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The Effects of Sex, Education and Marital Status on Alexithymia

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ABSTRACT

Background: Alexithymia is a sub-clinical condition characterized by an inability to identify and describe emotions, together with an externally oriented thinking style. The aim of this study was to investigate the effects of sex, education and marital status on alexithymia in African university students.

Methods: A total of 368 Nigerian university students were involved in the study. Participants were 170 men and 198 women who were 17-27 years of age. Toronto Alexithymia Scale (TAS-20) was used to assess the points associated with alexithymia. Data were analyzed by applying student's t-test (independent sample test) and one way ANOVA tests in SPSS for Windows (version 18) statistical program.

Results: Alexithymia score was higher in female than in male subjects ($t=2.83$, $p<0.01$). There was an inverse relationship between alexithymia scores and years of education ($F=5.74$, $p<0.001$). Single subjects had the statistically higher alexithymia scores than the married subjects ($t=2.18$, $p<0.05$).

Conclusions: According to these results, it can be stated that male gender, university education and marriage may be related to the lower alexithymia scores in university students. Also, these results suggested that university education individualize to students and improves their mental health by decreasing their alexithymia scores.

Key words: Gender, University education, Marital status, Alexithymia

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INTRODUCTION

The term "alexithymia" was first used by Sifneos [1]. People with alexithymia have three major characteristic aspects: (a) they cannot thoroughly identify emotions, (b) they have difficulties when expressing feelings, (c) they do not have the strength to create fantasies [2]. Other characteristics are also: difficulties to differentiate between feelings and physical feelings (states) that follow emotional excitement, lack of self-examination, tendency to social conformity, reduction of daydreaming, externally oriented thinking [3], shortfall in the identification of emotions within oneself or others [4], use of irrelevant defense mechanisms (e.g. projection) [5], lack of compassion, cold and reserved attitudetowards other people [6], inability to establish close relationships and limited social skills [7].

Also, alexithymia is related with the ability to identify non-emotional states from the body called 'interoception' too. Interoception is the perception of a wide range of physical states beyond emotions, including heart rate, respiratory effort, temperature, fatigue, hunger, thirst, satiety, muscle ache, pain and itch [8].

The results of a recent research showed that alexithymia was associated with poor non-affective interoception and increased perceived similarity between intuitive and non-intuitive states, in both the typical and clinical populations. They suggest that alexithymia is better characterized by a general failure of interoception [9] rather than being specifically associated with intuitive damage.

In a study of healthy athletes, the relationship between alexithymia and the likelihood of sport accidents was reported. People who have difficulty identifying and describing their emotions are more likely to seek out the experience of emotions. Alexithymia was associated with greater risk taking and a greater propensity to experience accidents [10].

Because the controversies are well known, the behavioral studies need the robust replications with the larger sample size. This study was conducted to reinvestigate the effects of sex, education level, and marital status and work status on alexithymia in African university students.

MATERIALS AND METHODS

Subjects

A survey was carried out to assess alexithymia scores. This was to ensure the results obtained from the probing were valid and reliable. In the survey, the questionnaire was posted online for volunteers to fill out. A total of 368 volunteers participated in this survey (198 women, mean age=21.23, SD=1.02; 170 men, mean age=20.92, SD=1.39). They were students of the different faculties in Nile University of Nigeria. Exclusion criteria were health problems such as psychiatric, respiratory, metabolic, cardiac, or autonomic nervous system diseases that might change the alexithymia scores. The present study was conducted and its data was collected in between September 2018 to January 2019. This study was performed in accordance with the Declaration of Helsinki and approved by the Local Committee for Medical Research Ethics. All subjects were voluntaries to attend the study. All participants signed informed consents after the aims and objectives of the study have been clearly explained.

Alexithymia

Toronto Alexithymia Scale (TAS-20) [11] was used to assess the points associated with alexithymia. The reliability and validity of TAS-20K have been well-demonstrated in adults by Lee et al. [12] and in adolescents, by Seo et al. [13]. The participants were asked to rate the degree to which they agree with each of the statements using a five-point Likert rating scale that ranges from "strongly agree" to "strongly disagree." The questionnaire was posted on the following platforms: The school faculty website. Google classroom for students to fill out and social media, every student can fill the questionnaires only once while login into the online survey students ID is required in order to protect duplication.

Statistical analyses

Measured values are given as a mean +/- standard deviation. Statistical analysis was performed by using SPSS for Windows (version 18) statistical program. Student's t-test (independent sample test) and one way ANOVA tests were used to compare the alexithymia scores in university students. A p-value less than 0.05 was considered significant.

RESULTS

Age was not different statistically by the sex. There was a sex related statistically significant different in university students in terms of alexithymia score (t=2.83, p<0.01). The mean ± SD of alexithymia score is 68.58 ± 6.76 in female (N=198) and 66.39 ± 8.13 in male (N=170) subjects (Table 1).

Table 2 shows the effects of the year of education (from first year to 6th year of university education) on alexithymia score in African university students. There was an inverse statistically significant relationship between alexithymia scores and years of education in total sample (F=5.74, p<0.001), in men (F=2.57, p<0.05) and in women (F=3.25, p<0.01) in one way ANOVA.

Table 1: The mean (± SD) alexithimia scores by gender

Males (N=170)	Females (N=198)	t	p
66.39 ± 8.13	68.58 ± 6.76	2.83	p<0.01

Table 2: The mean alexithymia scores (± SD) by the level of education in total sample, in men and in women

Year of Education	Total Sample	Men	Women
First	68.78 ± 7.11	68.41 ± 6.16	69.19 ± 8.12
Second	69.56 ± 6.81	68.11 ± 7.78	70.29 ± 6.18
Third	65.11 ± 5.65	63.68 ± 5.42	66.21 ± 5.68
Fourth	67.08 ± 6.34	67.27 ± 6.09	66.89 ± 6.73
Fifth	65.11 ± 6.51	60.93 ± 5.32	66.69 ± 5.37
Sixth	64.64 ± 9.79	64.21 ± 11.27	65.42 ± 6.59
T and p	F=5.74, p<0.001	F=2.57, p<0.05	F=3.25, p<0.01

There was a marital status related statistically significant different in university students in terms of alexithymia score (t=2.18, p=0.04). Single subjects (N=336, mean ± SD=67.96 ± 7.41) had the statistically significant higher alexithymia scores than the married subjects (N=32, mean ± SD=65.31 ± 6.56) (Table 3).

Table 3: The mean (± SD) alexithimia scores by marital status

Single (N=336)	Married (N=32)	t	p
67.96 ± 7.41	65.31 ± 6.56	2.18	p<0.05

DISCUSSION

Alexithymia is a sub-clinical condition characterized by inability to identify and describe emotions together with an externally oriented thinking style [14]. Alexithymic traits are therefore typically measured across three subscales: difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking. The clinical relevance of alexithymia is increasingly being recognized [15], because increased rates of alexithymia are observed in both adolescents and adults with a range of psychiatric disorders; for example eating disorders [16,17], schizophrenia [18,19], and Autism Spectrum Disorder [20,21].

Also of relevance is the impact of adolescence on rates of alexithymia, and how this is moderated by gender. The overall prevalence of alexithymia is higher in adolescents (18%) than in adults (8%-10%) [22,23]; with higher rates in early adolescence, decreasing to adult levels by late adolescence [22,24]. Although several studies show higher rates of alexithymia in males compared to females in adult samples [25], this pattern is reversed in adolescence [26]. In this study, the alexithymia score were higher in female university students than their male

counterparts in Nigeria. The results of the present study are consistent with a previous study [26].

In another study by Salminen et al., alexithymia scores were age- and gender-dependent during adolescence and they showed a negative relationship with age after adolescence in males, whereas it remains more stable in females [23]. The results of the present study are consistent with this study [23] because education level is also related to the age.

Also, the results of the present study has shown that at the end of university education the alexithymia scores decreased progressively in university students in total sample, in men and in women. In a recent study, it was found that alexithymia scores vary among students of different disciplines [27]. Higher rates of alexithymia were found in life science students compared to students of psychology [27]. Another study by Pasini et al. [28] reported that subjects with a lower educational level had higher alexithymia scores with respect to subjects with a higher educational level. In the same study, women had higher alexithymia scores and the subgroups according to sex and age had the fair internal stability of the alexithymia [28]. The results of the present study are consistent with the results of this study [28] because in the present study the last year students had the lower alexithymia scores.

A recent study by Rad et al. [29] showed that emotional intelligence training is effective to decrease alexithymia in male students. They suggested that emotional intelligence can be taught in order to reduce the level of students' alexithymia and improve emotional problems in individuals with high alexithymia.

CONCLUSION

In the present study, alexithymia scores were higher in married subjects than in single ones. These results showed that marital status was effective to decrease alexithymia scores and it should be accepted like education.

According to these results, it can be stated that male gender, university education and marriage may be related to the lower alexithymia scores in university students. Also, these results suggested that university education individualize to students and improves their mental health by decreasing their alexithymia scores. In universities, the emotional training programs can be useful to decrease many possible psychological problems including alexithymia. Probably, taking responsibility, problem solving, planning a research project, interpretation and presentation presenting of the results in university education may be effective to reduce alexithymia scores in university students.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article.

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