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Title: Food Insecurity during COVID-19 in a Canadian academic pediatric hospital; a cross-sectional survey
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Reviewer 1: Dr. Emilie Beaulieu
Institution: University of British Columbia
General comments (author response in bold)

Hospital-based food insecurity is a very intriguing and rarely explored topic! This is a great opportunity to provide evidence and inform practical changes in pediatric hospitals. The objectives of this study are well stated. However, I feel like there were some missed opportunities in terms of analysis that could have provided additional evidence and stronger conclusions. I also wish the discussion section could be developed to discuss practical implications to the findings, including how the researchers expect to improve hospital-based food insecurity (involve social workers with families from low socioeconomic status to provide economic support like food coupons, prepaid parking coupons, etc.?)
We thank the reviewer for the interest in our topic and acknowledging the novelty of exploring hospital-based food insecurity. We also would like to thank her for the thoughtful feedback to our manuscript.

Here are some of my suggestions to improve the manuscript.

Introduction:
2) p.3 Line 18-21: Can you provide a few examples of hospital-based food insecurity to provide a better idea to the reader of what is meant by this quite new concept. Also, you may want to change the word 'adequate food' for healthy, it might help to understand what hospital-based food insecurity is. Also, Makelarski et al described caregiver hospital-based food insecurity as ' defined as not getting enough to eat during a child's hospitalization which seemed easier to understand from my point of view…
Thank you have also have added the wording "not getting enough to eat" used by used by Makelarski et al to clarify the concept of hospital-based food insecurity (page 3, Line 12).

Methods
3) p.3 Line 48-50: Can you provide the province and country of the hospital?
We have added province and country in the study population section (page 3, Line 34).

4) p.3 Line 50: Was there a minimal hospitalization length of stay to contact families? Would a patient hospitalized for one night only be less likely to have been recruited? Parental distress and the financial burden of an overnight stay vs two weeks long hospitalization may lead to very different results. I know you used this variable as a potential confounder, but in table 3, you present the duration of admission with a mean and SD as if this variable follows a normal distribution, but I would think that there are more 1-2 nights hospitalization than more than 2 night? Would it be worth presenting the median, 25th, and 75th percentile? Or min and max? did you delete some outliers? Etc. Would there be a difference in your model if you used it as a categorical variable?
The mean admission duration was very similar among food secure and food non-secure families. See details below. We did not exclude outliers from our analysis.

		Complete Study population N=430	Food Insecure n=143	Food Secure n=243
Duration of admission in days	**Mean (SD)**	**5.4 (5.7)**	**5.5 (5.6)**	**5.4 (6.0)**
	Min, Max	**0, 40**	**0, 39**	**0, 40**
	25th percentile	**2**	**2**	**2**
	75th percentile	**6**	**7**	**6**

We have updated Table 3 with these details.
We also added testing for interaction between food insecurity and parental distress and the child's duration of admission. Please see our answer to editor nr 29.

5) p.3 Line 56: I think the second 'by' should be deleted.
We removed the second "by".

6) P.4 line 7: Regarding the HFSSM, I understand that there are child and adult-specific questions. However, I was a bit confused by Table 2. If the parent answer 1 affirmative answer that is a child item and 1 positive answer for the adult items then they would be considered household food insecure but would they be considered as 'marginal' (e.g.1 each) or 'moderate' (e.g. because they have 2 items in total)? I reviewed quickly ref 16 that was provided for this questionnaire but did not see that they would divide the results like that. On p.34 of this reference, my understanding is that if it is a household with children (which is always the case for this study) you would report the results on 18? Table 2 doesn't provide the overall answers (on 18) and the way I understand it, I cannot sum the adult item column and child item columns…If it is ok to present results on 10 for adults and 8 for children-related items, could you consider modifying the way you describe this variable on p.4 because I was expecting a result out of 18 points. Also, I think it is interesting to see in Table 2 that overall there is a bigger proportion of caregiver-related food insecurity than child-related insecurity, but I wonder what is the added value of presenting the adult and child separate values in a table. There are no child-specific items for the hospital-based food items, so I feel like it looks a bit weird to have all these NA in the table…I would strongly suggest redesigning the way you present this data.
Our food security classification was based on the scoring system of the Canadian Community Health Survey and used in all national reports of PROOF (Food Insecurity Policy Research, reference). See the report "Household Food Insecurity in Canada" 2017-2019; reference 1. We have changed Table 2 in order to make the scoring of the HFSSM more clear.
We have also added the scoring as a footnote to this Table.
According to this scoring method; If a parent has 1 affirmative item on parent questions and 1 affirmative item on the child questions they would considered to be "marginal" food insecure in both the Adult and Child category.

7) p.4 line 14: Would it be possible to add a reference to justify your choice of the three questions for the hospital-based food insecurity items? Were there similar questions to what was used by ref 14 and 15 mentioned in the introduction?

There is currently no validated screening tool available to measure hospital-based food insecurity. Therefore, we adapted three questions from the HFSSM survey to identify hospital-based food insecurity. For example if the HFSSM question was "I/we could not afford balanced meals in the last 12 months" we adapted the question to " I/ we could not afford balanced meals during my child's hospital admission". The specific three questions were chosen to give an impression about the severity of the hospital-based food insecurity. Previous research by Lee et al also adapted the HFSSM to inquire about hospital-based food insecurity. We have updated our method section with these details page 4, line 7.

Analysis

8) p.5 line 12: Did you consider using statistical analysis to compare secure and insecure household related answers?

We have provided the specific covariate effects between the food secure and insecure households in an Appendix.

9) p. 5 line 15: Can you specify how the parental distress variable is used (continuous) It is written in your table results but would be helpful to write it in the analysis section. Because you wrote in the parental distress paragraph' Studies have identified a cut-off score of 4 to 5 to detect significant parental distress.', as was wondering if you would decide to use the parental distress as a categorical variable.

Parental distress was used as a continuous score because we have used it in parents of hospitalized children; in this population the parental distress score is generally high. Also, we have no previous data in our population about parental distress to decide on "cut-off" points.

We have clarified in our method section that parental distress was used a continuous score; page 5 Line 28.

10) Also, it is interesting to know if there is a relationship between the 'level' of food insecurity (on score form 0-10 or 0-8) and parental distress (using a linear regression model). But I would have liked to know if there was a statistically significant difference in parental distress between secure and insecure household and hospital-based…you compare the result 'descriptively', but why not use a logistic regression to compare and adjust for confounders?

We thank the reviewer for this suggestion. However, as described above – parental stress in hospitalized children is generally high. We did not think it was appropriate to use it as a dichotomous outcome variable ("stress" vs "no-stress") in our population and we were more interested to see if the level of stress would increase if families reported food insecurity.

11) p.5 line 17: Can you specify if the model was adjusted for all potential confounders.

We have made it more clear that the model was adjusted for all potential confounders (page 5, line 9).

Results

12) p.6 line 36-37: The way the numbers and percentages are presented here is confusing. 775 is not 91% of 1340. Please refer to your abstract where it is presented appropriately.

We have changed Figure 1 and the way the numbers and percentage are presented.

1340 children were admitted to our general pediatric ward; 132 (9.9%) children were readmitted and not approached for our study. We were able to reach 851 caregivers by telephone and they were asked to participate in our study. 775 (91%) caregivers gave consent to participate and 430 (51%) completed at least one survey.

13) p.7 line 40-42: I was not convinced that a parental distress score of 7.3 vs 6.2 was significantly different…also, the clinical difference of these results should be discussed in the discussion section…
We agree with the reviewer; we did not compare the parental distress score between the different food insecurity groups statistically and we have removed this statement from this section.

14) p.8 qualitative results section
I really enjoyed reading the quotes. Very rich data. I am not sure however that putting these quotes in a table 5 is helpful…
Thank you for this feedback. As per editor suggestion; all quotes were placed in the Table.

15) p.9 line 8: delete the 'in' before important
We have edited this sentence.

Interpretation
16) First paragraph: There was one reference from the US (ref 14) discussed in the introduction that studied hospital-based and household food insecurity and found very similar results to this study. This was not mentioned in the discussion?
We thank the reviewer for this suggestion and we have added the comparison to the data from this study in the United States to our Interpretation section (page 6, line 43).

17) Third paragraph: It is not clear to me that parental distress was clinically higher among the food insecure group, compared to secure group based on the data presented. Parental distress increases as food insecurity increases, and I think this should be discussed more.
We agree with the reviewer (similar as discussed above) and we have removed this statement from the third paragraph and made the continuous association more clear (page 7, line 11).

18) I am used to thinking of food insecurity as 'yes-no' and not as a continuous variable. What is the clinical implication of using this variable as continuous? Would it allow you to prioritize families with higher food insecurity scores in terms of economic support while hospitalized, etc.? Also, my understanding of the data is that some families report hospital-based food insecurity but not household food insecurity? Can you highlight and discuss this? Would identifying and supporting at least all the families with household food insecurity allow preventing most of the hospital-based food insecurity and associated parental distress?
We thank the reviewer for these important ideas and encouraging us to include clinical implications in this manuscript. In the future we plan to use the data from this study to inform interventions to address food insecurity in the hospital setting. We have highlighted the fact that most families suffered from both household- and hospital-based food insecurity. Clinicians and hospital

administrators should be aware of this overlap and when identifying families with social needs. Clinicians should also inquire about immediate hospital-based food insecurity and when available resources (like meal vouchers) should be given to families to alleviate hospital-based food insecurity. However, not all families who suffered from hospital-based food insecurity also suffered from household food insecurity as pointed out. This may be explained by the high food costs in hospital. Hospital management should make it a priority to offer nutritious food at no or low cost to caregivers to alleviate hospital-based food insecurity. We have added this information to the Interpretation Section Page 7, line 34 and in our Conclusion section page 8 , line 8.

19) Perhaps I missed it, but it would be interesting to discuss what is normally done in your hospital to help parents with financial difficulties during hospitalizations. Is a social worker included when it is a prolonged hospitalization and parents with low socioeconomic status for example? If so, do you identify any risk of bias? If not, would it be an avenue to apply to your results?
In our hospital, there is no standardized screening for food insecurity and/or financial difficulties. If families are identified with social needs a social worker may be consulted, who might be able to provide meal vouchers. This does not depend on the duration of hospital admission. We did not collect any data about referral to social work during our research study. We have added this to our limitation section, page 7, line 45.

Reference
19) p. Ref 16: the link did not work for me
Thank you for notifying, we have updated the link.

Reviewer 2: Dr. Hasanain Ghazi
Institution: Management and science University
General comments (author response in bold)

1. the 3 added questions on hospital based secuirty adopted from where? put reference and also any validation done ?
See the answer to question 7, reviewer 1.

2. what is the sampling Methods user?
We have updated our Figure of the population sample.

3. any inclusion and exclusion criteria?
All families with a child admitted to the general pediatric ward were approached. Participating families had to be able to understand English and have internet access to participate.

4. How the child food status measured ?
With the HFSSM survey as stated in our Method section.

5. why month of admission wan included? any importance
We also included the month of admission because during COVID-19 our hospital had implemented different rules and from April through June, only one caregiver was allowed to stay with their child during the admission which could have led to

difference in food access. We have added this to the Method section, Page 4, line 43.