

# Tjilku Walykumunu

Ngaanyatjarra Lands  
Child Health Study

APPENDIX SIX:  
FAMILY WELLBEING  
DATA ANALYSIS



Ngaanyatjarra  
Health Service

# Developing a Family Wellbeing Scale

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## **Methods**

Specifically collected data on household indicators of wellbeing were collected across the domains of financial, socio-demographic, family and leadership, housing and risk factors for twenty households (or families). Within each domain the indicators were tabulated, and a factor analysis of the indicators for each domain was carried out to identify sets of indicators that differentiated households. For each factor analysis, loadings for the indicators are presented with those greater than 0.4 in bold black, and those from 0.30 to 0.40 in bolded red, along with each factor's Eigen-value and the variation explained by that factor. Loadings can be interpreted in a similar way to a correlation coefficient, with a factor with indicators having a positive loadings being positive correlated with each other, and the negative loadings indicating that that indicator is negatively correlated with other indicators on that factor.

## Results

### *Financial indicators of wellbeing*

Table 1 shows counts and frequency for financial indicators of wellbeing for the twenty families (n=20). Forty percent of households had someone employed at the time of the survey, 95% of households has a person on Centrelink payments, while 30% had someone participating in CDP. Thirty-five percent of households always ran out of money before their next payday, 40% mostly had money before next payday, while 25% always had money.

**Table 1.** Frequency and percentage for financial indicators of wellbeing

<b>Someone employed</b>	<b>n</b>	<b>%</b>	<b>Participates in CDP</b>	<b>n</b>	<b>%</b>
No	9	45	No	14	70
Yes	8	40	Yes	6	30
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>

  

<b>Receives Centrelink</b>	<b>n</b>	<b>%</b>	<b>Has money for essentials <sup>1</sup></b>	<b>n</b>	<b>%</b>
No	1	5	Run out before next pay	7	35
Yes	19	95	Mostly have	8	40
<b>Total</b>	<b>20</b>	<b>100</b>	Always have	5	25
			<b>Total</b>	<b>20</b>	<b>100</b>

<sup>1</sup> Has money for essentials such as food and bills before next pay

Table 2 presents factor loadings, Eigen-values and the percentage of variation explained for each factor for financial indicators of wellbeing. It shows:

- Families with someone employed were less likely to run out of money for essentials, and less likely to be on Centrelink payments.
- Families with someone on CDP were better at managing money than those on Centrelink (and not CDP)
- Families with someone participating in CDP were more likely to also be on Centrelink payments than employed

**Table 2.** Rotated factor analysis of financial indicators of wellbeing

<b>Variable</b>	<b>Factor 1</b>	<b>Factor 2</b>
Has money for essentials always	<b>0.88</b>	-0.10
Employed	<b>0.86</b>	<b>0.39</b>
Participates in CDP	0.14	<b>0.90</b>
Receives Centrelink	<b>-0.57</b>	<b>0.52</b>
Eigen values	1.86	1.25
% variation explained	46.4%	31.1%
Cum. % variation explained	46.4%	77.5%

### *Socio-demographic indicators of wellbeing*

Most households were either multigenerational families (35%), or families with multiple households across the community (35%). Usual household residents was from seven to nine for 40% of households, four to six for 50% of households, and one to three for 10% of households. Most households had slightly more residents in the house on the night of the survey, compared with usual resident numbers. Most (75%) of households had grandparents living in the household. Most (80%) of households reported that the crowding levels were never high, while 20% reported they were sometimes high. Fifty-five percent of households spoke a mixture of Aboriginal and English at home, while 45% spoke in an Aboriginal language predominantly. Most (80%) of households reported they spoke English at a good level, while 20% reported they only spoke a little bit of English.

**Table 3.** Frequency and percentage for socio-demographic indicators of wellbeing

<b>Household type</b>	<b>n</b>	<b>%</b>	<b>Subjective crowding low</b>	<b>n</b>	<b>%</b>
Nuclear-family HH	4	20	Sometimes high	4	20
Multi-generational HH	7	35	Never high	16	80
HHs across community	7	35	<b>Total</b>	<b>20</b>	<b>100</b>
HHs across multi-communities	2	10			
<b>Total</b>	<b>20</b>	<b>100</b>			
<b>Usual HH residents higher</b>	<b>n</b>	<b>%</b>	<b>Night of survey residents higher</b>	<b>n</b>	<b>%</b>
1 to 3	2	10	1 to 3	2	10
4 to 6	10	50	4 to 6	7	35
7 to 9	8	40	7 to 9	10	50
<b>Total</b>	<b>20</b>	<b>100</b>	10 or more	1	5
			<b>Total</b>	<b>20</b>	<b>100</b>
<b>Language spoken at home</b>	<b>n</b>	<b>%</b>	<b>English proficiency good</b>	<b>n</b>	<b>%</b>
Aboriginal language spoken	9	45	A little bit	4	20
Mixed-language spoken	11	55	Good	16	80
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Grand-parents in HH</b>	<b>n</b>	<b>%</b>			
No	5	25			
Yes	15	75			
<b>Total</b>	<b>20</b>	<b>100</b>			

Table 4 presents factor loadings, Eigen-values and the percentage of variation explained for each factor for socio-demographic indicators of wellbeing. It shows:

- Households with higher levels of usual residential crowding, were also more likely to have higher levels of crowding on the night of the survey, and more likely to have other family in households across the community. This was negatively correlated with a nuclear family household.
- Households that spoke their Aboriginal language at home were more likely to report that their subjective crowding was low.
- Multigenerational households were negative correlated with households who had family in other houses in the community.
- Households with grand-parents living in them were corelated with households who had family in households spread across multiple communities.
- Households with someone with good English proficiency were more likely to report higher levels of crowding on the night of the survey.

**Table 4.** Rotated factor analysis of socio-demographic indicators of wellbeing

<b>Variable</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>	<b>Factor 5</b>
Usual HH residents higher	<b>0.77</b>	<b>-0.34</b>	-0.08	-0.11	0.09
Night of survey residents higher	<b>0.74</b>	-0.18	-0.01	0.21	<b>0.43</b>
HHs across community	<b>0.45</b>	0.06	<b>-0.80</b>	<b>-0.28</b>	-0.16
Heritage language spoken at home	-0.01	<b>0.93</b>	0.04	0.07	-0.18
Subjective crowding low	-0.22	<b>0.78</b>	-0.14	<b>-0.25</b>	0.15
Multi-generational HH	<b>0.27</b>	0.00	<b>0.92</b>	-0.22	-0.13
HHs across multi-communities	0.07	-0.04	-0.07	<b>0.93</b>	0.10
Grandparents live in HH	<b>0.30</b>	-0.33	0.25	<b>0.40</b>	-0.05
English proficiency good	-0.05	-0.05	-0.02	0.08	<b>0.96</b>
Nuclear family HH	<b>-0.91</b>	-0.05	-0.10	-0.11	<b>0.27</b>
Eigen values	2.40	1.74	1.60	1.30	1.30
% Explained	24.0%	17.4%	16.0%	13.0%	13.0%
Cum. %	24.0%	41.4%	57.4%	70.4%	83.4%

### *Family and leadership indicators of wellbeing*

Most (85%) of households reported that they were close to their kin, regularly talking and sharing things. Twenty percent of households reported a 'no-boundaries' style of parenting, 25% had strict parenting style and 55% were mixed parenting style. Forty percent of households reported conflict in their households some of the time, while 30% reported conflict often, and 30% never. Sixty percent of households reported having a community leader in their household, while 35% reported having a cultural leader in their household. Sixty-five percent of households reported they had strategic relationships beyond their own family. Just 15% of household reported they did no or a few cultural activities, while 45% reported they did some and a further 40% reported they regularly did cultural activities. Thirty percent of households reported they did not have regular household routines (e.g. cooking, cleaning), while 35% reported that they did household routines some of the time and 35% did household routines most or all the time. Over half of households (60%) indicated that they were confident in two-worlds. Most (75%) of households had grandparents, while 15% reported that the grandmother was often or always the primary carer of children in the household, 10% reported that sometimes the grandmother was the primary carer, and 75% never reported a grandmother as a primary carer. Forty percent of households had someone living there receiving home care.

**Table 5.** Frequency and percentage for family indicators of wellbeing

<b>Good kin support</b>	<b>n</b>	<b>%</b>	<b>Parenting style strict</b>	<b>n</b>	<b>%</b>
No support, with tension	2	10	No-boundaries	4	20
Kin not close, but OK	1	5	Mixed	11	55
Kin close: Talk & share	17	85	Strict	5	25
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Low levels of HH conflict</b>	<b>n</b>	<b>%</b>	<b>Community leader in HH</b>	<b>n</b>	<b>%</b>
Often	6	30	No	8	40
Sometimes	8	40	Yes	12	60
Never	6	30	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Total</b>	<b>20</b>	<b>100</b>			
<b>Grand-parents in HH</b>	<b>n</b>	<b>%</b>	<b>Cultural leader in HH</b>	<b>n</b>	<b>%</b>
No	5	25	No	13	65
Yes	15	75	Yes	7	35
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Grand-mother primary carer less</b>	<b>n</b>	<b>%</b>	<b>Strategic relationships beyond family</b>	<b>n</b>	<b>%</b>
Almost/Always	3	15	No	7	35
Sometimes	2	10	Yes	13	65
Never	15	75	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Total</b>	<b>20</b>	<b>100</b>			
<b>Regular cultural activities</b>	<b>n</b>	<b>%</b>	<b>Confident in two worlds</b>	<b>n</b>	<b>%</b>
None or a few cultural activities	3	15	No	8	40
Some cultural activities	9	45	Yes	12	60
Regular cultural activities	8	40	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Total</b>	<b>20</b>	<b>100</b>			
<b>Regular HH Routines</b>	<b>n</b>	<b>%</b>	<b>Home care in HH</b>	<b>n</b>	<b>%</b>
None	6	30	No	12	60
Some HH routines	7	35	Yes, someone receives homecare	8	40
Regular HH routines	7	35	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Total</b>	<b>20</b>	<b>100</b>			

Table 6 presents factor loadings, Eigen-values and the percentage of variation explained for each factor for family indicators of wellbeing. It shows:

- For a subset of households, having regular household routines, low levels of household conflict, being confident in two-worlds, and having strategic relationships beyond the family

and having a community leader in the household were positively correlated, while these factors were negatively correlated with a strict parenting style (and households with someone receiving home care).

- Another subset of households were more likely to have grandparents in the household, a household with someone receiving home care, do regular cultural activities, have good kin support and also have strategic relationships beyond the family.
- There were also a group of households which had both a community and cultural leader in the house, carried out regular cultural activities, and were confident in two-worlds.
- A smaller subset of households had a grandmother as a primary carer, had a cultural leader and good kin support.

**Table 6.** Rotated factor analysis of housing indicators of wellbeing

Variable	Factor 1	Factor 2	Factor 3	Factor 4
Regular HH routines	<b>0.92</b>	-0.10	0.12	0.05
Low levels of HH conflict	<b>0.88</b>	0.13	-0.23	0.00
Confident in two worlds	<b>0.83</b>	0.25	<b>0.37</b>	0.20
Strategic relationships beyond family	<b>0.62</b>	<b>0.58</b>	0.16	0.00
Grand-parents in HH	0.04	<b>0.79</b>	0.05	-0.16
Recipient of home care in HH	<b>-0.35</b>	<b>0.77</b>	-0.19	-0.13
Regular cultural activities	0.30	<b>0.55</b>	<b>0.39</b>	0.29
Good kin support	0.23	<b>0.44</b>	-0.06	<b>0.57</b>
Community leader in HH	<b>0.37</b>	-0.13	<b>0.88</b>	-0.11
Cultural leader in HH	-0.26	0.22	<b>0.68</b>	<b>0.55</b>
Grand-mother primary carer less	0.11	-0.26	0.01	<b>0.89</b>
Parenting style strict	<b>-0.87</b>	<b>0.31</b>	-0.22	-0.01
Eigen values	3.94	2.34	1.70	1.60
% variation explained	32.9%	19.5%	14.2%	13.3%
Cum. % variation explained	32.9%	52.4%	66.6%	79.9%



### Housing indicators or wellbeing

Thirty percent of households had a lot of furniture, 40% some furniture and 30% had little or no furniture. Food preparation and storage was mostly or always done in 35% of households, and never in 25% of households. Thirty percent of households were well equipped with cooking utensils, while 20% had limited or no cooking utensils. Eighty percent of households had a functioning kitchen, 70% had cleaning products in the house, and 90% had a functioning bathroom. Most (75%) households had a washing machine for washing clothes, while 55% had a washing machine that could wash blankets.

**Table 7.** Frequency and percentage for housing indicators of wellbeing

House has lots of furniture			Food preparation & storage mostly/always		
	n	%		n	%
A little furniture	6	30	Never	5	25
Some furniture	8	40	Sometimes	8	40
Lots of furniture	6	30	Mostly/Always	7	35
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
Cooking utensils well equipped			Cleaning house products present		
	n	%		n	%
Limited-None	4	20	No	6	30
Some	10	50	Yes	14	70
Well equipped	6	30	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Total</b>	<b>20</b>	<b>100</b>			
Functioning kitchen			Washing machine for clothes available		
	n	%		n	%
No	4	20	No	5	25
Yes	16	80	Yes	15	75
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
Functioning bathroom			Washing machine for blankets available		
	n	%		n	%
No	2	10	No	9	45
Yes	18	90	Yes	11	55
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>

Table 8 presents factor loadings, Eigen-values and the percentage of variation explained for each factor for housing indicators of wellbeing. It shows:

- For most households, all housing indicators of wellbeing, except having a functioning bathroom were correlated with each other.
- A subset of households were more likely to have a functioning bathroom and kitchen, and had lots of furniture, but were less likely to have a washing machine for clothes.

**Table 8.** Rotated factor analysis of housing indicators of wellbeing

Variable	Factor 1	Factor 2
Cooking utensils well equipped	<b>0.92</b>	0.22
Food preparation & storage mostly	<b>0.91</b>	0.28
House has lots of furniture	<b>0.86</b>	<b>0.44</b>
Washing machine for clothes available	<b>0.75</b>	<b>-0.39</b>
Cleaning house products present	<b>0.69</b>	0.07
Washing machine for blankets available	<b>0.67</b>	0.00
Bathroom functioning	0.07	<b>0.91</b>
Kitchen functioning	<b>0.35</b>	<b>0.83</b>
Eigen values	4.03	1.99
% Explained	50.4%	24.9%
Cum. %	50.4%	75.3%

### Risk factors for wellbeing

Twenty percent of households often had drug use, while 35% never did. Most (65%) of households reported drinking alcohol sometimes, and 30% never drank alcohol in the house. Ninety percent of households reported tobacco use often (46%) and sometimes (45%). Ten percent of households reported gambling often, 55% sometimes, and 35% never. Thirty percent of households reported they never did exercise, and 70% did sometimes.

**Table 9.** Frequency and percentage for housing indicators of wellbeing

<b>Drug use never</b>	<b>n</b>	<b>%</b>	<b>Tobacco use never</b>	<b>n</b>	<b>%</b>
Often	4	20	Often	9	45
Sometimes	9	45	Sometimes	9	45
Never	7	35	Never	2	10
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Alcohol use never</b>	<b>n</b>	<b>%</b>	<b>Gambling never</b>	<b>Freq.</b>	<b>Percent</b>
Often	1	5	Often	2	10
Sometimes	13	65	Sometimes	11	55
Never	6	30	Never	7	35
<b>Total</b>	<b>20</b>	<b>100</b>	<b>Total</b>	<b>20</b>	<b>100</b>
<b>Exercises more (sometimes)</b>	<b>n</b>	<b>%</b>			
Never	6	30			
Sometimes	14	70			
<b>Total</b>	<b>20</b>	<b>100</b>			

Table 10 presents factor loadings, Eigen-values and the percentage of variation explained for each factor for risk factors of wellbeing. It shows:

- There was a subset of households that never gambled, used alcohol or drugs, and were more likely to exercise sometimes.
- Another subset were more likely to never use tobacco, exercise sometimes, and never use drugs.

**Table 10.** Rotated factor analysis of risk factors of wellbeing

<b>Variable</b>	<b>Factor 1</b>	<b>Factor 2</b>
Gambling never	<b>0.83</b>	0.08
Alcohol use never	<b>0.76</b>	-0.13
Drug use never	<b>0.64</b>	<b>0.51</b>
Tobacco use never	-0.17	<b>0.82</b>
Exercise more (sometimes)	<b>0.30</b>	<b>0.75</b>
Eigen values	1.80	1.51
% Explained	36.0%	30.1%
Cum. %	36.0%	66.1%