Impact of ethnicity and gender on college stress among undergraduates of Federal University Lafia

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Abstract

This study examines the impact of ethnicity and gender among undergraduates, via an ex post facto survey. 149 students, including 81 males and 68 females with mean age of 23 years, completed the College Stress Scale (CSS). Three hypotheses were tested using a two way ANOVA (Amos SPSS 21) analysis. Results showed significant differences on the main effect of Ethnicity (F (13, 127) = 7.86, p = .0005); with a medium effect size (partial eta squared = .45), and significant interaction effect (Ethnicity*Gender) (F (7, 127) = 5.48, p = .005), but not for Gender (F (1, 127) = .61, p = .44) at the significant level of p≤0.05. The import of this result is that gender alone is not a good determinant of stress experience. However, the effect of ethnicity on college stress is moderated by gender. Recommendations are made for students to learn how to respond appropriately to stress to avoid complications, and universities should intensify stress prevention education and support in order to prevent adverse effects.

Keywords: Ethnicity; Gender; College Stress; Undergraduate; Nigeria

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1. Introduction

Huge research interest in stress (Rausch et al., 2008; Grawitch et al., 2007; Ongori and Agolla, 2008) demonstrates that some degree of stress is experienced by most people daily, and students are even more likely to face situations and events that require of them to make changes and adapt their behaviour. In psychological research, stress is one of the variables of greatest impact due to its effect on people's health and wellbeing. This evidence contrasts with the minimal attention reserved particularly for students’ stress (Michie et al., 2001) among Nigerian scientists, despite the fact that research has shown its high prevalence among university students (Zajacova et al., 2005; Dyson and Renk, 2006). In fact, this prevalence is comparable to that of some clinical samples (e.g., Gonzalez and Landero, 2007).

The complex academic environment with its pressures and demands often poses great psychological, social and medical problems to the students enough to threaten or compromise their psychological wellbeing. In addition, Arbona (2016) argued that, during their academic careers, college students are exposed to stressors normative to their developmental stage. These stressors include separation from parents, social and romantic life, as well as their role as students (e.g., academics, finances). Theoretical models have also shown that students from ethnic groups and social class backgrounds experience stress when they encounter negative situations that put at risk their sense of wellbeing and threaten to overwhelm their resources to cope (Folkman et al., 1986). Previous research findings also suggest that the college experience may vary according to gender. Despite this awareness, little research is done to explore ethnic and gender differences of students to general college stress.

Studies on ethnic identity and minorities on acculturation and racial discrimination abound in western literature. Weiten et al. (2011) argued that cultures vary greatly in the predominant forms of stress their people experience. In their opinion, culture sets the context in which people experience and appraise stress. In some cases, a specific cultural group may be exposed to pervasive stress that is unique to that group and characteristically reflect in how they respond to stress. It has also been established that ethnic identity may play a key role in protecting immigrant non-American adolescents from typical stressors associated with being an ethnic minority adolescent (Stein et al., 2014). Some studies also suggest that ethnic identity may serve to shield (immigrant) Asian youth from deleterious outcomes when confronted with racial/ethnic discrimination (e.g., Rivas-Drak et al., 2008), other studies find that ethnic identity can serve to exacerbate these negative experiences, leading to worsened mental health outcomes (Lee, 2005). However, there are few available studies which directly test the relationship between ethnic identity and stress or mental health outcomes.

Different schools of thought hold varying opinions about stress. The first school considers stress as a stimulus, the second as a response, while the third view stress as a process. From the stimulus perspective, stress is seen as an external object or situation which influences the thoughts and feelings of an individual. When regarded as a response, stress relates to the internal tensions or worries and physical symptoms originating in response to stress. Finally, when considered as a process, stress refers to the dynamic interplay between the individual and the potential stressful environmental stimulus. The combination of these three views gives a clearer explanation of stress as a multidimensional response, involving the discrepancy arising...
from the demands of a situation or stimulus and the individual’s resources to cope (Lazarus and Launier, 1978).

Recently, theories of stress have emphasized forms of self-control as important in understanding stress, and whether the experiences of stress depend on a person’s gender and sociocultural group membership (ethnicity). In determining the basis upon which people judge that they have control over events or things that happen in their lives, Bandura, (1986; 2004) and DeVellis and DeVellis (2001) claimed that people make these assessments by using information they gain from their successes and failures throughout life. People’s sense of control also develops through social learning, in which they learn by observing the behavior of others (Bandura, 1986). Significant others at home and school serve as role models and greatly shape development during childhood. This socialization may carry over to old age and in my opinion represents ethnic or personal beliefs and idiosyncrasies, which may account for difference in stress experiences.

Bandura (1986, 2004) referred to the ways by which people gauge their chances of success in a particular activity they are engaged as self-efficacy. In his opinion, people’s beliefs about their abilities greatly affect those abilities. That is, moist people adjudge their capacities to perform certain tasks by comparing themselves with others. Depending on a favourable self-efficacious judgement, their decision to engage in a particular task is based on either of two expectancies - outcome or self-efficacy. The former expectation provides the assurance that if the behaviour or task is properly undertaken, would result in positive outcome; while the latter indicates the confidence in one’s self to execute the activities properly. Acknowledgement of these expectations motivates individuals towards desired behaviours. For example, an athlete who believes in his/her sense of self-efficacy may know that performing well in a race could bring recognition and fame. Therefore, regardless of how daunting the task could be, is spurred by the belief in self to perform.

The relationship between a potentially stressful stimulus and an individual’s response to that stimulus is complex and will be affected or mediated by other variables, including socio-cultural factors, physical or environmental factors, and psychological or individual factors. Against this background, health psychologists in particular need to make students aware of the influence of ethnic and gender characteristics on stress and the different personal controls they can exercise over stressful circumstances in their lives to stay healthy? Therefore, it is important to examine factors that may be associated with college stress to guarantee academic success.

1.1. Ethnicity and college stress

Some researchers (Betancourt and Lopez, 1993; Costa and Bamossy, 1995; Hirschman, 1983; Phinney 1996; Venkatesh, 1995) have defined ethnicity as a nation or group who share one or all of the following: a common nationality, culture, language, race, religion and common descent. Alternative definitions of ethnicity focus upon migration and resulting minority status. Costa and Bamossy (1995) argues that ethnicity is merely a matter of belief, describing ethnic groups as those human groups that entertain a subjective belief in their common descent because of similarities of physical type or custom or both, or because of memories of colonisation and immigration. Venkatesh (1995) shares this definition, adding that ethnicity is an
ideologically fashioned term to describe a group who is culturally and/or physically outside the dominant cultures of the day. This implies ethnicity only becomes apparent or experienced when one is in a minority.

Similarly, many anthropologists, psychologists and sociologists generally agree that ethnic categories are imprecise and arbitrary, “social constructions rather than natural entities that are simply ‘out there’ in the real world” (Waters and Eschbach, 1995, p.421). Both ethnic categories and the labels for these categories vary over time, context and individuals. Even in an ethnic group whose members share a relatively precise ethnic label there is tremendous heterogeneity. This heterogeneity has been examined in terms of social class and education, generation of immigration, geographical region, family structure and size and composition of the ethnic community, among other factors that differentiate subgroups (Harrison et al., 1988).

Nigeria is a multi-ethnic country and the minority ethnic groups put together far outnumber the dominant (Hausa/Fulani, Yoruba and Ibo) ethnic groups. In terms of federal university admissions, the quota system is used to ensure equal distribution of students among ethnic groups, thereby drastically reducing ethnic minority situations as witnessed in international universities. However, most state universities reflect higher proportion of ethnic groups of origin from their zone. It is very common to see posters of ethnic meetings and cultural day celebrations on Nigerian university’s noticeboards. This is an indicator that most students identify with their ethnic group or are made to do so through compulsory registration and participation in its sociocultural activities, thereby emphasizing the need for ethnic belongingness. This study, therefore, addresses the effect of ethnicity on general college stress as implied in the ensuing literature.

Although mainstream studies on ethnicity or ethnic identity in recent literature does not reveal much about direct association to college stress, earlier studies (phinney, 1989, 1992, and others) with ethnic identity development involving a myriad of ethnic minority groups has indicated it to be important to adolescent development and been associated with a variety of positive outcomes relating to psychological wellbeing and school success. For example, a study involving minority and nonminority high school students found ethnic identity to be a significant predictor of minority adolescent wellness in relation to spirituality, self-direction, school-work, leisure, love, and friendship (Rayle and Myers, 2004).

Stein et al. (2014) argued that when faced with stress; a strong sense of ethnic identity may help youth place their difficulties in the context of the struggle of other youth similar to themselves. The authors were particularly interested in economic stress, which is a component of college stress. In their view, they suggested that identifying with their ethnic principles may help them to appreciate their parents’ sacrifices in and to understand that, despite their family’s economic struggles, improved outcomes may result for the family. They further insinuated that the contextualizing of these youths’ economic stress may result in a sense of friendship and connection that may help them cope. In addition, a strong sense of ethnic identity may help youth access social support, as they may have other peers going through similar situations (Costigan et al., 2010).

When applied to students, it is possible to suggest that their ethnic identity would increase their outcome expectancy and self-efficacy expectancy that the struggles they are passing through would lead to economic emancipation for them and their families after graduation. Somehow, ethnic identity may provide needed insight to cope with the prevailing stress. This notwithstanding, it is uncertain whether ethnic identity
buffers students’ outcomes in the face of college stress. More research evidence is required to support the deduction.

A study by Phinney (1992) found self-esteem to be significantly related to ethnic identity in high school students and college students. Phinney (1992) also found that among high school students, having a sense of belonging had an impact on academic achievement; the high school students in the study evidenced higher grades when they had more developed ethnic identities. In another study examining ethnic identity as a predictor of self-esteem in African American, Latino, and White adolescents, Phinney et al. (1997) found ethnic identity to be a significant predictor of self-esteem in all three of the groups that participated. Phinney and her colleagues (1997) also found that in regards to adolescents in ethnically diverse settings, the higher their ethnic identity, the higher their self-esteem tended to be.

In another related study involving ethnically diverse middle school students, Roberts et al. (1999) found ethnic identity to be positively correlated with self-esteem, coping, sense of mastery, and optimism. Roberts and his colleagues (1999) also found that ethnic identity was negatively correlated with depression and loneliness. In a recent study using an ethnically diverse high school, Giang and Wittig (2006) also confirmed the assertion that ethnic identity was positively linked with self-esteem. Drawing from Phinney’s and other related studies, there is high likelihood that students with sense of ethnic belonging will possess more resources than those without in tackling college stress.

1.2. Gender Differences in Stress

Evidence from previous researches (Hogan et al., 2002; Ptacek et al., 1994; Tamres et al., 2002) suggests that women report higher levels of chronic and daily stressors than men do. Using a modified version of Wheaton’s chronic stress inventory, McDonough and Walters (2001) found that women’s distress scores were 23% higher than men’s. Utilizing the Life Event Stressful Success Questionnaire (LESSQ), Matud’s (2004) study also found that women reported being more stressed than men.

Furthermore, recent studies have found that university women reported feeling more stressed than university men (Abouserie, 1994; Dusselier, et al., 2005; Hudd et al., 2000; Pierceall and Keim, 2007; Soderstrom et al., 2000). Despite strong support for gender differences in university students’ appraisal of stress was found, empirical support for specific stressors that created and maintained stress has been mixed. For example, Misra et al. (2000) found that university women reported higher levels of stress than university men for some stressors such as frustration, self-imposed stress, and pressure in relation to academics. A similar study in Kuwait on stressors among medical students by Badr and Hamoda (2005) found that 67% of medical students had stress, with a significantly higher rate among females. Dyson and Renk (2006) however, found no gender differences in university students’ reported stress levels for university and family stressors. Thus, past research has found gender differences in reported levels of stress for university students, but strong evidence for specific stress was not found.

It is generally argued that the differences in stress response among men and women are attributable to socialisation. Wilsey and Lyke (2015) in their study cites authorities confirming the assertion that women, for example, report family and health-related events experienced by themselves and those in their
environment as more stressful compared to men, whereas men report work events experienced by themselves as highly stressful (Matud, 2004).

1.3. The present study

The objectives of the present study were to examine among undergraduate students enrolled in four-year courses at Federal University, Lafia, Nasarawa state in Nigeria: (a) what is the impact of ethnicity and gender on college stress? (b) does gender moderates the relationship between ethnicity and college stress? The following three hypotheses were examined: (1) ethnicity will have a significant main effect on college stress; (2) gender will have a significant main effect on college stress; and (3) gender will significantly moderate the effect of ethnicity on college stress among students.

2. Method

2.1. Participants

A sample of 149 students comprised of 81 (54.4%) males and 68 (45.6%) females ranging in age from 18 to 33 years, mean-age of \( M = 23.16 \) was drawn from the university population. Out of this number, 124 (83.2%) indicated being single, while 25 (16.8%) were married; 116 (77.9%) indicated their religious belonging to Christianity and Islam had 33 (21.1%). Classifying the participants according to ethnicity showed those from Hausa were 27 (18.1%), Yoruba, 17 (11.4%), and Ibo, 12 (8.1%). Others include Tiv, 30 (20.1%), Idoma, 11 (7.4%), Alago and Yala, 7 (4.7%) each, Ibibio, 8 (5.4%), while Igbo, Tarok, and Kuteb, had 6 (4%) each. Finally, Jukun, Effik and Eggon had 4 (2.7%) each. The participants reflected all the three faculties, Social Sciences faculty dominated with 97 (65.1%), followed by Arts with 34 (22.8%) and the least, Sciences with 18 (12.1%) participants. Similarly, sociology department topped the representation with 73 (49.0%), while economics, history and social work had 15 (10.1%), 14 (9.4%) and 11 (7.4%) respectively. Biochemistry and botany had 5 (3.4%) respondents each; theatre arts had 9 (6.0%), while creative arts had 8 (5.4%) respondents. Finally, computer science and zoology had 6 (4.0%) and 3 (2.0%) participants respectively. In relation to level of study, 400 level represented the highest frequency of 77 (51.7%), followed by 300 level with 30 (20.1%), while 100 and 200 levels came least with 27 (18.1%) and 15 (10.1%) participants respectively.

2.2. Instrument

College Stress. The College Stress Scale (CSS; Li, 2002) was used to measure three dimensions of college stress: academic hassle (ten items; e.g., “Difficulty discussing academic problems,” “Examination pressure”); personal hassle (sixteen items; e.g., “Inadequate social skills,” “Unsatisfactory family financial situation”), and negative life event (four items; e.g., “Being told off in public”). Students were asked to rate the stressfulness of each item based on their college experience on a 4-point Likert scale that ranged from 0 = not at all; 1 = Low;
2 = Moderate; and 3 = High). A college stress score was obtained by averaging the scale’s 30 items. In the present study, the internal reliability Cronbach’s alphas for the scale’s scores was .89 and 86; .78; and .76 respectively for the subscales.

2.3. Procedure

Students were encountered in their lecture rooms after ethics approval was sought and obtained from management of the university, and with the assistance of a senior lecturer, were asked to voluntarily participate in the study. They were also told that volunteering was tantamount to consent and assured of anonymity. It took them between five to ten minutes to complete the questionnaires, which were returned to the lecturer or researcher. Only the correctly completed ones were used for analysis.

3. Results

3.1. Descriptive analysis

The descriptive statistics of the means and standard deviations for the fourteen ethnic groups considered in the study according to male and female showed the first three dominant ethnic groups. Hausa, male (M = 36.66; SD = 7.61; N = 12), female (M = 21.40; SD = 10.64; N = 15); Yoruba, male (M = 43.30; SD = 15.94; N = 13), female (M = 31.00; SD = .00; N = 4); Ibo, male (M = 17.00; SD = .00; N = 3), female (M = 30.33; SD = 5.00; N = 9). The statistics for Tiv, male (M = 33.00; SD = 7.32; N = 15), female (M = 41.06; SD = 16.15; N = 15); Idoma, (M = 38.00; SD = 13.14; N = 6), female (M= 54.00; SD = 13.69; N = 5); Alago, male (M= 41.00; SD = .00; N = 3), and female (M = 34.00; SD = .00; N = 4) respectively. Ibibio, only showed the statistics for male (M = 59.00; SD = 7.48; N = 8). Igede, showed male (M = 46.80; SD = 7.15; N = 5), and female (M = 32.00; SD = .00; N = 1). Tarok, had only female (M = 31.66; SD = 1.03; N = 6). Kuteb, had male (M = 34.00; SD = .00; N = 1), and female (M = 29.60; SD = 1.34; N = 5); while Jukun again had only female (M = 5.00; SD = .00; N = 4), Yala, Effik and Eggon had only male (M = 35.85; SD = 10.15; N = 7), (M = 31.00; SD = .00; N = 4) and (M = 47.00; SD = .00; N = 4) respectively.

3.2. Data analysis

In Table 2, a two-way between-groups analysis of variance was conducted to explore the impact of ethnicity and gender on levels of college stress as measured by the College Stress Scale (CSS). Participants were divided into fourteen ethnic groups, as indicated in the descriptive analysis above. The interaction effect between ethnicity and gender was statistically significant, \( F (7, 127) = 5.48, p = .0005 \) There was also a statistically significant main effect for ethnicity, \( F (13, 127) = 7.86, p = .0005 \). However, there was no statistically significant main effect for gender, \( F (1, 127) = .61, p = .44 \). The interaction result indicated the impact of ethnicity on stress levels depend on whether the student is male or female. The result of the main effect for ethnicity shows that stress levels experienced by students differ among the groups, while main effect result for gender indicate no differences in amount of stress students experience according to gender.
In other words, gender differences do not determine the level of stress felt by students. Using the commonly used guidelines proposed by Cohen (1988): .01 = small effect, .06 = moderate effect, .14 = large effect, this result suggests a very large effect size (partial eta squared = .45 for ethnicity and .23 for interaction). As shown in the plot below, the parameter estimates indicated that there was a significant difference in the mean scores for the Ibibio, Jukun and Effik ethnic groups (M = 59.00; SD = 7.48; N = 8); (M = 5.00; SD = .00; N = 4), and (M = 31.00; SD = .00; N = 4) respectively. All the other ethnic group means did not differ significantly from each other.

Table 1. Summary of two-way ANOVA for ethnic groups and gender

Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Noncent. Parameter</th>
<th>Observed Power</th>
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<td>Corrected Model</td>
<td>17198.391*</td>
<td>21</td>
<td>818.971</td>
<td>8.173</td>
<td>.000</td>
<td>.575</td>
<td>171.630</td>
<td>1.000</td>
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<tr>
<td>Intercept</td>
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<td>1</td>
<td>106115.218</td>
<td>1058.971</td>
<td>.000</td>
<td>.893</td>
<td>1058.971</td>
<td>1.000</td>
</tr>
<tr>
<td>Ethnicity</td>
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<td>13</td>
<td>787.379</td>
<td>7.858</td>
<td>.000</td>
<td>.446</td>
<td>102.149</td>
<td>1.000</td>
</tr>
<tr>
<td>Gender</td>
<td>60.871</td>
<td>1</td>
<td>60.871</td>
<td>.607</td>
<td>.437</td>
<td>.005</td>
<td>.607</td>
<td>.121</td>
</tr>
<tr>
<td>Ethnicity * Gender</td>
<td>3842.724</td>
<td>7</td>
<td>548.961</td>
<td>5.478</td>
<td>.000</td>
<td>.232</td>
<td>38.348</td>
<td>.998</td>
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<tr>
<td>Error</td>
<td>12726.160</td>
<td>127</td>
<td>100.206</td>
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<tr>
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</table>

* R Squared = .575 (Adjusted R Squared = .504)

b. Computed using alpha = .05

Figure 1. plot of the estimated marginal means of the Total Stress Score
4. Discussion and conclusion

This study set out to examine the impact of ethnic and gender differences in stress to college students enrolled in an ethnically diverse major research university in the North-central geo-political region of Nigeria. As expected, at the two-way ANOVA analysis showed that there was a significant main effect of ethnicity on college stress. This result Justifies that the experience of stress significantly differed among students in relation to their ethnic belongingness. As such, ethnic identification is a good determinant of college stress among students. However, results regarding the main effect of gender on college stress showed insignificant difference. This implies that gender or gender is not a good determinant of college stress among students in the university under study. All the same, the result indicated an interaction effect of ethnicity and gender on college stress. This means that being male or female from a particular ethnic group determines the level of college stress experienced.

The results are broadly consistent with Rayle and Myers’ (2004) study involving minority and nonminority high school students, in which they found ethnic identity to be a significant predictor of minority adolescent wellness in relation to spirituality, self-direction, school-work, leisure, love, and friendship. That is, in other words, identification with one’s ethnicity contributed to how effectively students deal with stressful situations, thereby resulting in the amount of wellbeing felt. Furthermore, the results are consistent with Stein et al. (2014) study, in which they argued that when faced with stress, a strong sense of ethnic identity may help students place their difficulties in the context of the struggle of other students similar to themselves. This is proper, particularly when such reference group of students share similarities in ethnicity.

The result of this study, that gender is not a good determinant of college stress among students fails to agree with previous studies (Dusselier et al., 2005; Hogan et al., 2002; Pierceall and Keim, 2007; Ptacek et al., 1992; Tamres et al., 2002) that found female students to express higher levels of stress than the male. The import of this result is that college stress equally affects both male and female students. However, the fact that, gender moderates the impact of ethnicity on college stress, implies that being male or female from a particular ethnic group could explain better the differences than merely on the basis of gender.

These results describe for the first time the impact of ethnicity and gender on stress among students in a Nigerian university. This study has therefore opened the space for further debate to sufficiently understand the relationship between ethnicity, gender and college stress. The no difference in college stress among male and female students only shows that both categories of students exhibit similar levels of college stress in this study. Also, it is suggestive that as college stress has three sources (academic hassles, personal hassle and negative life event), differences in scores on either sources may have reduced the variances among the groups.

The study has a number of possible limitations. First, the significance of this finding is unclear with regards to the methodology. That is, a linear relationship between ethnicity and college stress does not tell us the mechanism through which the impact was made possible. Therefore, the above analysis does not enable us to answer the ‘how’ question, which could have been possible with a third or fourth variable included in
the study. Further larger studies with more rigorous statistical analysis meant to shade more light on the nature of relationship between the variables will be of interest.

Although this study was conducted in one university, the results should be generalisable to other conventional universities as well as other higher education institutions in the country. The findings of this study would help students understand that identifying with one’s ethnic group may provide personal and social resources to mitigate college stress effects. The findings also suggest that university managers must understand the dynamics between ethnicity and students’ stress with a view to strengthen their support services to provide needed help to deserving student population.

References


