

## PEER REVIEW HISTORY

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### ARTICLE DETAILS

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| <b>TITLE (PROVISIONAL)</b> | Drivers of Healthy Eating in a Workplace in Nepal: A Qualitative Study                                                    |
| <b>AUTHORS</b>             | Tamrakar, Dipesh; Shrestha, Archana; Rai, Anjana; Karmacharya, Biraj; Malik, Vasanti; Mattei, Josiemer; Spiegelman, Donna |

### VERSION 1 - REVIEW

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| <b>REVIEWER</b>        | Thomas Kottke<br>HealthPartners, USA |
| <b>REVIEW RETURNED</b> | 22-Jun-2019                          |

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| <b>GENERAL COMMENTS</b> | This manuscript reports the qualitative analysis of focus groups and interviews in a Nepalese hospital that were conducted in an effort to determine the barriers and promoters of healthy eating. While the results are much as might be expected, the study is a nice example of how focus groups and qualitative methods can be used to define the factors that a client group considers important. While the English is quite good, the text would benefit from very careful review by one of the authors whose native language is English. |
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| <b>REVIEWER</b>        | Christina Zorbas<br>Deakin University |
| <b>REVIEW RETURNED</b> | 24-Aug-2019                           |

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| <b>GENERAL COMMENTS</b> | Thank you for the opportunity to review this manuscript on the perceptions of healthy eating in a hospital workplace in Nepal. The study provides insights into this issue from a novel, low-income setting, explores the perspectives of a diverse group of participants and provides rather informative results. However, there are a number of areas where the manuscript could be enhanced:<br>Overall:<br>• Please proof read the manuscript for grammatical errors including the use of plural language. Additionally, the use of the words price and cost are not necessarily interchangeable whereby cost can cover time costs and price costs (please try to be consistent).<br>Introduction/discussion: |
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|  | <ul style="list-style-type: none"> <li>• Additional description of the Nepalese context is required (i.e. low income setting, food environment and food access issues, access to healthcare issues, etc) as an international audience will not be familiar with this. This could also strengthen the novelty of the study in two ways: (i) by addressing literature gaps on perceptions of healthy eating in low income settings and (ii) comparing the findings in low income settings to those in high income countries (see a review by Zorbas C et al, Factors perceived to influence healthy eating, Nutrition Reviews, 2018). These ideas could also be addressed to strengthen the discussion (i.e. are the barriers and facilitators that the authors have described likely to be universal or are there specific factors in the workplace or low income settings?).</li> <li>• The broader factors that influence healthy eating (e.g. social determinants) are not identified. These determinants should be acknowledged or discussed in the limitations, especially since the authors mention that participants reported enjoying fried foods and this will be difficult to change – how can these social norms be challenged and addressed going forward?</li> <li>• More broadly, the implications for research and practice should be clarified in the discussion rather than largely reemphasising the key findings.</li> </ul> <p>Methods:</p> <ul style="list-style-type: none"> <li>• The inclusion of the word ‘provision’ in the objective to ‘investigate the perceptions, provision, enablers and barriers to employee’s healthy eating’ is not grammatically correct – should it be to ‘investigate the perceptions, enablers and barriers to employee’s healthy eating and the types of foods provided in the hospital setting’?</li> <li>• Please describe the hospital context further – how many beds/patients does it served? Is it the biggest hospital in Nepal? What sort of scale does this hospital operate at?</li> <li>• Was a theoretical approach used to guide the focus group and interview questions? E.g. questions asked to align with the socio-ecological model of health. It is important to clarify the rationale for asking the questions that were asked and this may further indicate why social determinants were not identified.</li> <li>• It is also important to add a few sentences on reflexivity – what perspectives and roles do the researchers have in the hospital or food service setting that influences their orientation to this research?</li> </ul> |
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### VERSION 1 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

Reviewer: 1

Please leave your comments for the authors below

This manuscript reports the qualitative analysis of focus groups and interviews in a Nepalese hospital that were conducted in an effort to determine the barriers and promoters of healthy eating. While the results are much as might be expected, the study is a nice example of how focus groups and qualitative methods can be used to define the factors that a client group considers important. While the English is quite good, the text would benefit from very careful review by one of the authors whose native language is English.

A native English speaker reviewed the manuscript. Thank you

Reviewer: 2

Please leave your comments for the authors below

Thank you for the opportunity to review this manuscript on the perceptions of healthy eating in a hospital workplace in Nepal. The study provides insights into this issue from a novel, low-income setting, explores the perspectives of a diverse group of participants and provides rather informative results. However, there are a number of areas where the manuscript could be enhanced:

Overall:

Please proof read the manuscript for grammatical errors including the use of plural language. Additionally, the use of the words price and cost are not necessarily interchangeable whereby cost can cover time costs and price costs (please try to be consistent).

We have proof read the manuscript. We used the word 'price' consistently.

Introduction/discussion:

- Additional description of the Nepalese context is required (i.e. low income setting, food environment and food access issues, access to healthcare issues, etc) as an international audience will not be familiar with this. This could also strengthen the novelty of the study in two ways: (i) by addressing literature gaps on perceptions of healthy eating in low income settings and (ii) comparing the findings in low income settings to those in high income countries (see a review by Zorbas C et al, Factors perceived to influence healthy eating, Nutrition Reviews, 2018). These ideas could also be addressed to strengthen the discussion (i.e. are the barriers and facilitators that the authors have described likely to be universal or are there specific factors in the workplace or low income settings?).

We agree with the reviewer. We have added the context in Introduction section as follows:

Nepal is one of the least developed countries in the world, which is experiencing the epidemiological transition from infectious disease to chronic diseases.<sup>5</sup> Ischemic heart disease, chronic obstructed pulmonary disease and stroke are the top three causes of death in 2017. A fourth of the adult Nepalese population are overweight, 4% have diabetes, and 26% have hypertension.<sup>6</sup> An unhealthy diet might have contributed to the high prevalence of these diseases and risk factors.<sup>7 8</sup> Unhealthy diet is the third top contributor to the disability adjusted life years in Nepal. In Nepal, the typical dietary pattern with refined grains, meat and alcohol was associated with a higher prevalence of overweight and obesity. Deep fried foods were associated with hypertension; the cereal and vegetable pattern was inversely associated with diabetes prevalence.

- The broader factors that influence healthy eating (e.g. social determinants) are not identified. These determinants should be acknowledged or discussed in the limitations, especially since the authors mention that participants reported enjoying fried foods and this will be difficult to change – how can these social norms be challenged and addressed going forward?

While we agree that the social determinants are important, our goal was to explore the environmental level determinants of healthy eating in cafeteria. This study was conducted as a formative study to design an environmental level intervention. The social determinants that influence healthy eating was not explored in detail, and we acknowledge this as our limitation. We have added it in discussion section.

- More broadly, the implications for research and practice should be clarified in the discussion rather than largely re-emphasising the key findings.

We have added a section to clarify the implication of research and practice in discussion section as follows:

The results of this study are valuable in designing appropriate cafeteria-based interventions to sustained healthy eating behaviors in worksites in Nepal. Availability of healthy food options at an affordable price, involvement of stakeholders at all levels of decision making, and increasing awareness on healthy eating would be crucial part of a worksite based environmental interventions to improve diet of employees. The interventions focusing on healthful, less expensive food preparation, or selection of more convenient yet inexpensive healthful food, may help overcome the most common barriers in this population.

Methods:

- The inclusion of the word 'provision' in the objective to 'investigate the perceptions, provision, enablers and barriers to employee's healthy eating' is not grammatically correct – should it be to 'investigate the perceptions, enablers and barriers to employee's healthy eating and the types of foods provided in the hospital setting'?

We agree with the reviewer. We have revised the objective as " to investigate the perceptions, enablers and barriers to employee's healthy eating in a hospital site in central Nepal."

- Please describe the hospital context further – how many beds/patients does it served? Is it the biggest hospital in Nepal? What sort of scale does this hospital operate at?

We have added the further context of the hospital in 'study setting' of methods section as follows:

It is 400 bedded tertiary hospital that annually serves about 2.2 million people within its catchment area. It is one of the largest tertiary level hospitals in central Nepal.

- Was a theoretical approach used to guide the focus group and interview questions? E.g. questions asked to align with the socio-ecological model of health. It is important to clarify the rationale for asking the questions that were asked and this may further indicate why social determinants were not identified.

We used socioecological model of health promotion, emphasizing on institutional and organizational factors, to guide the focus group and interviews. We have added the information in methods section

- It is also important to add a few sentences on reflexivity – what perspectives and roles do the researchers have in the hospital or food service setting that influences their orientation to this research?

The researchers from Nepal (DT, AS, BMK) are employees of the hospital and are regular customers of the cafeteria. We have added this information in the methods section.

### VERSION 2 – REVIEW

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| <b>REVIEWER</b>        | Christina Zorbas<br>Deakin University, Australia |
| <b>REVIEW RETURNED</b> | 19-Nov-2019                                      |

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| <b>GENERAL COMMENTS</b> | <p>Thank you for the opportunity to review a revised version of this manuscript which explores the factors influencing healthy eating in a sample of hospital employees in Nepal. While the study may be important to the local hospital context and the authors have made some effort to address the previous comments, this study seems to lack comprehensiveness in exploring the identified issue (i.e. factors that influence healthy eating). In particular, my major concerns regarding insufficient exploration of the broader contextual influences on healthy eating (including the food supply, social and commercial determinants of health such as income and business contracts) remain completely silenced in the results and discussion. Many of the cited studies were published prior to 2010. Since then, our understanding of the broader environmental, contextual, social and commercial determinants of healthy eating has been advanced, and therefore should have been explored. Given there have been many studies looking at this topic, it would be expected that to meet publication standards, new studies on barriers and facilitators to healthy eating should attempt to provide comprehensive and new information. The theoretical gap that is articulated in the introduction is also not convincing in light of all the existing evidence that is described.</p> |
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### VERSION 2 – AUTHOR RESPONSE

Reviewer(s)' Comments to Author:

While the study may be important to the local hospital context and the authors have made some effort to address the previous comments, this study seems to lack comprehensiveness in exploring the identified issue (i.e. factors that influence healthy eating). In particular, my major concerns regarding insufficient exploration of the broader contextual influences on healthy eating (including the food supply, social and commercial determinants of health such as income and business contracts) remain completely silenced in the results and discussion.

Many of the cited studies were published prior to 2010. Since then, our understanding of the broader environmental, contextual, social and commercial determinants of healthy eating has been advanced, and therefore should have been explored. Given there have been many studies looking at this topic, it would be expected that to meet publication standards, new studies on barriers and facilitators to

healthy eating should attempt to provide comprehensive and new information. The theoretical gap that is articulated in the introduction is also not convincing in light of all the existing evidence that is described.

We agree with the reviewer that our study is context specific to a single worksite in Nepal. We have highlighted this limitation in our study. We also agree that the recent publication can add advanced understanding in the discussion section. Therefore, we have revised our results and discussion section. In the result section, we have re-structured the findings to highlight environmental, individual, and commercial contributing to healthy eating within worksite setting. In the discussion section, we have discussed our findings in the context of newer publications. This has helped improve our discussion. In the introduction section, we have added more theoretical gap. We would like to request the reviewer and editor to acknowledge that our study's objective is to explore drivers of healthy eating in a worksite setting, with an intention to design a worksite-based intervention to improve eating of employees and subsequently employee health.