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Dear Editorial Board,

We are pleased to re-submit our updated manuscript entitled “Relationship between Psychosocial-cultural Factors and African American Women Obesity.” This research and manuscript were developed to further explore nuances of environment interactions of obesity, specifically within an African American population. The dissemination of research focusing on this population is critical to address Healthy People 2030 goals related to eliminating/reducing health disparities. The insight provided by the manuscript reviewers was greatly appreciated, and we tried to accommodate the requests through extensively editing the manuscript. Please notify us if you would like us to reduce the manuscript further.

The Journal of Health Disparities Research and Practice would be an appropriate home for this manuscript due to the journal’s commitment to evidence-based solutions in addressing health disparities. This manuscript is an original manuscript and has not been published elsewhere and will not be submitted to any other journal while under consideration. All authors have reviewed and approved the revisions of this manuscript, and believe it will contribute to the body of knowledge on African American women and obesity. Additionally, it is the hope of the authors that this manuscript begins a dialogue about over looked factors in the exploration of obesity etiology as well as interventions for African American women.

We are looking forward for your reply.

Please refer any questions or concerns related to the submission of this manuscript to Dr. Knox-Kazimierczuk at [kazimife@ucmail.uc.edu](mailto:kazimife@ucmail.uc.edu).

Sincerely,

Francoise Knox-Kazimierczuk Ph.D., R.D.

Thank you to the Editor and Reviewers for your thoughtful comments, which have helped

improve the review greatly. We have organized our responses by manuscript section in the Table

below.

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| --- | --- |
| Comment | Response |
| Line 52: Citation needed. | Citations added. |
| Line 60: Some context regarding why this 2003 study is still valid to use in 2020 would be welcome. Perhaps something based on Lines 251-253? | This content was added to address this comment: The NSAL-SAQ is a unique dataset, which offers a comprehensive assessment of the lived experiences of African Americans. To date no other such dataset exists, which provides the means to study the racial disparity of obesity through exploration of a multitude of variables. As obesity rates continue to rise and proposed interventions fall short of reducing the obesity rates in African American communities, it is important to engage in exploratory studies to find associations which might be fruitful in addressing this problem. |
| Line 70: suggest: Participants for the NSAL-SAQ were recruited …… | Participants for the NSAL-SAQ were recruited from the initial NSAL study. |
| Line 83-83: Please clarify the last sentence. .. “for statistical analysis”???? | For the purposes of this paper, only African American females at a BMI of 18.5 kg/m2 or greater were included in the final sample (n = 2,100).  As the focus was on normal and overweight/obese participants the sample was reduced to only include these participants. |
| Line 85: Please discuss the predictor variables employed and how they relate to or are derived from SEM. It seems like the measures are in the SEM Figure 1, but it would be more clear to discuss them here. | This information was included in the background to provide clarity and flow to the paper. Each SEM construct was defined and later used as subheadings in the Predictor Variables section and Discussion. The SEM has been used to understand health behaviors in a number chronic diseases through focusing on how behaviors are informed through internal traits and contact with the external environment. Additionally, the SEM posits that health is influenced by multiple interacting spheres. The model is represented by the following concentric spheres; intrapersonal, interpersonal, community/institutional, and public policy. The intrapersonal sphere examines biological and sociocultural characteristics of the individual including factors such as age, race/ethnicity, socioeconomic status, sex, beliefs, values, and preferences. The interpersonal sphere, explores the close social and cultural relationships and interactions which can shape individual behavior. The community sphere focuses on the environment and the role land use, urban design, and safety in health habit acquisition. Finally, the public policy sphere examines the role of values, norms, and policies.  The SEM provides a broad framework by which to explore BMI status in African Americans. Health outcomes such as weight status is explained largely by these Social Determinants of Health (SDOH) with in the SEM.  The Predictive Variable Section includes the following opening paragraph: Predictor variables were categorized based on the SEM. Measurements within the dataset were selected for their approximation to the description of each SEM sphere. The public policy sphere was not measured in this study, as this specific construct was not directly measured and did not have good proxies in the NSAL-SAQ. |
| Line 104: Re Table 1; I think it would be interesting to also see descriptives for the other SEM variables, the interpersonal and the community/institutional measures | While we also thought seeing these additional variables as descriptive variables would be interesting we did not feel that it added to scientific value to the manuscript. Additionally, the addition of these descriptive variables would require two additional tables and would add further to the length of this manuscript. |
| Line 118: Please explain the differences between Model 1 and Model 2. Also more details on the regression modeling parameters would be welcome. Did you test for inter-correlation among the variables? | Linear regression. Variables used for simple linear regression were determined based on SEM concepts. Simple linear regression analyses were used to determine statistically significant variables. Variables not reaching significance (p < .05) were excluded from Model 1.  In the multiple regression analyses model 1 and 2 results are presented in Table 2. Model 1 (Adj. R2 = .072) revealed that the SEM without the inclusion of the interpersonal sphere of influence, which excluded the measures race problems, upset by race problems, and church membership was better in its ability to predict BMI than model 2 (Adj. R2 = .057).  Inter-correlation among variables was tested for and ranged from small to medium. As the multicollinearity between the predictor variables was not high, which could pose a problem, no variables were removed to build to build the model. |
| Line 135: Please provide additional details on the statistical tests used for Table 3. Also please describe all the Table Columns – Not exactly sure what SEM is, for example. Categorical and continuous variables are presented, which testes were applied? What tests of model validly were employed? | Table 3 was removed after further review of this manuscript. Table 3 provided information on the differences between Overweight/Obese and normal weight participants, which was not the focus of this manuscript. This manuscript aimed to explore relationships through regression analysis. |
| Line 140: It would be useful to see the total effect of the model’s variables ‘worked out’ - effect on BMI of differences in the predictor variables, based on the Beta parameters. | Model 1 indicated that household income was significantly predictive of BMI. Decreases in household income increased BMI (β = -.060). Additionally, lower levels of educational attainment and being married were also significant predictor of BMI. Married individuals had a greater BMI compared to individuals who indicated they were single (β = .086). Self-rated mental health and self-rated physical health were both predictive of BMI. The results indicated as self-rated mental health increased BMI increased (β = .088). Self-rated physical health decreases showed an increase in BMI (β = -.205). |
| Line 186: Please mention where in the study this variable/result is presented. | Access to parks, playgrounds, supermarkets, and medical clinics were shown to have an inverse relationship to BMI.  This information is now included in a new table 1 for Linear Regression |
| Lines 193-197: Please be specific about the results you are discussing ... Table 2 or Table 3? | Corresponding table numbers are included in each sentence that reports results. |
| Line 204: I am not clear on how the author is distinguishing between ‘associated’ and ‘not associated’ in this study. | However, the variable “Race problems” as not statistically significant in the linear regression and thus was not included in Model 1 Table 2. The addition of this variable in Model 2 still did not achieve significance Table 3. |
| Lines 235-238: Agreed. It seems that the representation of the ‘environment’ (both physical and sociocultural) in the NSAL-SAQ is fairly limited. | Reviewer did not make a suggestion or provide feedback on anything to fix. |
| Conclusion: Statistically significant variables with low explanatory power in the model does indeed seem to indicate a much more complex relationship among factors contributing to BMI. Is that the main takeaway? How should the SEM model be changed or improved? Can the author(s) suggest specific ideas for variables that can (better) represent sociocultural conditions? | Yes, this is the main take away. There are other factors unaccounted for within the model that need further explanation.  I would recommend a deep exploration of the construction of race (incorporating a racial identity scale), racism, and the intersections of class, gender, and sexuality. Additionally, exploring stress, coping, and resilience could add a further dimension. |
| Much of it includes what I would call “run-on paragraphs” that are difficult to follow and undercut the importance of the findings. The section should be organized to reflect the SEM model in the order of the analysis. Then there need to be subheadings that guide the reader to each of the main findings. | This was resolved via adding subheadings and reorganizing the manuscript. See details above. |
| what do the findings mean for those in practice or for future research | Future analysis should focus on exploring the relationships between SES, educational status, and obesity; playing special attention to the sociocultural structures that transect the spheres of influence. Additionally, researchers should work towards social restructuring through policies that promote an egalitarian society. Such a society would provide resources and access to the marginalized, allowing for improvements in health outcomes. It is important to remember that the construction of a social environment is based on educational opportunity, jobs, taxation, and housing; all which influences health behaviors indirectly |
| while the NSAL was a very important study because it reflected the great diversity of the Black population in the US, by the time this article would be published the data will be up to 10 years old. A lot has happened in between and I think this needs to be addressed and the journal editors need to consider this issue. | This issue address above.  The NSAL-SAQ is a unique dataset that provides rich data on the experiences of African Americans. To date there has not been another dataset collected with a large sample and extensive variables to allow for the exploration of the spheres of influence that inform health habits. Additionally, there is a dearth of literature on African American women and obesity. Most literature reviews on this topic range from 17-23 studies that specifically focus on African American women. So, it is important to disseminate findings on this topic.  While I would agree with you on the fact that a lot has happened over the last ten years, within the Black Community obesity remains a significant issue and the factors impacting this problem have not altered much. In the case of African Americans researchers have failed to fully elucidate the factors for reasons I mentioned above. |