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Community-based Identification of Health Needs
Among First Nations Children and Youth: a Cohort Study

Running Title	Identifying Needs with Indigenous Children
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Abstract

Background: First Nations children in Canada experience health inequities. This study aimed to determine whether the Aaniish Naa Gegii: the Children's Health and Well-being Measure (ACHWM) identified children's needs for support earlier in their illness.

Methods: Children (8 to 18 years) were recruited from community schools, recreation centres and a mental health clinic in one rural First Nation. All children completed the ACHWM then met with a local mental health worker who determined whether their health was at-risk. ACHWM Emotional Quadrant (EQ) scores were compared between groups.

Results: Three groups of children were formed: a healthy peers (HP) group who were not at-risk (n=134); a newly identified needs (NIN) group who were at-risk and not previously identified (n=35); and a typical treatment group who were already receiving support (n=58). The mean EQS were: 80.1 (SD 11.25) in the HP group; 67.2 (SE=13.27) in the NIN group; and 66.2, (SD=16.30) in the TT group. The HP group had significantly higher EQS than NIN and TT groups ($p < 0.0001$). The NIN and TT groups' EQS did not differ from each other ($p = 0.76$).

Interpretation: The ACHWM was able to distinguish between healthy children and those in need of support. This study identified needs for support among 35 children who were then connected to local services. The similarity of EQS in the NIN and TT groups highlights the value of community screening to optimize access to services. Future research will examine the impact of this process over the subsequent year in these groups.

Key Words:

Indigenous, Mental Health, Child, Adolescent

Introduction

Indigenous¹ children (First Nations, Inuit and Métis) in Canada experience serious health inequities (1-3). Rates of mental health crises are highest in northern and rural communities, where the rates of physician visits for mental health support are lowest (4). Thus, Indigenous children are often forced to seek treatment hundreds of kilometres away from home, creating a disconnect from family supports and natural helpers that is not conducive to health recovery (5). One opportunity to improve the fit between the needs of Indigenous children and local resources is through the identification of emergent needs within the community. This is in keeping with the recognition that successful health and life promotion programs originate from within communities and are culturally-based (6).

This paper responds to Indigenous health leaders, who are eager to improve children's health outcomes (7) and focus upstream on primary prevention and early intervention (secondary prevention). Prevention strategies and timely access to child-centred care are critical in isolated communities and school-based screening is a recommended best-practice for harm reduction (8, 9). Early intervention reduces the impact of a disease or injury that has already occurred, is effective in high-risk youth populations(10, 11). We sought to determine whether a wellness measure was able to identify Indigenous children's symptoms when they were emergent, rather than urgent.

An Indigenous children's health assessment tool was developed with and for Indigenous children, 8 to 18 years (12), to ensure solutions come from within each community (13, 14). It is called the Aaniish Naa Gegii: the Children's Health and Well-being Measure (ACHWM). It is completed by children on Android tablets and is feasible to implement in lower-resource contexts. The ACHWM has been shown

¹ The term "Indigenous" is used in this paper to include First Nations, Inuit and Métis people.

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3 to be culturally-appropriate (15, 16), valid (17), reliable (18), sensitive (19), and has the support of the
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5 Chiefs of Ontario (20) and Health Canada (21). The ACHWM generates a summary score and four
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7 quadrant scores: Spiritual, Emotional, Physical and Mental (or intellectual). Note that the term
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9 “emotional health” is used in keeping with the Anishinaabe teachings and refers to “mental health” in
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11 Western society. The ACHWM is transforming the way Indigenous children are engaged in health
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13 assessment and includes screening and triage processes (19) that expedites connections to appropriate,
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15 local, culturally-based supports. In addition, the ACHWM helps initiate strengths-based conversations
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17 about health with children.
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21 The objective of this paper was to determine whether the ACHWM was able to identify Indigenous
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23 children’s needs for support earlier (at a less severe stage) in their illness. This screening strategy is in
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25 line with several key guidance documents relevant to this population (22-24).
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28 **Methods**

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30 We conducted a prospective cohort study between 2016 and 2019 in Wiikwemkoong Unceded Territory,
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32 Ontario, Canada. This study was approved by the Research Ethics Board at Laurentian University and
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34 by the Wiikwemkoong Chief and Council. The details of this study design were described elsewhere
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36 (25) and summarised here. This paper is the first of several to present results from these methods and
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38 represents the baseline observations from a longitudinal study. A subsequent paper will assess the
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40 impact of screening and triage on future health outcomes.
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43 a) Sample

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46 Children between the ages of 8 and 18 years were recruited for this study. The first cohort was recruited
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48 at community schools and recreation centres and were not receiving mental health treatment. The second
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50 cohort was comprised of children currently undergoing treatment and was recruited at the Nadmadwin
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52 Mental Health Clinic in Wiikwemkoong Unceded Territory.
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3 b) Manoeuvre
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6 Participants in the first cohort completed the ACHWM in the community at local schools, the youth
7 centre and at community events. Their results were screened for acute emotional health symptoms in
8 real time by the tablet, using a previously validated algorithm (19). Each participant met with a local
9 mental health worker (MHW) to discuss their experience with the ACHWM. The MHW also celebrated
10 each child's unique strengths (e.g., quadrant with the highest scores) then assessed their emotional
11 health in more detail. This community-based cohort was divided into two groups based on the MHW's
12 assessments: those who were *not-at-risk* were assigned to the **Healthy Peers** (HP) group, and those who
13 were *at-risk* of a poor emotional health outcome were assigned to the **Newly Identified Needs** (NIN)
14 group. All children in the NIN group were provided brief support immediately after completing the
15 ACHWM and connected to local services for ongoing treatment.
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19 Participants recruited from the Nadmadwin Mental Health Clinic formed the **Typical Treatment** (TT)
20 group. They completed the ACHWM during one of their counselling sessions at Nadmadwin at a time
21 deemed appropriate by their therapist to ensure that the study did not delay access to urgently needed
22 support. These children continued to receive mental health supports according to their clinical plan.
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27 c) Analysis
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30 This paper answers the question: *Does the ACHWM identify Indigenous children's needs at a less severe*
31 *stage?* We used analysis of variance (ANOVA) to compare emotional quadrant scores (primary
32 outcome) between the HP, NIN and TT groups, with post-hoc comparisons between pairs of groups.
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34 Since the NIN group were not accessing emotional health supports prior to ACHWM completion, we
35 hypothesised *a priori* that they would have higher EQS than the TT group.
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39 In Anishinaabe teachings, health is a "wholistic" construct. Thus, we also explored differences between
40 the three comparison groups in the ACHWM summary scores and the other three quadrants of health:
41 spiritual, physical and mental (or intellectual functioning).
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We also wanted to estimate the accuracy of the screening algorithm and enhance the precision of previously published estimates from a smaller sample (19). Thus, we calculated the sensitivity, specificity, positive and negative predictive values for the ACHWM screening results (potential risk vs no-potential risk) compared to the current standard of clinical assessment by a local mental health worker (*at-risk* vs *not-at-risk*). Finally, we explored the questions with that contributed to screening positive for *risk* (flags) between groups.

The data analysed in this paper this was gathered with informed consent to publish. The raw data will remain private to protect the confidentiality of participants and to respect data sovereignty (26-28).

Results

a) Deviations from the Protocol

This protocol was adapted to ensure the optimal design and fit with community circumstances. Specifically, the recruitment period for the TT group was extended by approximately one year to generate a sufficient sample size (see Table 1). Thus data from the TT group were gathered approximately one year later than data from the HP and NIN groups.

b) Sample

This study included 227 children (57.1% girls), whose mean age was 12.9 (SD=2.89) years. Within this sample, 169 were recruited from the community and were considered to be healthy; yet the tablet-based screening process identified 54 (32.0%) as being potentially at-risk. MHWs determined that 31 were true positives and 4 (3.5%) were false negatives (none of 4 had serious mental health issues and minimal treatment was required). Thus, 35 children formed the NIN group, leaving 134 in the HP reference group. There were 58 children recruited from the mental health clinic, all of whom were known to be *at-risk* and formed the TT group (median treatment duration of 3.5 days, interquartile range of 0 to 20). The creation of the three groups (HP, NIN and TT) is shown in Figure 1 and their demographic characteristics are summarised in Table 1.

[Insert Figure 1 approximately here]

This paper follows the STROBE reporting guidelines (29) and aims to inform community health leaders, clinicians and a general academic audience. Our results are presented in a mix of text, tables and figures to meet the needs of these diverse audiences.

[Insert Table 1 approximately here]

Adjustments for age and gender differences between groups were explored and found to be non-significant (ANOVA Adj. R-squared=0.0069, $p=0.1698$ and $\chi^2 = 4.38$, $p=0.112$). Further exploration identified small differences in EQS in the pooled sample that were associated with age (a decline of 0.85 points per year) and gender (boys scored 0.67 points higher than girls) on average. The unadjusted results are reported here for ease of interpretation.

The primary analysis identified a significant difference in EQS between groups (ANOVA $p < 0.0001$). The mean EQS for the NIN group was 67.2 (SD 13.27) and was not significantly different (post-hoc comparison $p=0.73$) from the mean score of children in the TT group who had a mean EQS of 66.2 (SD 16.30). The mean EQS for the NIN and TT groups were both significantly lower than the mean EQS from the HP group (post-hoc comparison $p < 0.0001$), of 80.1 (SD 11.25).

[Insert Figure 2 approximately here]

c) Exploring how the groups are different based on ACHWM quadrant scores

The mean scores by group for all quadrants of health and the summary score are presented in Table 2.

[Insert Table 2 approximately here]

[Insert Figure 3 approximately here]

The HP group reported scores that were consistently higher than the NIN and TT group by approximately 10.4 points on average; differences that were statistically significant ($p < 0.0001$) and clinically meaningful. The scores for the NIN group were higher (better) by small amounts compared to

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3 the TT group in the spiritual, physical and mental quadrants and the summary scores. These differences
4 did not reach statistical significance (p values ranged from 0.26 for physical to 0.54 for spiritual) and
5 were not clinically meaningful.
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10 d) Sensitivity & Specificity

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12 The sensitivity, specificity, positive and negative predictive values of the screening algorithm are
13 presented in Table 3. These estimates are based on assessments by local MHWs who also had access to
14 the ACHWM results. While obtaining a completely independent assessment was ideal from a scientific
15 perspective, keeping ACHWM results from the MHWs was not in the best interests of the children.
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17 Thus, these results must be interpreted with caution.
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23 [Insert Table 3 approximately here]
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26 Finally, we explored flag scores and the questions that were flagged. The median number of flags in the
27 NIN group was 4 (IQR of 2 to 6), compared to 2.5 (IQR 1 to 5) in the TT group and 0 (IQR 0 to 1) in the
28 HP group. The flags most commonly raised by children in the NIN group were similar to those raised in
29 the TT group.
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35 **Interpretations**

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37 This study identified large differences (>10 points) in EQS between the HP group and both the NIN and
38 TT groups; thus the ACHWM is able to clearly distinguish between healthy children and those who need
39 support. Despite our prediction that the ACHWM may identify children's need for support earlier in
40 their illness, the EQS of the NIN group were not different from those of the TT group.
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46 A critically important finding is that we identified 21% of children in the community sample as being *at-*
47 *risk* of an adverse mental health outcome and connected them to services. Thus, the project has
48 generated new opportunities for support for children who were not yet receiving support from the health
49 system. This suggests that community-based screening may be an effective secondary prevention
50 strategy that expedites access to services and support stepped care (30).
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Identifying Needs of Indigenous Children

We noted that the NIN group had more flags (less favourable) than the TT group, with an increase in flags related to personal safety (e.g., rarely feeling safe), underscoring the important role for community-based health screening in Indigenous communities. While 4 children at-risk were missed by screening, they required brief support. Thus, all serious mental health issues were detected by the ACHWM. The flag counts in the NIN group underscore the need for additional funding and human resources to support children whose symptoms may be less obvious, yet clinically important. Reaching out to children at this sub-acute phase has the potential to improve effectiveness of community-based mental health services.

This study also provides more precise estimates of sensitivity and specificity relative to our previous published estimates of 75% (CI: 19-99) and 79% respectively, from a smaller sample (n=37) (19). The new estimates exceed 80% and indicate that the ACHWM screening process is 89% sensitive and 83% specific. Our study also provides support that the ACHWM is strong at ruling out the need for support, with a negative predictive value of 97%. The low positive predictive value (57%) means that many children will require assessment by a MHW to confirm their need for support. However, screening out those who do not need support makes the brief assessment by experts far more efficient than the alternative; not knowing who requires clinical assessment.

a) Future directions in the area of study

This study describes the health of Indigenous children, including 35 children who were identified as newly in need of support; a population that has not been previously studied. These cohorts are being followed, and a subsequent paper will report on the impact of ACHWM screening on outcomes at one year.

b) Limitations of the Study

This study was conducted in one First Nation community and was limited to those children for whom we could obtain consent. This study also had a relatively small sample size and as a result we were unable to adjust for age and gender effects. Our previous research has shown relevance of this measure

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3 in other communities (16). Thus we expect these findings to be generalizable to Indigenous communities
4 elsewhere in Canada. However, it will be important for other communities to explore the effectiveness
5 of the tool in their local context.
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10 c) Conclusions

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12 The ACHWM is a measure that assesses health from an Indigenous world view and seamlessly
13 integrates technology with local health care. The tablet-based app gives children a way to communicate
14 their personal perceptions of health and screens for acute symptoms. While the ACHWM was not able
15 to identify children's needs at a lower level of acuity, compared to the standard referral process, it
16 demonstrated a significant impact by immediately linking many children *at-risk* (21% of the community
17 sample) to local and culturally-appropriate supports when their needs were emergent rather than urgent.
18 This approach supports community-based MHWs; acting as a catalyst for strengths-based conversations
19 with school-aged children and facilitating connections that would not have otherwise been possible.
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30 The ACHWM screening process aligns with the goals of Indigenous health leaders who are eager to
31 improve the health outcomes of their children, particularly their mental wellness (7). This strategy
32 leverages the power of technology to engage child and support their health. It has the potential to
33 optimise the allocation of scarce resources to support children *at-risk*. The ACHWM also offers a
34 mechanism to reduce the number of children needing screening by a MHW (some vs all), thus reducing
35 the cost associated with screening. The approach enhances access to MHW's for the children who are in
36 greatest need of support. However, it is important to recognize that funding inequities may be
37 contributing to limited services in Indigenous communities and must be addressed so that the needs of
38 all children can be met.
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References

1. Health Canada. First Nations and Inuit Health Strategic Plan: A Shared Path to Improved Health. Health Canada; 2012.
2. Canadian UNICEF Committee. Canadian Supplement to the State of the World's Children. Aboriginal Children's Health: Leaving No Child Behind Toronto: UNICEF Canada; 2009 [Available from: www.unicef.ca/sites/default/files/.../Leaving%20no%20child%20behind%2009.pdf].
3. Adelson N. The Embodiment of Inequity: Health Disparities in Aboriginal Canada. Canadian Journal of Public Health / Revue Canadienne de Sante Publique. 2005;96:S45-61.
4. MHASEF Research Team. The Mental Health of Children and Youth in Ontario: A Baseline Scorecard. Toronto Institute of Clinical Evaluative Sciences 2015.
5. Oulanova O, Moodley R. Navigating Two Worlds: Experiences of Counsellors Who Integrate Aboriginal Traditional Healing Practices. Canadian Journal of Counselling and Psychotherapy. 2010;44(4):346-62.
6. AFN National Youth Council. AFN National Youth Council: Calls to Action on Life Promotion in First Nations Communities. Ottawa, ON: Assembly of First Nations; 2016.
7. First Nation Mental Wellness Continuum Framework Ottawa: Health Canada; 2015. p. 64.
8. Scott MA, Wilcox HC, Schonfeld IS, Davies M, Hicks RC, Turner JB, et al. School-based Screening to Identify At-Risk Students nNot Already Known to School Professionals: the Columbia Suicide Screen. American Journal of Public Health. 2009;99(2):334-9.

- 1
2
3 9. Kutcher SP, Szumilas M. Youth Suicide Prevention. Canadian Medical Association
4
5 Journal. 2008;178(3):282-5.
6
7
- 8
9 10. Clifford AC, Doran CM, Tsey K. A Systematic Review of Suicide Prevention
10
11 Interventions Targeting Indigenous Peoples in Australia, United States, Canada and New
12
13 Zealand. BMC Public Health. 2013;13:463.
14
- 15
16 11. Robinson J, Cox G, Malone A, Williamson M, Baldwin G, Fletcher K, et al. A Systematic
17
18 Review of School-Based Interventions Aimed at Preventing, Treating, and Responding to
19
20 Suicide-Related Behavior in Young People. Crisis: Journal of Crisis Intervention &
21
22 Suicide. 2013;34(3):164-82.
23
24
- 25
26 12. Young NL, Wabano MJ, Burke TA, Ritchie SD, Mishibinijima D, Corbiere RG. A
27
28 Process for Creating the Aboriginal Children's Health and Well-Being Measure
29
30 (ACHWM). Canadian Journal of Public Health. 2013;104(2):136-41.
31
32
- 33
34 13. Saylor K, Blackstock C. Many Hands, One Dream: Healthy Aboriginal Children and
35
36 Young People. Paediatric Child Health. 2005;10(9):523-4.
37
- 38
39 14. Chandler MJ, Lalonde CE. Cultural Continuity as a Moderator of Suicide Risk among
40
41 Canada's First Nations. In: Kirmayer L, Valaskakis G, editors. The Mental Health of
42
43 Canadian Aboriginal Peoples: Transformations, Identity, and Community. Vancouver,
44
45 BC: University of British Columbia Press; 2008. p. 221-48.
46
- 47
48 15. Young NL, Wabano MJ, Ritchie SD, Burke TA, Pangowish B, Corbiere RG. Assessing
49
50 Children's Interpretations of the Aboriginal Children's Health and Well-Being Measure
51
52 (ACHWM). Health and Quality of Life Outcomes. 2015;13(105):1-7.
53
54
55
56
57

16. Young NL, Wabano MJ, Blight S, Baker-Anderson K, Beaudin R, McGregor LF, et al. Relevance of the Aboriginal Children's Health and Well-being Measure (ACHWM) Beyond Wikwemikong. *Rural and Remote Health*. 2017;17(2):394-404.
17. Young NL, Wabano MJ, Usuba K, Pangowish B, Trottier M, Jacko D, et al. Validity of the Aboriginal Children's Health and Well-Being Measure: Aaniish Naa Gegii? *Health and Quality of Life Outcomes*. 2015;13(1):148-56.
18. Young NL, Wabano MJ, Usuba K, Mishibinijima D, Jacko D, Burke TA. Reliability of the Aboriginal Children's Health and Well-Being Measure (ACHWM). *Springer Plus*. 2016;5(1):2082-7.
19. Young NL, Jacko D, Wabano MJ, Hawthorne L, Seabrook S, Wabanosse S, et al. A Screening Mechanism to Recognize and Support Aboriginal Children At-Risk: Based on a Child-centric Survey. *Canadian Journal of Public Health*. 2016;107(4-5):e399-e403.
20. Chiefs of Ontario. Resolution 13/15: Ontario Chiefs' Acknowledgement and Acceptance of the Aboriginal Children's Health and Well-Being Measure (ACHWM). Wauzhushk Onigum Nation; 2015. p. 2.
21. Young NL, Jacko D. Increasing the Spread of the ACHWM—Aaniish Naa Gegil: the Children's Health and Well-being Measure Health Canada Health Care Policy and Strategies Program (HCPSP); 2021.
22. Health Canada. National Aboriginal Youth Suicide Prevention Strategy. Ottawa; 2013.
23. Atkinson D. Considerations for Indigenous Child and Youth Population Mental Health Promotion in Canada. National Collaborating Centres for Public Health. 2017.

- 1
2
3 24. Mahler H, Epp J, Franklin W, Kickbusch I. Ottawa Charter for Health Promotion. Health
4 Promotion International. 1986;1(4):405.
5
6
7
8 25. Young NL, Wabano MJ, Jacko D, Barbic SP, Boydell K, Roy-Charland A, et al.
9
10 Community-Based Screening & Triage vs Standard Referral of Aboriginal Children: A
11
12 Prospective Cohort Study Protocol. International Journal of Indigenous Health.
13
14 2018;13(1):66-87.
15
16
17 26. Schnarch B. Ownership, Control, Access and Possession (OCAP) or Self-Determination
18
19 Applied to Research. A Critical Analysis of Contemporary First Nations Research and
20
21 Some Options for First Nations Communities. Journal of Aboriginal Health.
22
23 2004;1(1):80-95.
24
25
26 27. First Nations Centre. OCAP: Ownership, Control, Access and Possession Sanctioned by
27
28 the First Nations Information Governance Committee, Assembly of First Nations. Ottawa:
29
30 National Aboriginal Health Organization; 2007.
31
32
33 28. Carroll SR, Garba I, O.L. F-R, Holbrook J, Lovett R, Materechera S, et al. The CARE
34
35 Principles for Indigenous Data Governance. . 2020;19(1):43. . Data Science Journal.
36
37 2020;19(43):1-12.
38
39
40 29. Von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP, et al.
41
42
43 The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)
44
45 Statement: guidelines for reporting observational studies. International Journal of
46
47 Surgery. 2014;12(12):1495-9.
48
49
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53
54
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56
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59
60

- 1
2
3 30. McDermott BM, Cobham VE. A Stepped-Care Model of Post-Disaster Child and
4
5 Adolescent Mental Health Service Provision. *European journal of psychotraumatology*.
6
7 2014;5(1):24294.
8
9
10
11
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Tables

Table 1: Characteristics of the Sample by Group

Group	Proposed Sample Size	Sample Size	Age Mean (SD)	% Female
HP: Healthy Peers	205	134	13.08 (2.8)	52.24
NIN: Newly Identified Needs	45	35	13.08 (2.8)	71.43
TT: Typical Treatment	60	58	12.25 (3.1)	59.65

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Table 2: Summary Scores by Group

	Newly Identified Needs (n=35)		Typical Treatment (n=58)		Health Peers (n=134)	
	Mean	SD	Mean	SD	Mean	SD
Emotional Quadrant	67.21	13.27	66.24	16.30	80.13	11.25
Spiritual Quadrant	74.83	16.72	72.98	17.33	82.52	12.04
Physical Quadrant	71.96	12.77	69.04	12.95	78.69	11.82
Mental Quadrant	58.07	11.44	55.95	14.07	68.28	13.08
Summary	68.84	11.47	67.07	13.03	78.70	9.96

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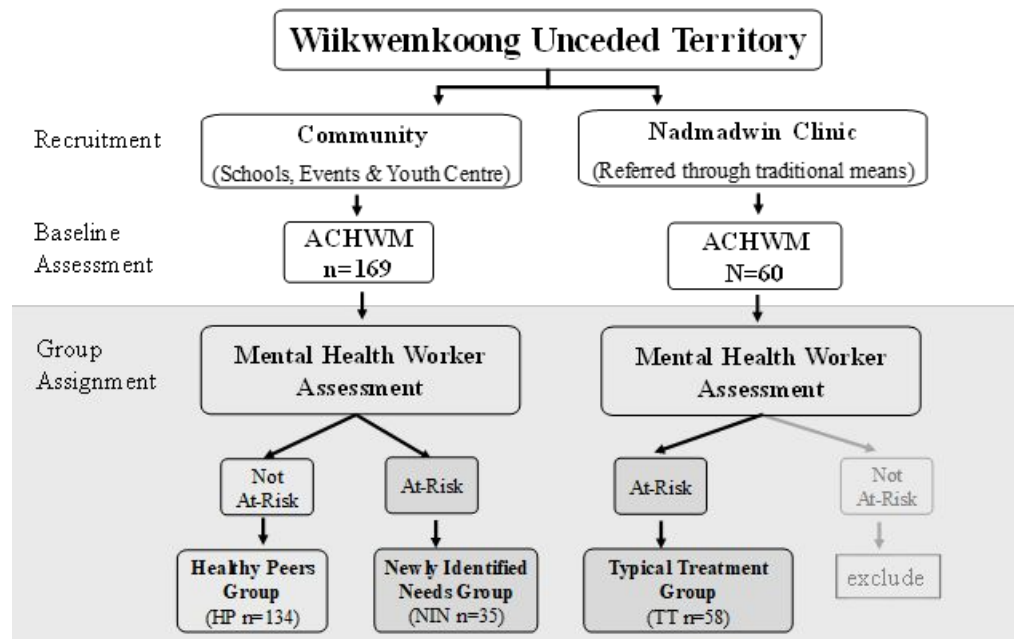
Table 3: Sensitivity and Specificity

Statistic	Value	95% CI
Sensitivity	88.6%	73.3% to 96.8%
Specificity	82.8%	75.4% to 88.8%
Positive Predictive Value	57.4%	43.2% to 70.8%
Negative Predictive Value	96.5%	91.3% to 99.0%

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Identifying Needs of Indigenous Children

Figure 1: Sampling Results



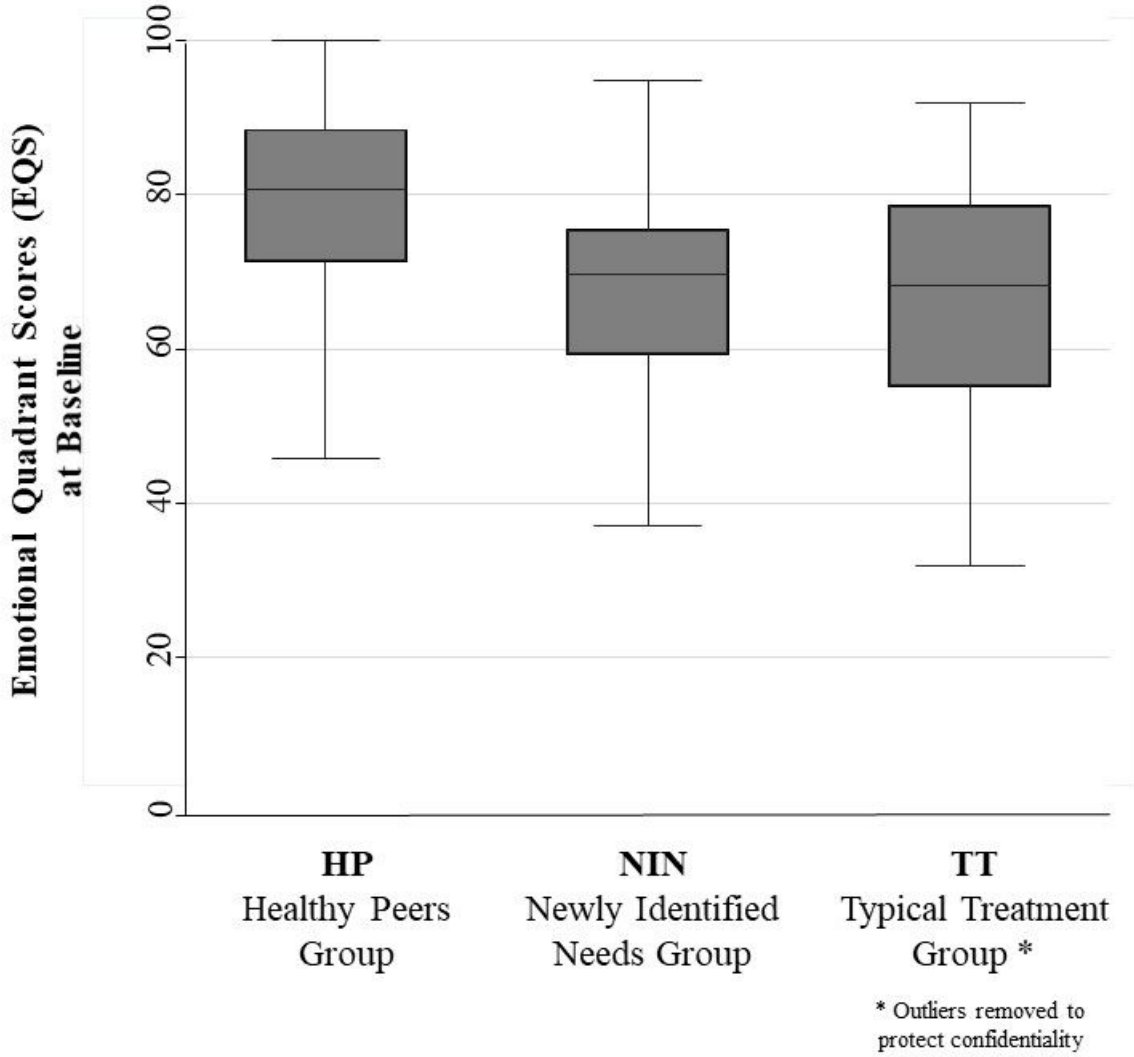
Note: Updated from (Young et al. 2018)

Full reference:

Young, N. L., Wabano, M. J., Jacko, D., Barbic, S. P., Boydell, K., Roy-Charland, A., et al. (2018). Community-Based Screening & Triage vs Standard Referral of Aboriginal Children: A Prospective Cohort Study Protocol.

International Journal of Indigenous Health, 13(1), 66-87, doi:<https://doi.org/10.18357/ijih.v13i1.30282>.

Figure 2: Emotional Quadrant Scores by Group



Identifying Needs of Indigenous Children

Figure 3: Distribution of Scores by Group

