive symptoms with female teachers who had high stress. Male teachers who had low stress did not also differ significantly in depressive symptoms with female teachers who had low stress. There was no significant interaction effect of stress and age on depressive symptoms, $F(1, 314) = 3.01$. Younger teachers who had high stress did not differ with younger teachers who had low stress in depressive symptoms. Older teachers who had high stress did not differ in depressive symptoms with older teachers who had low stress. Gender and age did not have a significant interaction effect on depressive symptoms, $F(1, 314) = .05$. Male teachers who were younger did not differ in depressive symptoms with male teachers who are older. Female teachers who were older did not differ in depressive symptoms with male teachers who were older. Stress, gender and age had a significant interaction effect on depression, $F(1, 314) = 4.56$, $p < .05$. There was a significant difference in symptoms of depression reported by younger male teachers who had low stress and older female teachers who had high stress. The Eta² of the interaction effect was .02, showing that 2% of the variation in depressive symptoms reported by the teachers was explained by stress, gender and age.

DISCUSSION

The present research examined role of stress, gender and age in depressive symptomatology in a sample of Nigerian rural school teachers. It was found that rural teachers who had high stress reported significantly higher symptoms of depression than teachers in the low stress group. The hypothesised outcome (H₁) which stated that teachers with elevated stress levels would report significantly higher depressive symptoms than teachers who had low stress levels was supported. This finding is consistent with findings of previous researches in diverse populations, especially among teachers (Tenant, 2001; Zhong, et al., 2009; Frost & Hall, 2012; Okafor, 1997). Relevant theories of depression such as Diathesis-Stress model (Monroe & Simons, 1991; Zuckerman, 1991) maintain that environmental and social conditions like the stressful work experiences of rural

teachers could precipitate depressive symptoms in vulnerable individuals. Also the cognitive theory (Beck, 1971) and behavioural view (Lemma, 1996) provides an understanding of the finding of the study, since dysfunctional thoughts and insufficient reinforcement, respectively, are antecedents of depressive symptoms due to stress.

The second hypothesis which stated that female teachers would report significantly higher symptoms of depression than male teachers was not supported by findings of the study. Male and female teachers did not significantly differ in symptoms of depression. This finding contradicts the popular gender imbalance in depressive symptoms in the general population (Nolen-Hoeksema, 1990; Nolen-Hoeksema, et al., 1991; Kendler, et al., 2001). Obi and Iroegbu (2013) reported that gender predicted depression in urban teachers. The finding of the current research is contrary to major theoretical views on gender and depression, namely labelling theory and social vulnerability model maintain that women may be found to have more depressive symptoms. Although, it may be reasoned that the roles of women in a patriarchal society, as explained in the social vulnerability perspective (Koss & Kilpatrick, 2002; Nolen-Hoeksema, 2002) predisposes them to depression, extant literature recognises social conditions in which rates of depressive symptoms were not different for men and women (Rosenfield, 1980; 2002). In recent times, the teaching profession has become increasingly dominated by women and has become less conventional in terms of gender roles, opportunities for career advancement and personal/educational development. Because more often than men, women value nurturance, compassion and responsibility for the wellbeing of others as primary life's goals (Beutel & Marini, 1995), gender differences in depression may be less pronounced in teachers. Teaching is a caring profession which may be considered suitable for females.

The third hypothesis of the study was that younger teachers would report significantly higher symptoms of depression than older teachers. This expectation was supported by the finding of this study, which is consistent a relatively recent research finding (Seedat, 2009). Other researchers (Jurado, et al., 1998; Ahmadzadah, et al., 2003) had reported that older teachers had more symptoms of depression. However, teaching is one of those jobs in which experience counts so much and older teachers may be more experienced in facing the challenges of teaching. Thus they are likely to have learnt how to make adjustments in their work based on available resources. They may have accurate perceptions of reality without making unrealistic expectations. Students are also more likely to take advantage of the naivety and inexperience of the younger teachers in rural schools to make teaching more difficult for the younger teachers. It is also possible that older rural teachers have attained geographical mobility and occupational stability in the teaching profession. The older teachers are more likely to have risen in the career ladder. Besides, the mellowing down effect in negative affect (Mundell, 2002), implies that older adults have reduced negative affect because of being more selective in their approach to the strains of their work.

The interaction of the 3 antecedent factors (stress, gender and age) was shown to significantly influence depressive symptoms. This finding supports Farabaugh, et al.'s (2004) finding which reported an interaction effect of stress, gender and age in depressive symptoms. One variant which can be gleaned from this interaction was that younger male teachers who had low stress reported higher symptoms of depression than older female teachers who had high stress. Possibly, it is a case in which experience also counts. There could be increased capability and realistic understanding of the special mission of teaching which counteracts the psychopathological consequences of stress. There are implications of the findings in this study for stakeholders in education such as administrators, government agencies, teacher educators/trainers, Non-Governmental Organisations (NGOs), teachers, parents, school management committees and communities. Structural changes and systemic interventions to improve the state of rural schools are fundamental mechanisms of alleviating stress. Most of the teachers who are posted to rural schools do not reside in their host communities. It is believed that the lack of basic infrastructural amenities such as electricity,

potable water, health-care systems and internet facilities makes life difficult in the rural setting. The teachers travel long distances from the urban areas to go to work in rural schools. Apart from making their attendance to school irregular, the long journey also constitutes stress. Government should give attention to basic amenities in rural areas. When the communities are provided with reasonable structural comfort, it will become conducive for most teachers to live and work in it. Residence in rural communities will make the teachers fit into the life of the people. In the interim, transport loans for purchase of motorcycles and allowances for transportation costs for rural teachers in remote areas is recommended. It is on this note that the provision of a bus for each secondary school in Enugu state by the Enugu State government in South-eastern Nigeria, is commendable. In addition to improving rural infrastructure, the condition of educational facilities, teaching aids and instructional materials in the rural schools should be improved. It deserves urgent attention of relevant government agencies, NGOs and philanthropists.

The workload on rural teachers is enormous due to the limited number of teachers and high student-teacher ratio in rural schools (CSACEFA, 2013). More teachers should be recruited given orientation on the dynamics of rural teaching. In the recruitment process, applicants should be assessed to determine their capabilities for the job. Also teacher-education programmes should be made to become more relevant in preparing student-teachers for the task of adapting to any teaching environment. Particularly, training programmes should be structured to become rurally-responsive in principle and practice. During the teaching practice, the student-teachers should not be concentrated in urban schools. The current practice where trainees mostly stay in urban schools should be discouraged. Exposing them to rural educational settings will prepare them for the challenges of rural education and enable them to cope effectively with rural life if they are posted to rural schools when employed. It will strengthen the younger teachers in their adjustment capabilities.

The average annual teacher salary was ₦149, 371(US \$2, 134) as determined from approved documents of the National Salaries and Wages Commission (Adeyemi & Akpotu, 2009). Low wages makes teaching to be viewed as a low status job (Ozoemena, 2013), because majority of teachers do not enjoy the salaries and benefits enjoyed by professionals of the same economic background in other occupations (Anih, 2010). Since research indicates that financial considerations are pertinent factors in teachers' choices of work locations, the Nigerian Union of Teachers (NUT) has, particularly, called for greater package to be offered to teachers in rural schools (UNICEF, 2012 in CSACEFA, 2013). An improved allowance would be a reasonable compensation to teachers who undergo the difficult terrain of rural teaching. There is also a need for a change of attitude towards education by parents and students in some rural communities. Where the attendance of students is irregular and teachers are treated with disregard in the community, their work becomes devalued and self-worth is endangered.

In addition to structural interventions, rural teachers should be enlightened on stress management techniques. Many role-based stresses can be alleviated through creative, well-designed, comprehensive staff development programmes through which teachers can systematically acquire the necessary skills and competencies needed for the job (Sparks, 1982; Wu, Li, Wang, Wang & Li, 2006). Workshops, seminars, and professional development programmes should be organised with the aim of educating teachers on stress and coping. In such programmes, awareness should be created on the benefits of physical exercises, relaxation techniques and meditation. Stress management experts can also be co-opted to educate teachers on Mindfulness Based Stress Reduction (MBSR) strategies (see Task Force on Promotion and Dissemination of Psychological Procedures, 1995; Kabat-Zinn, 2003). If the teacher is stressed because of indiscipline among students, a solid programme on classroom management is to teach with love and logic (see Fay & Funk, 1995; Fay & Fay, 2002).

In the midst of negative messages about teachers and the teaching profession in contemporary society (Sparks, 1983), teachers should learn how to reward themselves by being contented in their contributions to the development of the society. This will counteract the destructive effects of excessive focus on one's weaknesses. Teachers and the Nigerian people must also adopt a paradigm shift of not solely measuring success by the pay one receives at the end of the month. This approach requires a value orientation and cognitive restructuring whereby one can be satisfied in the fulfilment of one's vocation in life without undue distractions with the status associated with one's job. Negative attributions and the tendency in some teachers to view the rural school setting as awful can be catastrophic for the teacher if posted in such a rural setting. The negative thoughts should be modified through positive cognitions of daily events and work experiences. For instance, priceless opportunities of teaching in a rural school should be explored by teachers through active community engagement and curriculum adaptation to rural dynamics.

Previous studies have not investigated the mental health status of rural school teachers, especially depressive symptoms and its antecedents. Hence, the present research serves as a modest contribution to literature in rural education and mental health status of rural teachers with reference to depression. However, the findings of the study should be considered in recognition of the limitation of the study. One, the research is a cross-sectional study and depression was not clinically assessed in the teachers. The use of a self-report questionnaire is an insufficient basis for a diagnosis of clinical depression and the researchers cannot claim to have assessed depressive disorder. What was measured in the study are the self-report of depressive symptoms. Two, the sample for the study was also limited to warrant generalisations without caution. Three, the effect sizes obtained for the significant differences in symptoms of depression were low. Future studies should adopt a longitudinal design and efforts should be made to further assess teachers who may be clinically depressed. A larger sample of teachers using multi-stage sampling technique would also enhance the robustness of such researches. Since participants in the present research were drawn from secondary schools, other researchers may examine the depressive symptoms of rural primary school teachers.

Conclusion

The present study is a modest contribution to literature on rural mental health, especially in relation to the role of stress, gender and age on depressive symptoms in rural teachers. The educational and public health relevance of the findings of the study will facilitate better outcomes in Nigerian rural education. Structural changes and systemic interventions are fundamental mechanisms of alleviating rural teachers' depressive symptoms because productive and mentally healthy teaching staff represents both a competitive advantage and a critical strategic asset in promoting functional education in rural communities.

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APPENDIX A

S/N	Name of School	N
1	Boys Secondary School, Ibagwa-Aka	22
2	Boys Secondary School, Ovoko	40
3	Beacon Secondary School, Ovoko	10
4	Community Secondary School, Edem	28
5	Community Secondary School, Isienu	37
6	Community Secondary School, Umabor	30
7	Community Secondary School, Opi	34
8	Community Secondary School Ede-Oballa	36
9	Government Technical College, Nguru	42
10	St. Thomas Secondary School, Ibagwa-Aka	13
11	St. Charles College, Opi	23
	TOTAL	315