Author’s response to reviews

Title: Long-term members' use of fitness centers: a qualitative study

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Our response to the comments from the reviewer are written below, point-by-point:

1. Comment from reviewer:

The lack of a theory driven approach should be listed as a limitation of the study in the results section.

We have added this under strengths and limitations in the discussion.

Changes in the document:

L387: We consider it as a strength that the authors, who all took part in the analysis, have different backgrounds and experiences. Having researchers with other backgrounds, using a theory-driven approach, or doing member checking by inviting the participants to comment on the results could have produced other understandings and explanations.

2. Comment from reviewer:

While the authors say them sought to get variation across participants and they state that they achieved the "intended variation" (line 124), they did not specify what was the intended variation. Did all of the added members experience all of the example services listed (e.g., personal training, etc.)?

Thank you for your feedback. It made us realize that previous explanation was not clear enough and that it could be misunderstood. We have clarified the explanation of the intended variation and the information about the added informants.
Changes in the document:

L 124: The inclusion criteria for this study required that each participant was older than 18 years and had been a paying member for more than two years continuously (to avoid the large proportion terminating their membership after the obligatory one-year contract) at one of the eight 3T fitness centers in Trondheim. We sought a sample with diversity in gender, age, frequency of visits, and types of services used, ranging from those included in the membership to services with extra cost such as hiring a personal trainer.

The first step in recruiting participants consisted of randomly selecting from the membership register 24 members who met the inclusion criteria. Each of these prospects received a letter or an email with information about the study and a request to participate. The message also stated that they would be contacted by phone after two weeks if they did not respond before that time. Of these 24, 16 responded positively and were interviewed. However, none of these participants were under the age of 27, nor had they used additional services with extra cost. Therefore, eight additional prospects were identified in the member register or by employees at the fitness center. They were contacted as described above, resulting in two more participants who were in their early 20s and three participants (age range 30–57 years) who had used services with extra cost (personal trainer, physiotherapist, and / or nutrition supervisor).

3. Comment from reviewer:

In response to a question about choice of participant number the authors responded that study size is determined differently in qualitative research and that information power and saturation are key elements used for determining study size. However, they did not say anything about how they chose their study population based on an estimate of information power and saturation.

Thank you for your feedback and for allowing us the opportunity to explain how we considered the number of informants for this study.

First, a brief explanation of the terms saturation and information power which are the terms often used in qualitative studies when considering the number of informants needed in the sample. Information power is a relative new concept , introduced to clarify or operationalize the term saturation, by shifting attention from numerical input to the contribution of new knowledge1.

Saturation: Saturation is reached when a thorough understanding of the phenomenon under study has been reached. This is considered an end point for the sampling process, and happens when the next informant does not elicit new themes, i.e. provides the same information as raised by the other informants.

Information power: The main idea behind information power is that the more information the informant holds that is relevant for the actual study, the lower number of informants is needed in the sample.
The final sample size in this study was assessed continuously during the research process. The last 6 informants interviewed did not contribute with new knowledge for the actual study. Thus, no further recruitment was done.

4. Comment from reviewer:

In several places the authors refer to the statement of their results about factors correlated with fitness center membership retention as answers to questions about the implications of their findings. I think the questions from both reviewers were attempting to elicit the authors hypotheses/thoughts about how their findings might specifically inform practices/interventions in fitness centers and in the population to promote longer term maintenance of physically active lifestyles.

Thank you for clarifying this. We have gone through the discussion and made minor corrections to make our hypothesis / thoughts more explicit.

5. Comment from reviewer:

And, they state in several responses that quantitative research is needed to understand their findings. However, they do not suggest specifically what quantitative research should be done, in whom, etc. to see if their findings are generalizable to a larger, more randomly selected, population of fitness center users.

Thank you for the knowledgeable comment. We have added some text specifying this.

Changes in the document:

L405: Further research is required to quantify the knowledge from this study. Doing a questionnaire-based survey with a randomly selected sample of fitness center users is recommended.

Minor corrections (mainly language corrections) are also changed in the manuscript.