Author's response to reviews

Title: Is a ten-year trend (2000-2010) in prevalence of excessive weight among the Balearic Islands’ young and middle-aged women associated with socioeconomic factors?

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May 8, 2015

Dear Editor:

Please, find our manuscript entitled “Is a ten-year trend (2000-2010) in prevalence of excessive weight among the Balearic Islands’ young and middle-aged women associated with socioeconomic factors?” by Josep Ll. Coll, Maria del Mar Bibiloni, Rogelio Salas, Antoni Pons, and Josep A. Tur after we have considered all the views of the Academic Editor and those of the referees of BMC Public Health, as well as a detailed answer.

By submitting the manuscript to BMC Public Health, the authors understand that the material presented in this paper has not been published before neither it has been submitted for publication to another scientific journal or being considered for publication elsewhere. I attest that this work has been approved by all co-authors. The authors also understand that should the submitted material be accepted for publication in the journal, they will automatically transfer the copyright to the publisher.

I hope that the reviewing process finds the manuscript acceptable for publication in the journal.

Sincerely yours,

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Is a ten-year trend (2000-2010) in prevalence of excessive weight among the
Balearic Islands’ women associated with socioeconomic factors?
Josep Ll Coll, Maria del Mar Bibiloni, Rogelio Salas, Antoni Pons and Josep A Tur

Editor's comments:
A major methodological strength of this manuscript is the precise anthropological measurement of weight and height. Most other methodological issues need considerably more attention:
The participation rate (%) should be given in the Methods section and may be given in the abstract. The risk of selection bias as well as issues of representativity should be discussed.
According to the Editor, this information has been added to the manuscript in the Methods section and in the Abstract.
The SES and education variables, which are crucial in the study, should be exactly defined (as one of the reviewers point out).
According to the Editor, this information has been added to the manuscript in the Methods section.
The low risk of misclassification of BMI (given the anthropometric method) should be stressed as a strength in the Discussion section.
According to the Editor, this information has been added to the manuscript in the Strengths and Limitations section.
The fact that logistic regression model was used should be stated in the Abstract.
According to the Editor, this information has been added to the manuscript in the Abstract.
Were all variables in tables 2-4 included in the same model (which would be expected)? Was age adjusted for in the models (which should be done even within the age strata)? This is not clear.
According to the Editor, analyses were adjusted by age, as it has been reflected in Methods section (statistics) and Tables 2-4. Otherwise, the interaction between survey period and socioeconomic factors on excessive weight prevalence were assessed by binary logistic regression analyses applying the hierarchy principle (i.e. including in the models the survey period, the socioeconomic factor, and also survey socioeconomic factor) and adjusted only by age (continuous variable). This information has been also included in the suggested Strengths and Limitations section.
In the Discussion, the finding that there may have been an increase in BMI differences between employed and unemployed particularly should be stressed and discussed. This directly adheres to the fact that unemployment is high among the young in Spain, and the plausible effects of this situation.
According to the Editor, this information has been enclosed and discussed in the Discussion section as suggested.
As the reviewers state, there is much room for English language improvement,
and a professional English language examiner should make a full English language examination of the manuscript.

According to the Editor, a professional English native speaking examiner has reviewed the manuscript.

I think the authors should answer these questions and follow these points. I also think that they should follow the suggestions by the reviewers because their comment do not contradict but rather complement what I have stated above.

According to the Editor, referees’ suggestions have been also answered.

Referee 1:

Abstract
Line 22: However, the association with employment association only decreased significantly in the younger age group. Please correct and delete repeated word.
According to the Referee, this information has been added to the manuscript in the Abstract.

Background
Line 11: As the obesity pandemic has become more common, socioeconomic factors have changed across the time. This sentence is not too clear. I would be sure whether state obesity as a real pandemic at the moment.
According to the Referee, suggested changes have been done in the Background section.
Lines 22-23: The link between westernization or increasing affluence in Spain over the past decade and significant changes in diet or lifestyle, thereby impacting on health/weight should be highlighted through past reports of studies or surveys conducted in Balearic Islands or generally, in Spain.
According to the Referee, suggested changes have been done in the Background section.
Line 24: The socioeconomic factors studied should be specified in the aim.
According to the Referee, suggested changes have been done in the aim.

Methods:
The authors could have elaborated about the inclusion criteria for specific criteria taken into consideration while choosing nutritional surveys in their analysis – example, what were the methods of assessing dietary intake in chosen surveys? There is no mention of how authors defined SES, which is primordial in this study.
According to the Referee, further information has been added to the Methods section.

Results and Discussion
I do have some concerns of the way the English is written. For example, page 6 line 8: the female population in the Balearic Islands has experienced socioeconomic changes…
According to the referee, a professional English native speaking examiner has reviewed the manuscript.

The discussion could be strengthened as well with more scientific aspects.

According to the Referee, further information has been added to the Discussion section. We understand that scientific aspects are widely considered in the Discussion, mainly after the additional information has been added.

Conclusions:

Conclusion a bit poor. I wonder it would be wise to add the following as it pertains to the aim of the study: No significant increase in the prevalence of overweight/obesity was observed among middle-aged women and that educational level was the single socioeconomic variable associated with obesity in this target group.

According to the Referee, the suggested sentence has been added to the Conclusions section (and also in Abstract).

Referee 2:

An interesting paper in a field that is well examined for most countries. The investigation of excessive weight and associated socioeconomic factors is important to define risk groups and derive Public Health recommendations. To my knowledge outcomes about that issue are lacking for the Balearic Islands. Therefore, this paper could be a valuable contribution. However, there are many comments, which should be considered in a revision:

Major compulsory revisions:

# The chronic diseases you mentioned in line 6 are mainly associated to obesity (also see obesity paradox). In my opinion it would be altogether more interesting to make the analyzes separately for obesity and overweight and not for both (‘excessive weight’).

The referee is right and that was our first aim. However, we observed that it was better to analyze the change to BMI>25.

# Methods section: The sampling should be described in much more detail. Were men and women investigated in the two surveys? If yes, why were only women included in the study sample? Were subjects older than 55 years also investigated? What were the exact inclusion and exclusion criteria? Is the data collection of the first survey comparable to the second one? Were the same questionnaires used for collecting socioeconomic data? How was the educational level measured? As the highest school level reached? It is an limitation to join the low and medium educational level. I recommend to investigate the three educational levels separately. Subjects with low educational level more often suffer from obesity compared to those with high and medium educational level. Therefore it would be important to make differences between these groups.

According to the referee, further information on the study population, recruitment and approval, as well as on the sample selection and socioeconomic determinants has been added to the manuscript in Methods section as requested. Other data has been analyzed and will be used in other manuscripts.
The common analysis for interaction terms, using logistic regression models, consists in using dichotomous variables since the interaction term with polychotomous variables are difficult to interpret. In our study, the most significant association was obtained grouping low and medium educational level.

# I would strongly recommend to include the limitations of this study in the discussion part.

According to the referee, a new Strengths and Limitations section has been added in the Discussion part.

# Recommendations for further research and for Public Health should be integrated in the conclusion part of the paper.

According to the referee, these recommendations have been added in Conclusions.

Minor Essential Revisions:

# It should be mentioned in the title, that young and middle-aged women constitute the sample. This is an important information.

According to the referee, the title has been changed as suggested.

# Abstract: It should be included how the data were collected. Please indicate that measured data from Nutritional Surveys were analyzed. Where the data comparable? Furthermore, derived recommendations from your results should be included in the conclusions part.

According to the referee, all suggestions have been added in Abstract.

# page 4, line 27: …increased risk in non-Spanish women: the OR is very close to 0.

The referee is right, but these results are significant.

# page 8, origin: It would be interesting if you would shortly describe the origin of the migrants. The origin of the migrants might be decisive for obesity. Migrants from poorer countries might be rather have lower SES, and therefore more often suffering from stronger body weight.

The referee is right, we obtained this specific information from the last survey (2009-2010) but we did not from the oldest (1999-2000). So, we used all the information we have on this variable.

# the references list must be unified (ref. no 3, 18, 59)

According to the referee, these references have been unified.

Discretionary Revisions:

# page 5, line 31-32: the outcomes for the ORs are in the tables. It does not have to be that these are reproduced in the text.

According to the referee, these values have been deleted from the text.

# page 7, line 5: …increased prevalence of obesity in YOUNG AND MIDDLE-AGED women.

According to the referee, these words have been added.
# table 1: unify the font size ***, please include also the definition for overweight and obesity, describe the +- as standard deviation.
According to the referee, all the requested information has been added.
# tables 2,3,4: the column for the outcomes of BMI<25 n(%) can be saved.
According to the referee, these columns have been deleted.