

Discussion paper for the Cree Board of Health

Results of the Goodman “Strengths and Difficulties” Scale  
in Iiyiyiu Aschii

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### Background

In 2006–07, Statistics Canada carried out an Aboriginal Children’s Survey across much of the country. Iiyiyiu Aschii opted to be included in this survey, which focused on the health and development of children under six. The survey included the Goodman scale of Strengths and Difficulties, which is a standard set of questions designed to measure things like social skills, anxiety, peer problems, and behaviour issues.

The Goodman Scale has been used in many countries, but this is the first time it has been used in a survey of First Nation groups in Canada. As a result, no one is sure yet whether the scale is valid when used on First Nation groups. This paper begins by reviewing some of the work that Statistics Canada has done to assess the cross-cultural validity of the scale. It then takes a first, exploratory, look at the results in Iiyiyiu Aschii. The intent is not to draw conclusions about child development in Iiyiyiu Aschii, but simply to describe the results and how they relate to other things in the child’s life.

### About the scale

Psychologists often look at concepts that are difficult to measure directly, such as anxiety. As a result, they end up measuring the “symptoms” (indicators) of a concept rather than the concept itself. The accepted wisdom in these cases is to employ many different indicators of each concept. Up to a certain point, the more indicators you employ, the more accurate your measurement of the underlying concept.

The Goodman Scale divides children’s strengths and difficulties into five concepts that relate to different aspects of children’s behaviours, emotions, and relationships:

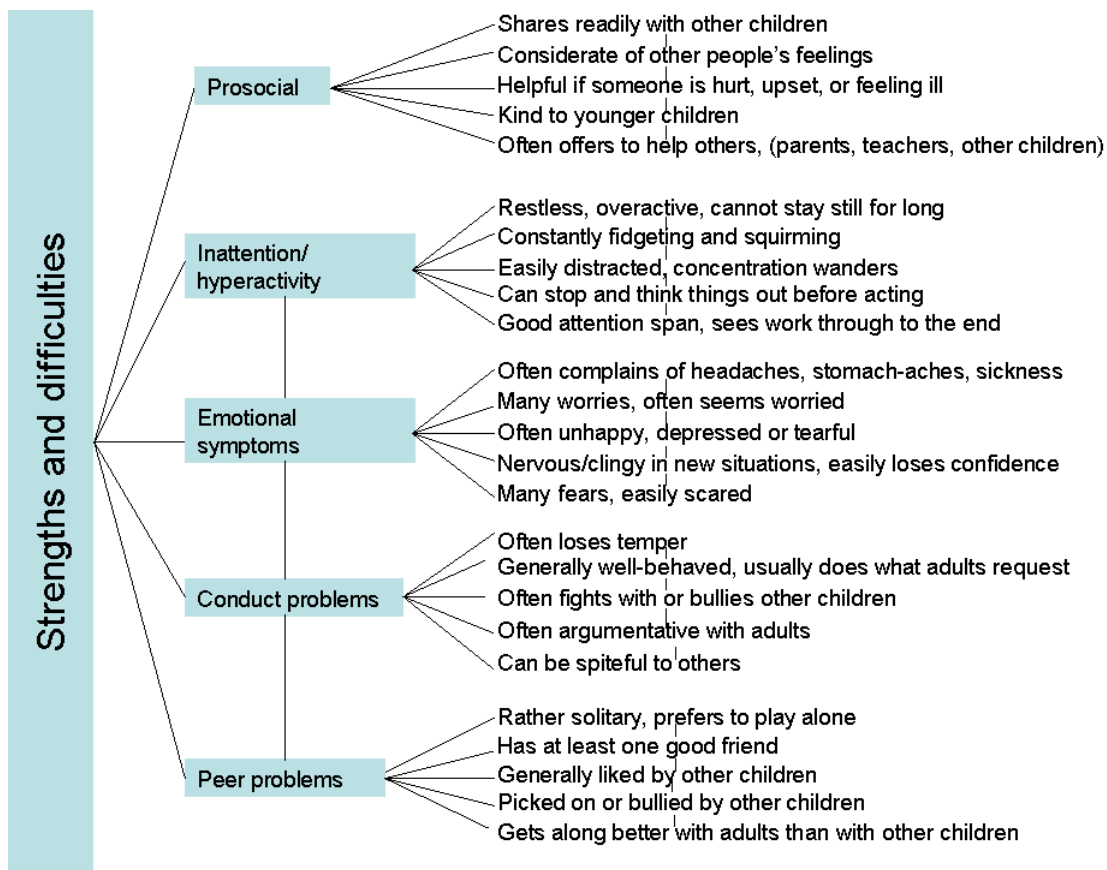
1. Prosocial behaviours
2. Inattention-hyperactivity
3. Emotional symptoms
4. Conduct problems
5. Peer problems

Each concept (subscale) is measured by five different indicators. These indicators (for instance, the question “Is the child considerate of other people’s feelings?”) are scored either “not true,” “somewhat true,” or “certainly true.” At the end, the results are presented in one of two ways: either as a separate score for each of the five subscales, or as a “prosocial” score and a “total problems” score obtained by summing the four subscales that deal with problems. Figure 1 shows the specific questions included in the scale.

The scale is used by people like educators and social service workers, and exists in several versions adapted for different age groups. Importantly, the scale has norms — established values that tell users whether a particular score indicates “low need,” “some need,” or “high need.” [Cox, 2000]

The Aboriginal Children’s Survey used the version of the scale created for children age 3–4. However, it extended the age range somewhat, to fit more closely with the ages included in the survey. In Iiyiyiu Aschii, this means that the scale was applied to children ranging in age from two years and five months up to six years and three months. (The child’s parent or guardian answered the questions.) Another difference was that although the Goodman scale is usually administered in paper-and-pencil form, in Iiyiyiu Aschii it was part of a face-to-face survey.

Figure 1: Goodman Strengths and Difficulties scale — original version



### Does the scale work properly for First Nation groups?

The Goodman scale has been used around the world, including with Australian Aboriginal children. [ICHR, 2007] Nevertheless, we know that some scales work poorly in certain cultures. For instance, self-esteem scales that ask people how pleased they are with their accomplishments work well in America, but poorly in Asian countries where people consider it boastful to say positive things about their own performance. Another example is a standard scale of problem drinking that was used in the 1991 Santé-Québec survey: this scale worked well in most of Quebec, but poorly in Iiyiyiu Aschii. Apparently the problem was that the scale contains a question asking people if they “sometimes feel guilty about their drinking.” In Iiyiyiu Aschii, it seems that even moderate drinkers had a tendency to answer “yes” to this question. [Daveluy, 1994]

To address issues of cross-cultural applicability, Statistics Canada assessed the Goodman results for the three Aboriginal groups included in the survey—off-reserve First Nations,<sup>1</sup> Métis, and Inuit. [Oliver et al, 2009] What makes for a valid scale? Psychologists have developed a series of statistical techniques to measure how well a scale is working. Many of them are based on the principle that if several questions are measuring the same theme, we expect the answers to cluster together—that is, people who say “yes” or “frequently” to one question on a theme should logically answer “frequently” to other related questions. If they don’t, it sends a signal that something is awry, and the questions aren’t measuring exactly what we thought they were.

In this particular study, the Statistics Canada analysts went through the following steps:

- 1) They used a technique called Confirmatory Factor Analysis to measure “goodness of fit” — that is, how well the Goodman model actually fitted the pattern of people’s answers. They also looked at internal consistency—how well the items in each specific subscale clustered together. [See the box on the next page for further details on these methods.]

The goodness-of-fit results indicated that the scale was of debatable validity when applied to either First Nation or Inuit children, although it was acceptable for Métis. The measures of internal consistency showed that four of the five subscales were reasonably consistent for First Nation children, but several of the subscales didn’t work for Inuit. (The “peer problems” subscale didn’t work for any of the three groups, and the analysts recommended it not be used.) Taken together, these results suggested that the Goodman scale is not particularly suitable for use with Aboriginal groups.

- 2) Next, the analysts used Exploratory Factor Analysis to try to reorganize the Goodman scale so that it would do a better job of grouping similar answers together, and the overall scale would “fit” the patterns of people’s answers better. The new, adapted, version is shown in Figure 2. It contains four subscales instead of five, is organized differently, and omits three of the original 25 questions. (The analysts retained the original labels for the subscales—e.g., “prosocial”—but it is not clear that they have exactly the same meaning as before.)
- 3) The final step was to re-run the original tests on this new version of the scale, to see if it was an improvement over the original. The results indicated that it was. The Statistics Canada analysts recommended that people use this revised version instead of the original one to score and interpret the results for Aboriginal groups. The data presented in the current paper was scored according to this revised system.

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<sup>1</sup> Iiyiyiu Aschii was the only “reserve” area to be included in the Aboriginal Children’s Survey, so the emphasis was on First Nation people living off-reserve. In fact, so as not to muddy the picture, Statistics Canada excluded the data for Iiyiyiu Aschii from its assessment of the scale’s validity.

## Testing a scale's validity

### Goodness of fit

“Goodness of fit” measures how well people’s answers fit with the researcher’s original theoretical model. That is, goodness-of-fit statistics summarize the discrepancy between what one expects the answers will be under a given model and what people have actually answered. In this case, Goodman’s original “model” was that children’s strengths and difficulties can usefully be grouped into five themes (prosocial, inattention, etc), and that each theme can be measured using the five questions he developed for it. That model seemed to fit quite well for children in America and several other countries. How do we test if it fits well for First Nation children?

The tests for goodness of fit actually work on the entire scale—all 25 items—but for purposes of example it will be helpful to focus on just the inattention-hyperactivity theme. Recall that the Goodman scale measures inattention-hyperactivity through five items:

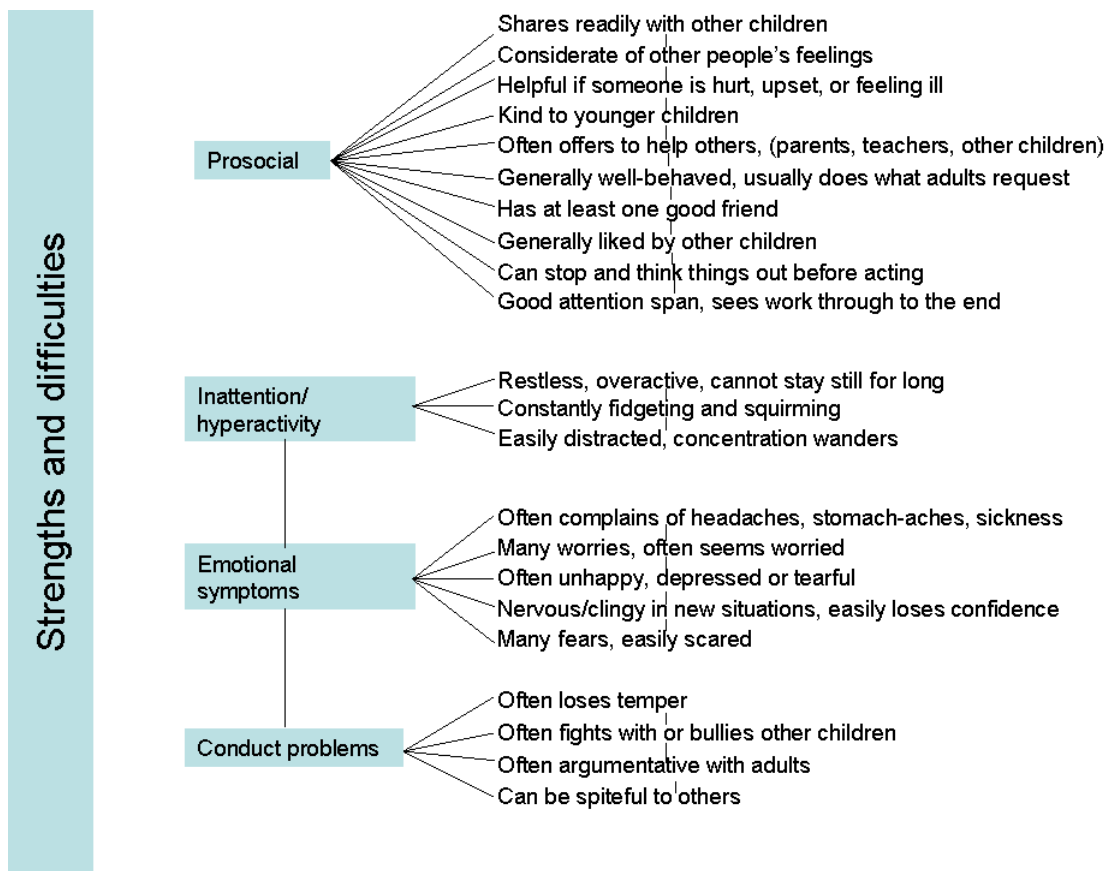
- Restless, overactive, cannot stay still for long
- Constantly fidgeting or squirming
- Easily distracted, concentration wanders
- Can stop and think things out before acting
- Good attention span, sees work through to the end

If in fact these items are good measures of inattention, then knowing a parent’s answer to one item—say, whether the child is constantly fidgeting—should give us some ability to predict the child’s overall inattention score (i.e., the score for the remaining four items in the subscale). And just how much predictive ability it gives us can be measured with statistics. Now suppose that, because of differences in cultural background or language, people in a particular group interpret one of those five items—say, “Can think things out before acting”—in a different way from other people. They don’t think of this item in terms of attention, but rather as respectfulness, so their answers to this question give us no clue how they’ll answer the other four questions on inattention. In this case, the statistics will tell us that this item doesn’t “fit” the model: rather than measuring if a child is inattentive, it seems to be measuring something else. If we find many items that don’t fit the model, this suggests that we are facing cross-cultural differences in interpretation, and that the model isn’t valid in this particular culture.

### Internal consistency

Another way to look at a scale’s validity is to assess internal consistency. The reasoning here is that items that are measuring the same theme will be correlate. So if my scale has four questions on anxiety, I expect that people who say “frequently” to the first few (in short, anxious people) will also usually say “frequently” to the others. If they don’t, I will wonder if some of those questions don’t really measure anxiety. In their study, the Statistics Canada analysts used three different measures of internal consistency.

Figure 2: The Strengths and Difficulties scale as adapted for use with Aboriginal children [Oliver et al, 2009]



### Using the adapted version

Although it seems logical to use a version of the scale that is specially tailored for First Nation groups, doing so has some drawbacks. First, since we are not using the same scale as the rest of the world, we cannot compare scores for Iiyiyiu children to those of other groups.<sup>2</sup> At best, we can compare Iiyiyiu scores to those for off-reserve First Nation children in Canada, since they were included on the same survey and can be scored the same way. More importantly, the “norms” developed for the original Goodman scale no longer apply. This means that we no longer know whether a particular score indicates a problem or not.<sup>3</sup> We do, however, still have a direction to the scores. That is, it is reasonable to assume that the higher a child’s score on the “prosocial” subscale the better, while we would want the scores on the “problem” subscales to be as low as possible.

<sup>2</sup> Such comparisons would have been difficult in any case, since we don’t have Goodman scores for Canadian children in general; the scale is not included on the National Longitudinal Survey of Children and Youth.

<sup>3</sup> In the long run, it may be possible to develop norms specifically for Aboriginal groups, but this has not yet been done.

Because we no longer have norms, the discussion that follows for Iiyiyiu Aschii is strictly exploratory. The purpose is not to draw conclusions about the strengths and difficulties of children in Iiyiyiu Aschii. Rather, it is to take a first look at how the scale performs, focusing on two questions:

1. How do the results for Iiyiyiuch compare to those for off-reserve First Nation children?
2. Do certain individual or family characteristics seem to go along with higher scores on the scale?

## Findings

### *Preliminary caution*

Although most parents who were asked to answer the Aboriginal Children’s Survey agreed to do so, non-response rates are high for some of the individual questions: unusually large proportions of people either refused to answer or said “don’t know.” This also held true for the various questions in the Goodman scale. In particular, four of the Goodman questions had non-response rates in the 20–36% range. (This kind of non-response may be a signal of cross-cultural differences in interpretation. People may be choosing to say “don’t know” rather than answer questions that are not meaningful to them. Alternatively, it may signal difficulties translating certain questions into Cree.)

### *Goodman results for Iiyiyiuch and off-reserve children*

Tables 1 and 2 show the average scores on each subscale for children in Iiyiyiu Aschii and for off-reserve First Nation children living in other parts of Canada. We can see that the average score for Iiyiyiu children on the “prosocial” subscale was 14 (out of a maximum of 20). The quintiles tell us that a fifth of children scored under 10 on the prosocial scale; the next fifth scored between 10 and 13.5; while the top fifth were such paragons that they scored over 17.6. We also see that Iiyiyiu children scored, on average, 2 out of a maximum of 6 on the inattention questions; 1.6 (of a possible 10) on emotional symptoms such as being nervous or clingy; and 2.3 (of a possible 8) on conduct problems such as fighting and arguing.

As compared to the results seen for off-reserve First Nation children, the Iiyiyiu scores are slightly lower for “prosocial” behaviours, but also slightly lower on all the problem behaviours. Since each question was scored as “not true,” “somewhat true,” or “completely true,” one possibility is that Iiyiyiu children are simply more “in the middle” in terms of both strengths and difficulties.

Table 1: Mean score and distribution by quintiles for the Goodman scale:  
Children in Iiyiyiu Aschii

	MEAN	Distribution by Quintiles			
		P 20	P 40	P 60	P 80
Prosocial subscale (max. of 20)	14.0	10.0	13.5	15.7	17.6
Inattention/hyperactivity (max. of 6)	2.0	0.0	0.7	1.8	2.9
Emotional subscale (max. of 10)	1.6	0.0	0.2	1.2	2.6
Conduct problems subscale (max. of 8)	2.3	0.0	0.8	1.9	3.6
Total difficulties	6.8	2.9	4.9	7.3	10.3

Table 4: Mean score and distribution by quintiles for the Goodman scale:  
First Nation children living off-reserve<sup>4</sup>

	MEAN	Distribution by Quintiles			
		P 20	P 40	P 60	P 80
Prosocial subscale	16.6	14.0	16.3	17.8	18.9
Inattention/hyperactivity subscale	2.3	.	1.5	2.2	3.2
Emotional subscale	1.8	.	0.5	1.8	3.0
Conduct problems subscale	2.7	0.3	1.6	2.9	3.9

In the absence of norms to tell us what score would indicate a problem, we cannot go much further than this in interpreting the results. We can, however, use these results as a baseline to measure changes in future. And we can examine what characteristics seem to be associated with higher “prosocial” scores and lower “problem” scores.

### ***Characteristics associated with high and low Goodman scores***

This part of the analysis looks at six measures that might be expected to affect children’s strengths and difficulties. The first two measures have to do with parent characteristics; the third with child care arrangements; and the last three with family ties. (Statistical tables for the results are shown in Appendix 2.)

#### *Parent characteristics*

This portion focused on two measures that might affect parenting:

1. Education of the parent or caregiver answering the survey
2. Whether one or both parents had attended a residential school or been placed in care.

Most measures of health correlate with education, and it seems the Goodman measures are no exception. Children whose parents had postsecondary education had significantly higher scores on the “prosocial” subscale. The results on the measure of “total problems” were slightly less clear, but still showed some relationship with the parent’s education.

The results according to whether the parent had attended a residential school or been in care were mixed. On the one hand, the children of these parents had significantly higher “total difficulties” scores, apparently reflecting a greater tendency to have problems with inattention and conduct. On the other hand, there was no statistically significant difference in the children’s “prosocial” scores.

#### *Child care*

Programs like Head Start are intended to develop children’s skills in various areas, so it seemed reasonable to expect that children attending Head Start, nursery school, or some other formal type of care might score higher on the Goodman measures than children who were receiving informal care from a relative or neighbour. The results do not support this view: on most of the Goodman

<sup>4</sup> Note that these values are not the same as those previously published by Oliver *et al* for off-reserve First Nations. The scoring method used for this paper differed slightly from Oliver’s method. See Appendix 1 for details.



measures, there was no statistically significant difference between the two groups, and if anything a slight tendency for the children in informal care to score better than those in institutional arrangements. For the “conduct problems” subscale, there *was* a statistically significant difference, with the children in informal care having better scores.<sup>5</sup>

However, an age effect may be obscuring the picture with respect to formal vs informal care. Only a small proportion of children in the territory are in informal care, and almost all of these children are already in school (which suggests that the informal care is for before and after-school periods). If things like conduct problems tend to decline with age, then it’s possible that what we’re really measuring when we compare formal and informal care is the fact that the “informal care” group is somewhat older.

### *Family ties*

The last three measures looked at family ties:

1. The total number of children in the home (1–2 children vs 3 or more)
2. Whether or not the child was growing up in a three-generation household<sup>6</sup>
3. Whether the child saw other relatives on a daily basis.

The reasoning here was that the increased opportunities for socialization offered by growing up in large households or seeing relatives might strengthen a child’s “prosocial” skills. However, none of these three measures showed any significant relationship to either the “prosocial” skills or the child’s “total difficulties” score.

In sum, the Goodman scores show some association with the parent’s education, and some with whether a parent was at residential school or in care (particularly in the inattention and conduct subscales). The relationship between a child’s scores and attendance at daycare is somewhat ambiguous; and none of the measures of family ties seem to correlate to the Goodman scores.

## **Acknowledgements**

I would like to thank Rene Dion—friend, psychologist, and statistician extraordinaire—for the hours he spent helping me to understand how psychometric scales are developed and tested. Any remaining mistakes in the description are, of course, mine.

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<sup>5</sup> In future, it would also be interesting to compare results for children in some form of care to those who are being cared for at home by their parents.

<sup>6</sup> 27% of children in Iiyiyiu Aschii were living in households that contained three generations.

## References

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Oliver, Lisa, Dafna Kohen, and Cameron McIntosh (2009). “Aboriginal Children’s Survey 2006: Evaluation of the Strengths and Difficulties Questionnaire.” Health Division, Statistics Canada, publication forthcoming.

## Appendix I: Scoring of Goodman Scale

For this study, the following scoring method was adopted.

Consistent with usual practice for the Goodman scale, each answer was scored as 0, 1, or 2. For the positive items, “0” was assigned to answers of “not true,” 1 to “somewhat true” and 2 to “certainly true.” For negative items, the order was reversed.

Valid skips (meaning in the case of this survey that the child was under two) were excluded.

Missing values/partial non-response were handled by pro-rating the child’s score for the items that *were* complete across all the items in that particular subscale. That is, if three out of five answers were present, the average score for those three answers was multiplied by five. However, the results exclude children who skipped *all* the items in a particular subscale.

The method above differs slightly from the one adopted by Oliver et al in their previous study. Oliver et al assigned scores of 1, 2, or 3 to the answers, and apparently required that children have answers to at least 80% of the items on a subscale. [How this 80% cut-off worked in practice, given that one of the subscales has only three questions, and another has four, is not clear.]

## **Appendix 2: Tables and results of significance tests**

## Basic frequencies for James Bay Cree children on Goodman scale items

Using the “First-Nation-adapted” groupings of Goodman

E = caution, high variability    F = suppressed for variability reasons    X = suppressed to protect confidentiality.

	Not true	Some- what true	Certainly true	Not stated	Total
<b>Social scale</b>	%	%	%	%	%
Considerate of other people’s feelings	x	18	68	12	100%
Shares readily with other children	7	30	57	7	
Helpful if someone is hurt, upset, or feeling ill	3E	15	72	10	
Kind to younger children	3E	15	69	14	
Often offers help to others (incl. parents, teachers, other children)	2E	16	63	19	
Generally well-behaved, usually does what adults request	4E	41	46	8	
Has at least one good friend	2E	4E	84	9	
Generally liked by other children	x	12	73	13	
Can stop and think things out before acting	12	26	26	36	
Good attention span, sees work through to the end	7	30	38	26	
<b>Inattention-hyperactivity scale</b>					
Restless, overactive, cannot stay still for long	32	36	24	9	
Constantly fidgeting or squirming	51	21	12	15	
Easily distracted, concentration wanders	34	30	19	17	
<b>Emotional scale</b>					
Often complains of headaches, stomach aches or sickness	65	18	7	9	
Many worries, often seems worried	71	13	3E	12	
Often unhappy, depressed or tearful	65	17	5	12	
Nervous or clingy in new situations, easily loses confidence	56	17	10	17	
Many fears, easily scared	47	19	12	22	
<b>Conduct scale</b>					
Often loses temper	31	47	14	8	
Often fights with other children or bullies them	48	28	10	13	
Often argumentative with adults	37	31	12	18	
Can be spiteful to others	37	26	10	26	

## Basic frequencies for First Nation children living off-reserve on Goodman scale items

Using the “First-Nation-adapted” groupings of Goodman

E = caution    F = suppressed for variability reasons    X = suppressed to protect confidentiality.

	Not true	Some- what true	Certainly true	Not stated	Total
<b>Social scale</b>					
Considerate of other people’s feelings	2	25	70	2	100%
Shares readily with other children	4	33	60	2	
Helpful if someone is hurt, upset, or feeling ill	3	19	75	3	
Kind to younger children	3	13	80	3	
Often offers help to others (incl. parents, teachers, other children)	3	22	72	3	
Generally well-behaved, usually does what adults request	3	31	63	2	
Has at least one good friend	6	9	81	4	
Generally liked by other children	1	11	84	3	
Can stop and think things out before acting	15	49	32	4	
Good attention span, sees work through to the end	10	42	45	4	
<b>Inattention-hyperactivity scale</b>					
Restless, overactive, cannot stay still for long	41	34	22	3	
Constantly fidgeting or squirming	62	22	13	3	
Easily distracted, concentration wanders	43	36	17	4	
<b>Emotional scale</b>					
Often complains of headaches, stomach aches or sickness	83	12	2	2	
Many worries, often seems worried	82	13	3	3	
Often unhappy, depressed or tearful	84	10	3	3	
Nervous or clingy in new situations, easily loses confidence	53	31	13	3	
Many fears, easily scared	65	25	7	3	
<b>Conduct scale</b>					
Often loses temper	35	46	17	2	
Often fights with other children or bullies them	71	20	6	3	
Often argumentative with adults	51	34	12	3	
Can be spiteful to others	56	32	9	4	

**Goodman scores cross tabulated by parent's education: Iiyiyiu Aschii**

**Average score on the prosocial subscale and total difficulties scale crossed by highest education level of parent answering survey, James Bay Cree, ACS 2006**

	<b>Social scale</b>	<b>Total difficulties scale</b>
	<b>Average score</b>	<b>Average score</b>
<b>High school</b>	16.3	7.1
<b>Post-secondary</b>	17	6.3
<b>University</b>	17.2	5

**Significance of mean prosocial scale for all 3 education levels and contrasts**

<b>Obs</b>	<b>CONTRAST</b>	<b>DF</b>	<b>WALDF</b>	<b>WALDP</b>	<b>signif</b>
<b>1</b>	HS=PS=Univ	2	4.85	0.008	yes
<b>2</b>	HS=PS	1	8.83	0.003	yes
<b>3</b>	HS=Univ	1	2.01	0.1571	no
<b>4</b>	PS=Univ	1	0.06	0.8052	no

**Significance of mean total difficulties scale for all 3 education levels and contrasts**

<b>Obs</b>	<b>CONTRAST</b>	<b>DF</b>	<b>WALDF</b>	<b>WALDP</b>	<b>signif</b>
<b>1</b>	HS=PS=Univ	2	5.59	0.0039	yes
<b>2</b>	HS=PS	1	4.93	0.0267	no
<b>3</b>	HS=Univ	1	7.75	0.0055	yes
<b>4</b>	PS=Univ	1	2.78	0.0959	no

E: Use with caution.

F: Too unreliable to be published.

X: Suppressed to meet the confidentiality requirements of the Statistics Act.

**Goodman scores cross tabulated by whether one or both parents attended a residential school or was placed in care:  
liyiyiu Aschii**

Percent of parents who attended a residential school or were placed in care – liyiyiu Aschii	
	ColPct
Parents attended a residential school or were placed in care	20.2
No/DK/NS	79.8

**Average scales crossed by whether children's parents attended a residential school or were placed in care**

	Social scale	Total difficulties	Inattention/hyperactivity scale	Emotional scale	Conduct problems scale
Parents attended a residential school or were placed in care	14.7	7.8	2.7	2	3.1
No/DK/NS	13.8	6.6	2.2	1.8	2.6

**Significance of mean Goodman scale for 2 levels of whether children's parents attended a residential school or were placed in care**

Obs	dv_soc	CONTRAST	MEAN	T_MEAN	P_MEAN	signif
1	Social scale	Attended vs Not attended		0.2	0.75	0.4546 No
2	Total difficulties	Attended vs Not attended		1.28	2.94	0.0034 Yes
3	Inattention/hyperactivity scale	Attended vs Not attended		0.5	2.74	0.0063 Yes
4	Emotional scale	Attended vs Not attended		0.018	0.91	0.3619 No
5	Conduct problems scale	Attended vs Not attended		0.53	2.57	0.0104 Yes



**Goodman scores cross tabulated by whether the child attends formal daycare or informal care: liiyiu Aschii**

**Table Goodman E  
Percentage of children in daycare setting, James Bay Cree, ACS, 2006**

	<b>ColPct</b>
Formal daycare setting	42.5
Informal daycare setting	6.9
Valid skip or NS	50.6

**Average scales of whether child is in regular childcare in a formal setting (nursery school, Head Start etc) or not**

	<b>Social scale</b>	<b>Total difficulties scale</b>	<b>Inattention/hyperactivity scale</b>	<b>Emotional scale</b>	<b>Conduct problems scale</b>
Formal daycare setting	16.5	7.1	2.2	1.9	3
Informal daycare setting	17.2	6	2	1.9	1.9
Valid skip or NS	16.5	6.7	2.3	1.8	2.6

**Significance of mean Goodman scale for 2 levels of whether child is in regular childcare in a formal setting (nursery school, Head Start etc) or not**

<b>Obs</b>	<b>dv_soc</b>	<b>CONTRAST</b>	<b>MEAN</b>	<b>T_MEAN</b>	<b>P_MEAN</b>	<b>signif</b>
1	Social scale	Formal vs Informal	-0.76	-1.39	0.1652	No
2	Total Difficulties	Formal vs Informal	1.05	1.54	0.1231	No
3	Inattention/hyperactivity scale	Formal vs Informal	0.2	0.65	0.5168	No
4	Emotional scale	Formal vs Informal	-0.05	-0.18	0.8564	No
5	Conduct problems scale	Formal vs Informal	1.07	3.49	0.0005	Yes

Goodman scores cross tabulated by total number of children in the home (including the child being surveyed): liyiyiu Aschii

Average score on the prosocial subscale and total difficulties scale crossed by the number of children at home, James Bay Cree, ACS, 2006

Children in home	Social scale Average score	Total difficulties scale Average score
2 or less	16.8	6.6
3 or more	16.4	6.9

Significance of mean social scale and total difficulties scale for 2 levels of children number and contrasts

Obs	dv_soc	CONTRAST	MEAN	T_MEAN	P_MEAN	signif
1	Social scale	LessCHD vs MoreCHD	0.4	1.62	0.1058	No
2	Total difficulties scale	LessCHD vs MoreCHD	-0.38	-1.03	0.3042	No

Goodman scores cross tabulated by whether children talk to relatives on a daily basis: liyiyiu Aschii

**Table Goodman C**  
**Mean social scale and total difficulties scale crossed by whether children talk to relatives on daily basis,**  
**James Bay Cree, ACS, 2006**

	Social scale Average score	Total difficulties scale Average score
Daily basis	16.6	7
Once in a while/DK/NS	16.5	6.6

**Significance of mean social scale and total difficulties scale for whether children talk to relatives on daily basis**

Obs	dv_soc	CONTRAST	MEAN	T_MEAN	P_MEAN	signif
1	Social scale	Daily vs not daily	0.11	0.51	0.6125	No
2	Total difficulties scale	Daily vs not daily	0.41	1.22	0.2246	No

**Goodman scores cross tabulated by whether the child lives in a three-generation household or not: Iiyiyu Aschii**

**Percentage of children in a 3-generation household,  
James Bay Cree, ACS, 2006**

	<b>CoIPct</b>
3-generation household	26.6
Others	73.4

**Average scale of whether children living a 3 generation household or not**

	<b>Social scale</b>	<b>Total difficulties scale</b>	<b>Inattention/hyperactivity scale</b>	<b>Emotional scale</b>	<b>Conduct problems scale</b>
3-generations household	16.7	7.1	2.3	2	2.8
Others	16.5	6.7	2.3	1.7	2.7

**Significance of mean Goodman scale for 2 levels of whether children living a 3 generation household or not**

<b>Obs</b>	<b>dv_soc</b>	<b>CONTRAST</b>	<b>MEAN</b>	<b>T_MEAN</b>	<b>P_MEAN</b>	<b>sig nif</b>
1	Social scale	3 generation HH vs Others	0.17	0.7	0.4856	No
2	Total difficulties scale	3 generation HH vs Others	0.37	1	0.3154	No
3	Inattention/hyperactivity scale	3 generation HH vs Others	0	0	1	No
4	Emotional scale	3 generation HH vs Others	0.27	1.68	0.0941	No
5	Conduct problems scale	3 generation HH vs Others	0.17	1.02	0.3085	No