Review of: "Obesity, Dyslipidemia and other Risks Factors for Metabolic Syndrome among Indigenous Black African Secondary School Students in Lagos, Nigeria"

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ABSTRACT

General comments

This section will benefit from proper proof reading and correction of grammatical and sentence structure errors

Population and Methods (line 2): correct sentence to read "Data were collected using a structured questionnaire and anthropometric measurements were taken."

Results *(line 7):* correct to read *"….25% of them had low levels…"*

INTRODUCTION

Line 5: "…in many less well-resourced countries due to westernization of diets…"

POPULATION AND METHODS

General comments

This section will benefit from proper proof reading and correction of grammatical and sentence structure errors

Sample size calculation: What does the 65.5% represent? If this is a prevalence figure used in the calculation, please clarify what prevalence it represents and the source.

Eligibility criteria

Exclusion criteria: correct to read "These included students on any therapeutic diet…"

Measurements

Line 2: "...and parental medication..." Do you mean "parenteral medication"? If parental medication is what was meant, what is the significance of parental medication on this study?

Definitions

Reference (7), "NHLBI. Obesity Education Initiative. The practical guide: Identification, valuation, and Treatment of Overweight and Obesity in Adults. National Institute for Health, Bethseda MD, USA. (NIH Publication Number 004084), 2021. nhlbi.nih.gov". This reference does not contain specific MetS criteria for children as stated by the authors.

RESULTS

General comments

- This section will benefit from proper proof reading and correction of grammatical and sentence structure errors
- Authors stated in the methods section that a p-value < 0.05 was considered statistically significant in this study. However, there are several instances in the results, where emphatic statements have been made as to the likelihood or odds of one group or another, developing a certain condition, when in many of those cases, the p-values for the said odds ratios were not statistically significant. Authors may remain silent on such results or clarify as part of the statements that such findings were not statistically significant.

Demographics and anthropometric characteristics, Table 1

Line 4: there is a repetition of words. i.e., "...compared to girls compared to girls..."'

Frequency distribution of systolic and diastolic blood pressure (mmHg), Table 2

These set of results include not only frequencies but other measures of central tendency, hence the heading should be rephrased to reflect this. Authors may consider using "Haemodynamic characteristics".

Fasting Blood Glucose (FBG) among study subjects. Table 3, Figure 1.

Line 2: correct to read "...while it was higher among boys than girls…"

Plasma lipids profiles of participants by stage of adolescence, sex, and BMI-for age. Table 4.

Total cholesterol (mg/dl) analysis (Table 4b)

These two statements in line 1, "The median total cholesterol (TChol) of boys (204.0) was higher..." and line 3 through 4, "In general, boys recorded the highest median Tchol of 260.9", appear the same yet have contradictory figures. For clarity, authors should consider rephrasing the latter if it refers to a different set of results.

Low-density lipoprotein (mg/dl) analysis (Table 4c)

Line 2 through 3: consider rephrasing "High concentration of LDL-cholesterol in boys (n=204, 294.0) was also significantly lower (Mann-Whitney U=-3.24, P-value=0.001) than that among girls (n=332, 315.0)." for clarity. What is the difference between these results and that in the preceding sentence? i.e., "There was a remarkable statistical variation (Mann-Whitney U=-3.03, P-value=0.002) in the median value of LDL-cholesterol of boys (271.5) compared to that of girls (295.4)."

Line 6 through 7: "...but underweight girls were not as likely to have higher LDL than underweight boys..." may be rephrased to read "...but underweight girls less likely to have higher LDL than underweight boys..."

High-density lipoprotein (mg/dl) analysis (Table 4d)

Line 1: correct to read "The overall median HDL-cholesterol was..."

Line 4: correct to read "...though none of these variations…"

Distribution of dyslipidemia by gender, stage of adolescence and BMI-for-age. Table 5.

Line 4: correct to read "...Surprisingly, the highest prevalence (71.7%) of dyslipidemia was noticed among…"

Specific risk factors for metabolic syndrome. Table 6.

Line 6: correct to read "Elevated Low-density lipoprotein cholesterol was the most prevalent risk factor (85.9%) among all, including boys (84.6%) and girls (86.7%)."

DISCUSSION

General comments

This section will benefit from proper proof reading and correction of grammatical and sentence structure errors

Paragraph 1

Line 2: "...among 10-19-years-old indigenous Black Nigerian adolescent attending secondary school students in Lagos, Southwest Nigeria." This statement does not sound right due to the position of the word "attending". Authors may consider rephrasing to read "…among 10-19-years-old indigenous Black Nigerian adolescent secondary school attending students in Lagos, Southwest Nigeria."

Line 7: The 19.7% prevalence figures of overweight for male and females, in a Syrian population in the referenced paper (35) appear problematic. The paper reports 20.3% and 20.1% prevalence of overweight in males and females respectively, among a Syrian adolescent population. Please check and correct.

Line 9: "The prevalence of obesity among males and female in this study is much higher than the 0.9% and 0.5%...". Are these figures respectively for male and female? If yes, please check in the referenced paper (36), as it reports 0.5% and 0.9% respectively for male and female and not the reverse.

Line 13: "A study reports that when the duration of sleep is increased from 7.5 to 10 h per day, a 4% reduction occurs in the prevalence of overweight/obesity". This statement appears misplaced and authors should consider deleting. From this study and from the discussion, it is unclear which gender has less sleep. The statement may however stand if the authors are able to include findings from another study which reports less sleep among female adolescents and hence a higher chance of being obese.

Paragraph 2

Line 2: Correct to read "...or the 3.6% prevalence of elevated total cholesterol reported from another study in Eti-Osa Local..."

Line 3: "…might be due to excessive dietary intake of saturated and trans fats, rather than hereditary causes." Could authors provide and research evidence of excessive intake of these foods in the subjects in this study compared to those of the comparable populations?

Line 5 through 6: "or various gene transformations leading to excessive production, or impaired clearance of triglycerides and low-density lipoprotein, or in very little production or excessive clearance of high-density lipoprotein." This statement appears to be misplaced as it does not appear to be a continuation of the preceding statement nor does it appear to be a stand-alone statement due to how it begins. Authors should check and correct accordingly.

CONCLUSION AND RECOMMENDATION

General comments

- This section will benefit from proper proof reading and correction of grammatical and sentence structure errors

Line 2: Authors should consider the use of increased/elevated or decreased/reduced in place of hyper and hypo respectively in this instance. Hyper and Hypo are prefixes and do not sound right when they stand alone as words.

Line 7: correct to read "Clinicians in Africa…"

TABLES AND FIGURES

General comments

Authors stated in the methods section that a p-value < 0.05 was considered statistically significant in this study. However, there are several instances in the results, where emphatic statements have been made as to the likelihood or odds of one group or another, developing a certain condition, when in many of those cases, the p-values for the said odds ratios were not statistically significant. Authors may remain silent on such results or clarify as part of the statements that such findings were not statistically significant.

Table 3 and Figure 1

The results on male and female as well as the different stages of adolescents as shown on figure 1 are the same as that from Table 3. Duplication of data in the same study is usually discouraged. Please check and correct accordingly. Proportions for the different weight classes as shown on the Figure 1 can be added to table 3 as was done for the gender and adolescent stages, and then the figure expunged.