Supplementary file- Plausible values calculations

Plausible values are values that are imputed to resemble individual responses and have approximately the same distribution as the construct being measured. Their value is dependent on the observed values of the recorded responses and related variables. For information regarding plausible value calculations in the context of the ACWP, please see the technical report [1].

The table below highlights plausible value calculations for Table One where the family cohesion variable was used. Only calculations for the younger year levels appear to alter the results in that the gradient increases across family cohesion levels.

Table 1. Plausible values calculations of prevalence of FHCs in years 4&6, by type and family cohesion level (%)

Family cohesion level	Disability	Mental Illness	Drugs	FHC Overall
Years 4&6				
Low family cohesion	19.7 (8.47-30.98)	12.1 (6.29-17.91)	10.8 (4.86-16.65)	31.5 (19.92-43.06)
Average family cohesion	13.6 (8.84-18.30)	7.6 (4.67-10.53)	6.5 (3.52-9.58)	22.3 (16.81-27.85)
High family cohesion	11.7 (4.91-18.54)	9.6 (-0.52-19.75)	8.3 (0.47-16.12)	23.9 (10.39-37.4)
Year 8				
Low family cohesion	17.21 [12.36 - 22.06]	20.78 [14.18 - 27.37]	15.49 [10.01 - 20.97]	37.03 [28.75 - 45.3]
Average family cohesion	12.80 [10.92 - 14.67]	10.80 [8.6 - 13]	7.13 [5.44 - 8.82]	24.16 [21.09 - 27.23]
High family cohesion	14.19 [8.47 - 19.92]	6.06 [3.22 - 8.9]	3.41 [-0.01 - 6.83]	19.60 [13.22 - 25.97]

Table 2. Plausible values calculations of symptom load by FHC and family cohesion.

| | Years 4 & 6 | | Year 8 | |
	No FHC	FHC	No FHC	FHC
Low family cohesion	35.66 [23.94 - 47.38]	57.78 [37.24 - 78.32]	38.55 [29.67 - 47.43]	55.51 [43.64 - 67.38]
Average family cohesion	28.90 [24.13 - 33.68]	46.41 [34.28 - 58.54]	23.95 [20.44 - 27.46]	39.61 [33.48 - 45.74]
High family cohesion	20.59 [11.52 - 29.66]	35.71 [13.83 - 57.6]	17.06 [11.09 - 23.03]	29.55 [13.49 - 45.62]

Table 3. Plausible values calculations for odds ratios for marginalised and non-marginalised students in Years 4 and 6 and Year 8 experiencing 2+ health complaints at least weekly, controlling for presence of FHC.

	Model 1		Model 2		Model 3		Model 4		Model 5		
			Controls		FHC disability		FHC mental illness		FHC drug/alcohol addiction		Any FHC
Variables	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI	
Year 8	0.82***	0.71 - 0.95	0.80***	0.68 - 0.93	0.79***	0.67 - 0.92	0.84**	0.72 - 0.98	0.81**	0.68 - 0.96	
Girl	1.53***	1.33 - 1.75	1.49***	1.29 - 1.72	1.37***	1.18 - 1.59	1.50***	1.29 - 1.74	1.37***	1.17 - 1.61	
Disability	3.37***	2.73 - 4.21	3.26***	2.57 - 4.13	3.03***	2.31 - 3.96	3.29***	2.62 - 4.13	2.99***	2.22 - 4.02	
Materially Disadvantaged	1.23*	0.98 - 1.55	1.27**	1.00 - 1.6	1.15	0.90 - 1.48	1.17	0.92 - 1.50	1.15	0.87 - 1.51	
Indigenous	1.10	0.79 - 1.52	1.13	0.78 - 1.64	1.19	0.83 - 1.72	1.16	0.81 - 1.66	1.30	0.85 - 2.01	
Low family cohesion	1.82***	1.49 - 2.23	1.86***	1.50 - 2.31	1.66***	1.34 - 2.06	1.78***	1.43 - 2.22	1.70***	1.34 - 2.16	
High family cohesion	0.64***	0.50 - 0.81	0.64***	0.50 - 0.83	0.67***	0.52 - 0.86	0.66***	0.52 - 0.84	0.68***	0.51 - 0.91	
FHC			1.33	0.86 - 2.08	1.65*	0.91 - 2.97	2.67***	1.40 - 5.10	1.80***	1.26 - 2.57	
Year 8 xFHC			1.19	0.79 - 1.79	1.11	0.65 - 1.88	0.72	0.39 - 1.30	0.94	0.67 - 1.32	
Girl x FHC			1.161	0.77 - 1.74	1.59*	0.99 - 2.56	1.07	0.62 - 1.84	1.30*	0.97 - 1.75	
With disability x FHC			0.97	0.59 - 1.57	1.10	0.58 - 2.10	1.00	0.51 - 1.95	1.00	0.62 - 1.61	
Materially disadvantaged x FHC			0.76	0.42 - 1.37	0.99	0.53 - 1.84	0.97	0.51 - 1.85	0.97	0.60 - 1.55	
Indigenous x FHC			0.79	0.32 - 1.95	0.48	0.19 - 1.26	0.51	0.22 - 1.19	0.54*	0.27 - 1.11	
Low family cohesion xFHC			0.85	0.48 - 1.51	1.36	0.71 - 2.59	0.93	0.48 - 1.79	1.08	0.68 - 1.72	
High family cohesion x FHC			0.95	0.50 - 1.82	0.80	0.34 - 1.89	0.66	0.24 - 1.86	0.83	0.46 - 1.48	
Constant	0.34***	0.29 - 0.40	0.33***	0.28 - 0.39	0.34***	0.29 - 0.41	0.32***	0.27 - 0.38	0.31***	0.26 - 0.38	
Observations	5,220		5,220		5,220		5,220		5,220		

Computed using plausible values calculations. Logistic regression model: two or more health symptoms at least weekly = f(girl, marginalised [with disability, materially disadvantaged, Indigenous], family cohesion and FHC, and interaction of Girl, marginalised and family cohesion with FHC. Separate models run for each disability type. Base case: Boy, not marginalised, no FHCs, average family cohesion. ***p<.01, **p<.05, *p<.1. McFadden's pseudo- R^2 is calculated as 1 − [Log Likelihood (full model)/ Log Likelihood (intercept only)]. Low family cohesion represents a score of 0-4 (from 9), high family cohesion represents a score of 8-9 (from 9).

References

1 Lietz P, O'Grady E, Tobin M, et al. Australian Child Wellbeing Project Technical Report. Adelaide, South Australia, 2015.