Author's response to reviews

Title: Obese Older Adults Report High Satisfaction and Experiences with Care

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Author's response to reviews: see over
As the corresponding author, please find the revised version of our manuscript entitled ‘Obese Older Adults Report High Satisfaction and Experiences with Care’ for publication in the *BMC Health Services Research*.

Comments to reviewers:
The authors would like to thanks the reviews for their thoughtful comments. We feel that their comments have vastly improved the manuscript. We feel that we have addressed all of their comments, and look forward to hearing your final decision. We have detailed our responses below for your information.

**Reviewer 1: Major Compulsory Revisions**
1) In the current Introduction it is established that obese patients report bias in attitudes and treatment among health care workers which can result in differences in satisfaction with health care services. Furthermore, the authors point out that obese patients are dissatisfied with their doctors’ engagement in their weight issues, and that older obese patients seem to be more satisfied with their health care services than younger obese patients. Although the objective in the manuscript is clear, the relevance of this study in relation to patient satisfaction (PS) and patient experience (PE) could be clearer, and thus relevant for more readers. One way to make the contribution of the study clearer is to restructure the Introduction to assure the logical flow from “what do we already know?” to “where is the gap?” and “what was our aim?” Example:

Author comments: The introduction was rewritten included an update of the literature.

a. Obesity is a major health care challenge for people across ages today. Apply references to relevant international policy documents and published research. One contribution to fight the obese epidemic is that health care personnel speak about obese-related issues with their obese patients.

Author comments: The introduction was revised to cover all ages with regard to the primary objective, satisfaction and experiences with care. However, the focus of this manuscript is older adults. Lastly, the aim and scope of this study was clarified.

b. PS and PE are important indicators in health care services. Point out that it is not new in the PS /PE empirical literature that older adults are more satisfied or have better experiences with care than younger adults (1-3). Why is it interesting to look closer on older obese patients and their patient satisfaction and patient experiences?

Author comments: The introduction and discussion were revised to include information about satisfaction and experiences with care across all ages and how it varies across age groups and number of chronic conditions.

c. Concluded projects in obesity, PS, and PE literature and gaps in the literature and aim(s) of your study. As the authors point out, it may be difficult for health
care personnel to discuss obese-related issues with their patients. PS and PE may serve as tools to monitor how patients perceive discussions about their obese conditions with health care personnel. (?)

Author comments: This topic was introduced in the conclusions.

2) Please delete the sentence in the Introduction: “The women in this study...”. This sentence should be in the Discussion section.

Author comments: The sentence actually refers to the sentence above, not “our study”. Therefore, the sentence was revised to be more clear and referenced. “The authors concluded that these women were less likely to consult their physician for guidance with regard to their weight control.”

3) Please make clear in the method section in text in which tables the statistical analysis appear. This would make the manuscript easier to follow.

Author comments: They are introduced in the results, per usual. This will be clearer when the manuscript is laid out to print.

4) In regard to Table 2, it is ok to only include the non-adjusted characteristics of the respondents in this table. If there are any particular reasons for including the adjusted characteristics for the patients in Table 2, please explain why.

Author comments: Done.

5) In the Results Experience with care section it is stated that: "... obese individuals reported 12%-22% better experiences with care in three of four categories measured (Table 3)”. Where in Table 3 are these results? Can you please explain the results in Table 3 more thorough?

Author comments: This was added. The percentages referred to the odds ratios. This was clarified in the text. Revised text: “obese individuals were 12%-21% more likely (i.e. odds ratios of 1.12 to 1.21) to report better experiences with care (i.e. global rating score of 90 or more) in three of the four categories measured.”

6) I would welcome a more thorough description of the aim, conduct and results of the logistic regression analysis in the Methods and Result section. It would be preferable that the authors account for dependent and independent variables in this analysis. This information should also be included in the title in Table 3 so that the title reflects the content of the table. The authors should also make clear what the prior hypothesis for conducting the regression analysis was and whether the results complied with the hypothesis.

Author comments: Revised to read: “This allowed us to estimate the independent impact of each BMI category on experience with care.” and “Composite ratings on
experiences with care were estimated following adjustments for non-response bias and various patient demographic, socioeconomic and health status differences as detailed in the methods section.”

Revise abstract and aim at end of introduction.
Author comments: The aim was revised to read: “Therefore, in the present study, we attempt to estimate the independent impact of obesity on satisfaction and experiences with care in older adults. To estimate this impact, we utilized multivariate regression modeling to adjust for demographic, socioeconomic and health status differences among the BMI categories.” The resulted were revised, for example, to read: “Composite ratings on experiences with care were estimated following adjustments for survey non-response bias and various patient demographic, socioeconomic and health status differences as detailed in the methods section. This allowed us to estimate the independent impact of each BMI category on experience with care.”

7) Furthermore, in the Methods in the Statistical Analysis section in text, it is referred to the CAHPS question in Table 4 "In the last 6 months, did your personal doctor….?". What about the other question in Table 4? Please explain why the other question is included in the table as well. In the Results Experience with care section (in text the authors) refer to the two questions in Table 4. However, the questions in the text are the same. Please correct the text to the two questions in Table 4: management of health care condition and frequency of visits to personal doctor.

Author comments: The right question was added. Both questions are relevant to obesity and should have been included in the methods as well as the table. This methods were revised. A more detailed discussion of this data was provided in the results and conclusions.

8) In the discussion, the authors argue that older obese adults are more satisfied with care than younger obese adults are. As mentioned earlier this is a common finding in PS and PE studies, and the authors could include references to other more general PS and PE studies also illustrating the positive association between age and higher level of PS/PE (1-3).

Author comments: Several references were added. While we did not add the suggested references, we added ones cited in those provided references. The following text was added: “The interpretation (i.e. ratings of satisfaction) of clinical encounters varies with such factors as age and health status indicating that age is an important factor in determining satisfaction, with older adults being more satisfied [1, 2]. In addition, patients with chronic conditions often have increased ratings of satisfaction, at least in part, due to the fact that increased quality of care leads to more intensive care [3].”

Suggested Reviewer References:


In text, it is argued that older obese adults are more satisfied because they are more easily pleased than younger patients are. However, why are they more easily pleased? Without providing the reader with the answer to this question, the explanation seems redundant.

Author comments: This sentence was removed.

9) Furthermore, the authors states the importance of taking action against the obese epidemic. The authors interpret the relationship between age and level of PS/PE as greater leeway for health care personnel to speak with older obese patients regarding their obese-related issues. It still then remains to find out how to do this. Does the authors have any thoughts on how to contribute to this?

10) The focus is here on older obese, but what about younger obese patients? It may seem harder to approach the younger obese group regarding their obese-related issues, since the level of PS and PE is lower in the younger obese group. Nevertheless, the authors should remark in text that it is important that health care personnel approach the younger obese group although it may seem more challenging.

Author comments: The following was added to the discussion: “Satisfaction may serve as a valuable benchmark to measure the impact of such conversations on the patient across all ages, as attempting to evaluate interpersonal cues are easily misinterpreted.” The reference to Bjertnaes et al., Coulter et al. and other references, were added to the introduction.


Reviewer 2: Major compulsory revisions
1. Rating scores have been dichotomised into \( \geq 90 \) and \(<90\) (out of 100). This has important implications for the analysis and findings but the rationale given is too limited: it would be useful to explain and justify the choice of 90 as a threshold, and to consider the implications of this. One important consequence of using dichotomised variables for the main outcome measures is that the scale of differences between patients in different weight groups cannot be quantified.

Author comments: The choice to dichotomize the outcome data was based on the distribution of the data and as reported elsewhere using CAHPS data. Furthermore, it allows us to demonstrate the outcomes as odds ratios from a logistic regression, making the results easier to interpret. Also, the Center for Medicare and Medicaid Services (CMS) reports their results this way and as reported elsewhere. The following reference was added to the manuscript.


2. The methods section would benefit from more detail on the approach taken to non-response adjustment. The adjustment appears to have normalised to the original sample size. This can artificially reduce variance and cause false positives unless appropriately handled. The handling of this is not described.

Author comments: The methods were revised as follows: “…the results were adjusted for survey non-response bias to increase the generalizability using the entire survey population (about 50,000 surveys were mailed out).”

3. Statistical reporting of results is unclear in places (see 3.1 & 3.2, below):

3.1. Results from the multiple logistic regression are reported as follows: “obese individuals reported 8%-22% higher satisfaction in each of the categories measured”. This is based on a range of odds ratios for the obese group of \( OR=1.086 \) to \( OR=1.217 \). Notwithstanding rounding errors re: both numbers, but the odds ratio do not quantify satisfaction. The more appropriate interpretation is that an odds ratio of 1.217 reflects people in the obese group reporting a global satisfaction rating of \( \geq 90 \) 21.7% more often than those in the normal weight group.

Author comments: The tables were rounded and corrected throughout the manuscript. The text was revised to more clearly state the actual meaning of the numbers.

3.2. In reporting the results from table 4, differences are reported in the following format: “obese individuals were almost 10% more likely to report their doctor prescribed avoiding a particular food”, etc. In this example, the difference is 9.8 percentage points – 29.1% of obsess vs 19.3% of normal weight respondents were told to avoid particular foods. In other words, obese individuals were more than 50% more likely to be given this advice – reporting the absolute percentage point difference as a difference in relative likelihood has the effect of
underreporting the difference by a factor of five.

Author comments: The table and referring text was revised as recommended.

4. The introduction section of the paper is very short and, for the most part, is narrowly focused on studies looking at relationships between obesity and patient satisfaction. The discussion section expands this to cover issues related to quality of care, service utilisation, and health outcomes. As this goes beyond the objective set out initially, the paper would be strengthened by moving some of this content to the introduction to better set the scene and establish the aims and potential implications of the work.

Author comments: The introduction was revised.

5. BMI categories used in the study are based on self-reported data, but the accuracy of this is not considered. This is important because it is well known that average people report themselves to be taller and lighter than they are – leading to lower BMI scores and significant underestimates of obesity prevalence (eg Spencer et al, 2002). Moreover, some studies have shown an association with age, with older people more likely to overestimate height and underestimate weight (eg Kuczmarski et al, 2001; Elgar & Stewart, 2008). Consideration should be given to what impact this might have on the analysis.

Author comments: the potential implications were discussed.

Minor essential revisions
Self-reported height and weight might underestimate BMI, however, it is sufficient to bucket individuals into the correct BMI category.

Author comments: The text was revised to read: “The limitations of our study include the reliance upon self-reported height and weight data, which may slightly underestimate BMI. That said, the use of BMI is sufficiently accurate to categorize individuals into the appropriate weight categories.”

6. Abstract (3rd sentence), introduction (last sentence), and discussion (1st sentence): “objective of this study was to examine the relationship between weight, as a function of body mass index (BMI), on patient satisfaction and experiences with care”. None of the analysis looks directly at weight or height, only at BMI categories – so it would be more accurate to say that the study looked at ‘the relationship between obesity, categorised by BMI, and patient satisfaction and experiences of care’.

Author comments: This was revised. We focused on obesity (determined by BMI), but included the other BMI categories for comparison.

7. Some sections could be clearer for international readers. For example, the first
line of the introduction cites obesity prevalence rates – but does not state that these are for the US only. This point was address in the introduction.

8. Second sentence of introduction: there is a missing 'and' after 'chronic conditions'. The word ‘independent’ at the end of the sentence should be deleted, too.

Author comments: Done.

9. Introduction, second para. “The women in this study indicated that they were less likely to CONSIDER their physician” – should the word in caps be ‘consult’?

Author comments: This sentence was revised.


11. Table 3 – footnote needs rewording as doesn’t currently make sense (“Results of the main the outcome measures…” – deleting the second ‘the’ should fix it).

Author comments: Revised.

12. p12: “…this population was 21% obese compared to the 37% that would be expected based on national statistics”. The 37% quoted is for men aged over 60; the 21% is men and women aged over 65. It doesn’t detract from the finding that the population reports lower than expected obesity, but the 37% is definitely an overestimate when compared against the population in this study. Also – see point 5, above, re: bias from self-reporting as an explanatory factor in differences in the observed vs expected obesity rate.

Author comments: The reference was updated to include adult men and women 65+. Agreed, clinical measure is always greater than self-reported, the text was revised accordingly.

13. p13, sixth line: “contributed” should be “contribute”

Author comments: Corrected.

14. First line of page 5 – survey used is normally referred to as the Picker Institute Adult Inpatient Survey.

Author comments: Done.

Discretionary revisions
15. p5 and throughout – inconsistent hyphenation of ‘fee-for-service’
Author comments: Revised.

16. p12: “our conclusion that many of the sicker obese, [sic] adults are no longer living at this age is supported by the fact that the mean age of the obesity category was 75 years versus 79 in the normal BMI group”. An alternative hypothesis would be that individuals are likely to lose weight as they age, reducing the prevalence of obesity in older groups.

Author comments: While malnutrition is an important issue in older adults, most individuals do not change BMI categories very much over time unless there is an underlying chronic condition.

17. p13 second para raises an interesting point about stigma and notes that “this stigmatism is especially true of younger, obese adults” (which probably needs a referencing). But this isn’t fully elaborated as a potential mechanism for an age/obesity interaction: it could be more clearly stated that experiences of stigma and/or reduced access to healthcare could cause younger obese people to report poorer care.

Author comments: This was deleted as a sufficient reference was not found.

Refs

Reviewer 3: Major compulsory revision
The introduction could benefit from a clearer introduction to the article’s research aims and core research questions including why older obese patients are of special interest and what the present article investigates over previously published results (cf. Peytremann-Bridevaux et al.), i.e. explain originality of the article.

Author comments: The end of the introduction was revised to read: “While it has been reported elsewhere that older obese adults report increase satisfaction using a subset analysis (Peytremann-Bridevaux et al.), the objective of this study was to examine the relationship that weight, as a function of body mass index (BMI), has on patient satisfaction and experiences with care solely in adults 65 years of age and older.”
Figure 1: this should be tested for significance between groups

Author comments: Done.

Table 4: these results should be tested for significance between groups
Discussion should include limitations of the study.

Author comments: Done.

Minor essential revision
- Table 3: indicate the reference group; typo in footnote a
- Please refer to Table 3 here: “Lastly, we descriptively analyzed results from the standard CAHPS survey question “In the last 6…” or give the answer options as otherwise this section is hard to follow. Also introduce which answer options you consider as obesity-related.

Author comments: Table 4. The question was fixed. We consider both questions in Table 4 to be obesity related, and thus, were included. The discussion was significantly elaborated to detail these facts.

- “Furthermore, older obese adults are less influenced by social and psychological stressors, which may contribute to greater satisfaction in this population.”: this should include a reference

Author comments: Sentence was deleted per other reviewer.