

Shepherd, Carrington CJ; Li, Jianghong; Mitrou, Francis; Zubrick, Stephen R.

**Article — Published Version**

## Socioeconomic disparities in the mental health of Indigenous children in Western Australia

BMC Public Health

**Provided in Cooperation with:**  
WZB Berlin Social Science Center

*Suggested Citation:* Shepherd, Carrington CJ; Li, Jianghong; Mitrou, Francis; Zubrick, Stephen R. (2012) : Socioeconomic disparities in the mental health of Indigenous children in Western Australia, BMC Public Health, ISSN 1471-2458, BioMed Central, London, Vol. 12, pp. --, <https://doi.org/10.1186/1471-2458-12-756>

This Version is available at:  
<https://hdl.handle.net/10419/251560>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<http://creativecommons.org/licenses/by/2.0>

**Additional file 1 - Relative odds of a mental health problem<sup>a</sup>, by carer occupation<sup>b</sup> and factors related to the child's physical health, the physical and mental health of the carer, and the circumstances of the family and household<sup>c</sup>**

<b>Socioeconomic and other measures</b>	<b>Odds ratio: Model 1<sup>d</sup></b>	<b>Adjusted odds ratio: Model 2<sup>d</sup></b>	<b>Adjusted odds ratio: Model 3<sup>d</sup></b>	<b>Adjusted odds ratio: Model 4<sup>d</sup></b>
Occupation <sup>b</sup>				
Managers/professionals	1.10	1.08	1.07	0.96
Tradespersons, clerical workers and labourers	1.00	1.00	1.00	1.00
Not employed	1.94***	1.91***	1.64**	1.17
Age				
4	1.11	1.23	1.21	1.26
5	1.00	1.00	1.00	1.00
6	1.42	1.62	1.58	1.49
7	1.34	1.80*	1.73	1.73
8	1.26	1.55	1.48	1.41
9	1.24	1.57	1.54	1.35
10	1.09	1.45	1.41	1.37
11	0.60	0.78	0.76	0.73
12	1.33	1.81*	1.68	1.38
13	1.18	1.58	1.52	1.49
14	1.07	1.54	1.34	1.25
15	0.38**	0.54	0.49	0.42*
16	0.53	0.80	0.69	0.65
17	0.43	0.61	0.49	0.41*
Sex				
Males	1.00	1.00	1.00	1.00
Females	0.49***	0.53***	0.52***	0.52***
Level of relative isolation				
None (Perth metropolitan area)	1.00	1.00	1.00	1.00

Low	0.70	0.70	0.68	0.74
Moderate	0.99	1.00	0.95	0.82
High	0.67	0.69	0.75	0.91
Extreme	0.21***	0.22***	0.22***	0.26***
Whether child had runny ears <sup>e</sup>				
No		1.00	1.00	1.00
Yes		1.91***	1.86***	1.63***
Whether child had normal vision in both eyes				
No		1.93***	1.86**	1.73**
Yes		1.00	1.00	1.00
Whether child had difficulty saying certain sounds				
No		0.28***	0.29***	0.32***
Yes		1.00	1.00	1.00
Whether the primary carer had used Mental Health Services <sup>f</sup>				
No			1.00	1.00
Yes			1.95***	1.58**
Don't know			1.00	1.08
Whether primary carer had a medical condition for 6 months or longer				
No			1.00	1.00
Yes			2.08***	2.02***
Quality of parenting <sup>g</sup>				
Very good				0.27***
Good				0.37***
Fair				0.49***
Poor				1.00
Family composition				

Two parent family				1.00
Sole parent				1.82***
Two parent step/blended				1.02
Other (e.g. Aunts/uncles)				2.43***
Overcrowding <sup>h</sup>				
Household occupancy level – Low				1.00
Household occupancy level – High				0.47***
Number of homes the child had lived in				
1-4 homes				0.69**
5 or more homes				1.00
Family functioning <sup>i</sup>				
Poor				1.81**
Fair				1.00
Good				1.32
Very good				0.78
Life stress events <sup>j</sup>				
0-2				0.57*
3-4				1.00
5-6				0.98
7-14				2.88***
Whether bothered by racism in the neighbourhood/community				
No				1.00
Yes				1.68***

Notes: \*p < 0.1; \*\*p < 0.05; \*\*\*p < 0.01; p values are calculated using chi-square tests adjusted for the complex sample design.

<sup>a</sup> High risk of clinically significant emotional or behavioural difficulties (CSEBD).

<sup>b</sup> Highest occupational class of primary and secondary carers. Occupation categories have been dichotomised based on skill levels defined in the Australian Standard Classification of Occupations, second edition. ‘Managers and professionals’ include occupational skill levels 1 & 2. ‘Tradespersons, clerical workers and labourers’ include occupational skill levels 3-5.

<sup>c</sup> Results are derived from multivariate logistic regression models using a multilevel framework.

<sup>d</sup> All models include age, sex, Level of Relative Isolation (LORI) and carer occupation. Model 2 also includes child physical health factors (whether child had runny ears, whether child had normal vision in both eyes, whether child had difficulty saying certain sounds). Model 3 further adds factors related to the physical and mental health of the carer (whether primary carer had a medical condition for 6 months or longer, whether the primary carer had used Mental Health Services). Model 4 further adds factors related to the circumstances of the family and household (quality of parenting, life stress events, family composition, overcrowding, number of homes the child had lived in, whether bothered by racism in the neighbourhood/community, and family functioning). Successive steps were conducted if the socioeconomic variable achieved marginal statistical significance ( $p < 0.1$ ).

<sup>e</sup> A discharge from the ear as a result of an eardrum rupture (usually from otitis media, or infection of the middle ear).

<sup>f</sup> Contact with Mental Health Services in Western Australia.

<sup>g</sup> An index of quality of parenting derived from responses to three items: how often carers praise their children, how often they hit or smack their children and how often they laugh together with their children. These items were rated by carers on a five-point frequency scale from 'Never' through to 'Almost always'. An overall score was produced by summing these three items. Scores were ranked and categorising into quartiles, and labelled 'poor', 'fair', 'good' and 'very good'.

<sup>h</sup> Households with a high occupancy level are those where the number of people who usually sleep at the dwelling exceeds the number of bedrooms in the dwelling by four.

<sup>i</sup> A nine-item scale was used to measure the extent to which families have established an environment of cooperation, emotional support and good communication. Ratings from scores provided by carers were summed to produce an overall score that was categorised into quartiles, and labelled 'poor', 'fair', 'good' and 'very good'.

<sup>j</sup> Primary carers were asked if any of fourteen major life stress events had occurred in the family in the preceding 12 months. These events included events such as illness, hospitalisation or death of a close family member, family break-up, arrests, job loss and financial difficulties.