Author's response to reviews

Title: Epidemiology of leisure - time physical activity, in relation to socio-demographic, lifestyle and psychological characteristics of men and women, in Greece; the ATTICA Study

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Author's response to reviews:

Replies to Reviewer #1 comments

General comment: This manuscript has good information. The Discussion is too long and should be shortened. The Conclusion should be expanded to be more of a summary.

Reply: We would like to thank very much the Reviewer for the attention given to our ms and the insightful comments made. We have shortened the Discussion section and we have expended the Conclusion section as suggested (pls see revised version).

Specific Comments:

Comment 1: Page 2, Paragraph 1, line 10 - Should designate gender of 40-49 year old participants
Reply 1: The gender of 40 - 49 year old participants is 48% men and 52% women, according to the stratification provided by the National Statistical Services (census 2001). We have added this information in the text (page 4, line 15-16).

Comment 2: Page 5, Paragraph 2, Line 3 - Should have some estimate of occupational activity i.e. level of intensity, sedentary, active, etc.
Reply 2: We have now provided the available information in the revised version (page 5, line 20 - 23). However, as stated before due to difficulties to ascertain the intensity of activities made we have not evaluated this information in the analysis.

Comment 3: Page 8, Paragraph 1, Line 7: Would be of value to know cholesterol levels <200 mg/dl
Reply 3: We have added this information in the results section (page 13, lines 4-5).

Comment 4: Page 8, Paragraph 2, Line 1-2 - Would be of value to briefly describe the ATTICA study.
Reply 4: We have now briefly introduced the design and aims of the ATTICA study in the Methods section (page 4, lines 2-9). We have also cited a reference of the basic paper of our Study (pls see Ref #11).

Comment 5: Page 12, Paragraph 3, Last line - Were other blood lipids evaluated?
Reply 5: HDL, LDL cholesterol and triglycerides, were also measured, but the information about their distribution as well as its relationships with PA levels has been presented elsewhere (Panagiotakos DB, et al. Atherosclerosis 2004).

Replies to Reviewer #2 comments

General comment: The main contribution of the present study to the existing knowledge seems to be that it represents a Greek population. Further, the study has an acceptable participation rate and the data collection and the paper generally gives a proper description of the material and method. However, the authors do not address a fundamental problem in their interpretation and discussion of the results- that the study is cross-sectional. Thus it is difficult to separate "cause" from effects. It also seems misleading to compare the present results with those from follow-up studies.

Reply: We would like to thank very much the Reviewer for the attention given to our ms and the insightful comments made.

We have made an effort to underline in the Discussion section that this is a cross sectional study that cannot provide causal relationships, but only state hypotheses for future research (page 13, line 18, page 18, lines 12 - 14). We have tried to state only associations, and not to imply causal relationships between PA and the investigated factors throughout the text and the Abstract.
We also understand the Reviewer’s concern about the comparisons made between our findings and results from prospective studies regarding depression. We have now stated that this might not be appropriate (page 17, line 3, page 17, lines 10-11), and we have moderated this information. Moreover, we have used the term "odds of reporting depressive symptoms" (page 17, line 5) instead of "the risk of developing".

Comment 1: Further, it is not very clear in the presentation what the authors assume are determinants and outcome. They both present the % of LPTA in relation to determinants (table 1 and text) and the % of determinants in relation to different categories of LTPA. If the focus is socio-demographic, behavioural and physiological "determinants" of LTPA, the first approach seems most appropriate.
Reply 1: In this cross-sectional study there are not determinants and outcome. The aim of this work was to evaluate the prevalence of LTPA and to investigate its association with various socio-demographic, lifestyle and behavioural characteristics of Greek adults (page 3, lines 17-20). All the associations reported are based on these hypotheses. For example, Table 2 presents the associations between SES indices and PA levels. There is no implication of determinants and outcome in this contingency Table. The same with Table 3 where we present the associations between lifestyle behaviours and PA levels. We understand the Reviewer’s concern since in a formal association Table the columns indicate the outcome and the rows the determinants. Thus, we could reverse the way we present the data in Tables 2 and 3, but we believe that this would confuse the reader since we only want to present the aforementioned associations.

Comment 2: Abstract: The text... behavioural distribution of LPTA... is not very clear.
Reply 2: We have now clarified the aims of this work in the Abstract and we have deleted the word "behavioural" (pls see Abstract, lines 1 - 4).

Comment 3: The conclusion goes much too far than the results from this cross-sectional study allow.
Reply 3: We have tried to moderate the messages presented in the Conclusion section (page 19, lines 23-32).

Comment 4: The power calculation is not sufficiently reported. The power not only depends on the number of cases (low LTPA) but also of the distribution of the determinants.
Reply 4: We have now stated that (page 4, lines 15-19) ... the number of the participants was determined by power analysis and chosen to evaluate two-sided differences between the normally distributed investigated parameters and physical activity groups greater than 10%, achieving statistical power > 0.80 at < 0.05 probability level (P-value).

Comment 5: Table 1 does not add much information.
Reply 5: Although the Reviewer is right, we would like to keep this Table in the ms, since it provides valuable epidemiological information about the frequency of PA within age groups. Thus a reader could compare our findings with the findings from another study within a specific age-group. If the Reviewer insists that we should delete it, pls let us know.

Comment 6: Discussion: See the first point above. Further, the section on study limitation is rather brief and not very informative. E.g. Misreporting of physical activity status due to self reports cannot entirely be excluded. Agree, but so what?
Reply 6: The Reviewer is right. We have now rephrased the Limitation section according to the suggestions made (pls see page 18, lines 8 - 20).