

Reviewer #1

1. What is the gap of knowledge?

Previous research has investigated the factors of NAFLD, physical inactivity and depressive symptoms in bivariate analyses. However, currently, we could not find literature on the interactive relationships between physical inactivity and depressive symptoms in those with and without NAFLD. That is the gap our study hopes to fill. The last paragraph of the introduction section now states this as the purpose of the study.

2. What are the primary and secondary outcomes of the study?

This study is cross-sectional in nature. All of the variables are being measured simultaneously. Depressive symptoms and physical inactivity are the two variables that we are measuring, looking at the relationship between them in the presence and absence of NAFLD.

3. Abstract and discussion: A lot of grammar and spelling mistakes to be corrected and English editing to be revised.

We have edited the abstract and discussion for grammar and spelling.

4. Results: BDI score better to be mentioned as median not mean

Thank you for this suggestion. We checked with our statistician co-author and since the data are normally distributed, we think that the mean is the correct measurement of central tendency to include since we want to also provide standard deviation. Also, the main analyses used BDI score as a dichotomous (presence/absence of depression) variable.

5. Discussion: A very poor discussion, lacking correlation with what is already known about the study

We have revised and improved the discussion. We were not able to identify a study that has simultaneously investigated the relationship between depressive symptoms and physical inactivity in those with NAFLD.

6. Conclusion: should be the same in the abstract and discussion

We have made the conclusion in the abstract and in the discussion the same.

Reviewer #2

1. The study population was 1992-1996 and they reported a very high prevalence of 39.9% by the hepatic steatosis index, I just wonder such a high prevalence (even

higher than nowadays) may be impossible during 1992-1996. What is the potential reason for this? The certain population or the low specificity of the index?

Thank you for this comment, we have investigated the literature to look at prevalence. The current sample is from the United States. A recent paper reported the prevalence of NAFLD (estimated by ultrasound) in the United States to be about 34% (Murag S, Ahmed A, Kim D. Recent Epidemiology of Nonalcoholic Fatty Liver Disease. Gut Liver. 2021;15(2):206-216. doi:10.5009/gnl20127). Therefore, our sample prevalence is not far out of the range of current estimates of prevalence of NAFLD in the United States.

2. This index is widely used in large population, however, the present population is not so large and it is better to diagnosis the NAFLD by other direct method at least by the ultrasound.

We agree that ultrasound (or biopsy) are the preferred methods for diagnosis of NAFLD. These measurements are not available to us in this data set. We have included the use of the HSI as the diagnostic criteria as a limitation in the Discussion section.

3. What about the prevalence of NAFLD in female? Seemed not balanced.

There are 223 females in the sample. Of those, 112 were identified as having NAFLD or about 50% of the females. Since gender was not a factor that we focused on, we did not investigate this difference. It does appear that the females were more likely to be physically inactive, which explains part of the higher percentage of females with NAFLD. We would be willing to investigate this further, if desired, but it is a bit outside the scope of the current article.

4. It is easy to understand that the inactive people tend to get NAFLD, so the most important thing should to investigate is why NAFLD people tend to be depressive?

Thank you for this insightful comment. We have added information on the potential overlaps between NAFLD and depression in the Discussion section.

Reviewer #3

1. It has a retrospective nature and the study period is old. There is no objective method of assessment of physical activity and the Beck Depression Inventory I was used instead of the newer one. There are no biopsies and the complete exclusion of viral hepatitis is unclear (eg HCV was discovered in 1990). The most important problem is that there is no objective evidence of NASH.

Yes, we absolutely agree that all of these are limitations with the current study. These are inherent in the data itself and cannot be directly addressed. We have acknowledged all of these in the limitations section within the discussion.

2. Despite all these limitations, the study presents some important findings.

Thank you, we hope so!