Title: Community-based screening and triage connecting First Nations children and youth to local supports: a cross-sectional study
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Reviewer 1: Dr. Geoff McKee
Institution: BC Centre for Disease Control
General comments (author response in bold)

This manuscript aimed to validate the ability of a tablet-based self-report tool, the Aaniish Naa Geegii: the Children's Health and Well-being Measure (ACHWM), to identify First Nations children 8-18 years of age living within the Wiikwemkoong Unceded Territory (WUT), Ontario, Canada, who may benefit from direct mental health supports for earlier intervention. This was attempted through a cross-sectional analysis across 3 cohorts including a community sample that was subdivided into Healthy Peers and Newly Identified Needs based on the ACHWM findings with subsequent evaluation by local mental health workers, and a Typical Treatment group recruited from those already connected to care. Several analyses were completed to compare characteristics across groups, as well as performance of the ACHWM as a screening measure for early identification. While the tool was deemed useful for identification of children who may benefit from linkage to mental health supports, it did not demonstrate evidence of value for early identification.

Strengths:
This paper addresses an important health issue and inequities experienced among rural and remote Indigenous communities with barriers to accessing mental health services. The authors demonstrated considerable efforts to ensure community participation and relevance throughout study, with considerations of Indigenous perspectives and tangible benefits for the community. This is a considerable strength and also recognizes the need to disseminate the findings for community use. Additionally, the need to defer to community needs around information sharing and follow-up, which was acknowledged as a limitation, aligns with this community-centered approach.
        We appreciate the reviewer's recognition of these strengths.

Issues:
        The authors reported that this is not a diagnostic tool in response to previous feedback; however, while the tool itself may not be intended for diagnosis, the study design is evaluating its use for screening. Therefore, previous criticisms of the study design related to sample selection, lack of blinding, and validation analysis as a diagnostic tool still hold. Rather than attempting to validate the tool's use as a screening/diagnostic tool, the authors may consider removing the sensitivity/specificity/predictive value analyses and focus on the descriptive comparison between each cohort.
        We have removed these sections based on your feedback.

2.   I am also curious whether any participants from the community screened negative on the ACHWM but were identified as needing services by a LMHW? It appears on lines 31-34 on page 9 that 4 children were screened negative but were also identified as at-risk by the LMWH, but this was not described in the results.

You are correct that 4 participants were missed by the ACHWM and are reported in the results section on page 6.

3.   The threshold for "at risk" based on the ACHWM is unclear in the manuscript, aside from a citation to another paper and description of 2 or more flags. It would benefit from being more explicitly defined, including a more robust description of the flags.

The ACHWM identified potential risk based on two or more flags, which means one response in a red flag zone or two responses in yellow flag zones. Some of this was originally included in the methods but has now been moved to the introduction and additional details have been added.

o   Tracked version page 4: "It includes screening and triage processes 17, that identifies potential risk based one highly concerning response or two moderately concerning responses, and expedites connections to local, culturally-based supports for children."

The term "at-risk" is used to denote the outcome of a clinical risk assessment by local mental health workers.

4.   While the "emotional" quadrant of the tool was emphasized, it is not clear in the manuscript how it differed from the "mental" quadrant, which was also referred to as "intellectual". The quadrants of the tool could benefit from more description.

The details on the quadrants have been previously reported (Young, N. L., et al. (2013). "A Process for Creating the Aboriginal Children's Health and Well-Being Measure (ACHWM)." Canadian Journal of Public Health 104(2): 136-141.) All the publications on the ACHWM are available at https://achwm.ca/research/articles. The word limits of CMAJ Open make it difficult to include all the details.

5.   Although the study offers evidence that the tool may identify children who could benefit from mental health supports, it does not specifically support the claim that it would "expedite" access as noted on line 14 of page 10 compared with more traditional outreach mechanisms. All children in the study were connected to LMHWs and thus the study did not evaluate the direct impact of the tool on access to care. While I recognize that the tool may be used this way and could offer this type of benefit, the authors may wish not to be as conclusive regarding its utility for accessing services based on the findings of the study.

This is an interesting point and one which we are not certain on how to address succinctly.

Those who wish to use the ACHWM are required to provide on-site local health staff to complete a follow-up assessment and initiate referral for children who are confirmed to be at risk. The details provided to local health staff supported them to identify risk that had not yet been identified and enabled them to make same-day referrals. These referrals would not have happened in the absence of the ACHWM. Thus, the referral process was accelerated. In many cases they also received expedited care, however, this data was not presented. We have revised "expedites access" to "expedites referrals" on page 10.

Reviewer 2: Dr. Carla Ginn

Institution: University of Calgary
General comments (author response in bold)

Thank you for your research study, contributing to the literature surrounding improving mental health outcomes for Indigenous children.

We appreciate the recognition of the need for additional literature in this field.

1.   The methodology and analysis are clear, however, a comment on the analysis would be that given the unequal sample sizes coupled with dissimilar variances, SD(HP)=11.25, SD(NIN) = 13.27, and SD(TT) = 16.30, did the authors consider adjusting the ANOVA test results?

We did adjust but because it did not change the results, we reported the simpler version of the analysis.

2.   The ANOVA assumes that the groups have equal variances and it not robust to departures from homogeneity of variance assumption. The researchers could test for the homogeneity of variances. If the variances are not equal statistically, then we would recommend reporting instead the p-values for Welch or Brown-Forsythe ANOVA. The Welch and Brown-Forsythe ANOVA compares three or more sets of unpaired measurements (data expressed using an interval or ratio scale), assumed to be sampled from a normal distribution but without assuming that the groups have equal variances. In most situations, the Welch test is applicable and recommended, as it has more power and maintains alpha at the desired level. However, when the data distribution is highly skewed in one tail (long tail), the Brown-Forsythe test is recommended. If the data from this research is skewed to one end, I would report Brown-Forsythe p-value, else the Welch p-value would be good. [Reference: SA Glantz, BK Slinker, TB Neilands, Primer of Regression & Analysis of Variance, Third edition, 2016] Co-reviewed by Carla Ginn and Grace Perez (Biostatistician, University of Calgary)

Thank you for your detailed statistical review. You are correct that the variances are unequal.
o   **The Welch method confirms the results from the ANOVA results.**
o   **We are trying to keep this paper accessible to a wide ranch of readers, and thus reported the most straightforward approach. However, we recognize that it is not technically correct.**

Since we had set an a priori expectation that the NIN and TT groups would report EQS scores that were lower than those of the HP group, we ran a one-tailed comparison with Welch adjustment for unequal variance and found the differences to be statistically significant (NIN compared to HP=0.0157 and TT compared to HP p=0.0009, respectively).

For the record, two-tailed comparisons were also statistically significant (p=0.0315 and p=0.0017, respectively).

We have added the following statement to the paper to clarify.
o   **"Note: these comparisons were repeated using the Welch adjustment for unequal variances and confirmed that the NIN and TT groups had significantly lower mean EQS compared to the HP group (p=0.0157 and p=0.0009, respectively) and that the NIN and TT groups did not different from each other (0.3272)."**