Reviewer's report

Title: Selling health and happiness How influencers communicate on Instagram about dieting and exercise: mixed methods research

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Reviewer: Anna Danielewicz

Reviewer's report:

The article written by Ms Katharina Pilgrim and Prof. Sabine Bohnet-Joschko introduces an original topic of influencers role in creating lifestyle behaviours and community awareness of health-related problems. Focus on the social network as an object of research is justified by its increasing use worldwide. This issue affects especially children and adolescents who are the largest and still increasing group of social media recipients. As authors stated common trust and positive attitude of this group to "influencers" and certainly promoted by them behaviour models, may significantly impact their own health beliefs and choices. In long-term perspective, it seems to be a key indicator of future disease burden. This is a point to identify potential positive and negative effects of influencer activities.

Furthermore, a better insight in the understanding of this phenomena might be useful in creating future health promoting campaigns targeted for "Generation Z". Instagram was successfully studied, e.g. in context of public awareness of HPV and Zika viruses, anorexia nervosa or depression. Joint approach aiming to analyse both body shape, physical activity and dieting was not previously studied. However, it seems to be a reasonable approach as all these fields are closely related to each other. Moreover, so-called " health influencers" usually address both the topic of nutrition and physical activity. The problem chosen by authors is therefore novel and highly relevant to public health.

Comments and questions:

Introduction: Authors provide detailed background in the studied topic with a particular explanation for using German Instagram users as a population for analysis. However, in my opinion, the introduction should not be structured.

Methods: Use of mixed method design is relevant to address stated research questions. However, I have several questions:

* Does "influence" range of selected accounts reaches the targeted population?
* What was the reason for selecting 50 accounts? How the change of accounts number could influence the results? Have considered any sample size justification?
* Does selection of newest posts might be a source of bias (caused, e.g. time of year) here? Could a random selection of posts be more suitable?
* Does the selection of 20 posts is enough to characterise the content shared with the community by influencer?
* You mention quantitative analysis of 38 items - Could you list them? 
What was the reason for selecting the mentioned keywords? Were they searched as "hashtags" or free-text terms? 
Description of methods includes reseazoning for their selection as well as strengths and limitation which should be preferably done in the discussion, not in the method section. The section is hard for the reader to understand.

Results:
Use of mixed method is an advantage as long as qualitative and quantitative parts as results of both sections are treated equally. In my opinion, the description of the quantitative part is highly limited here. You have mentioned of calculating frequencies, correlation coefficients etc. However, they are not described in any tables (only mentioned in some places in Result section) neither discussed in the manuscript. Qualitative part provides an in-deep analysis of studied data.

Discussion:
The studied topic is novel; However, still, there are some previous articles which handled similar research topic. Authors even in case of limited literature should try to describe their findings in the context of the previous findings. Furthermore, results should be critically discussed in the context of possible methodology limitation. In general, this section should be improved.

Language and style:
There are some grammatical and punctuation mistakes. The used language is hard to understand in many places.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics
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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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None

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