

# Unhealthy Family Functioning As A Psychological Context Underlying Australian Children's Emotional And Behavioural Problems

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## Abstract

**Objectives:** Understanding the psychological reasons underlying children's emotional and behavioural problems can guide appropriate interventions. This study examined emotional and behavioural problems in Australian children and unhealthy family functioning as a psychological factor associated with development of these emotional and behavioural problems. **Methods:** The study utilised stratified surveys conducted by the New South Wales, Ministry of Health, during the years 2005-2008. A computer assisted telephone interviewing method was employed. The surveys collected information on demographics, family functioning measured by the General Functioning Scale, and emotional and behavioural problems measured by the Strengths and Difficulties Questionnaire. Children aged 4-15 years ( $n=7,210$  children) were included. Logistic regression analyses were used for the emotional and behavioural problem outcomes. **Results:** Analyses adjusting for demographics revealed that unhealthy family functioning increased substantially the risks of emotional symptoms (OR = 2.53; 95% CI = 1.36-4.69), peer problems (OR = 6.26; 95% CI = 4.43-11.42), conduct problems (OR = 3.83; 95% CI = 1.88-7.84), and the overall emotional and behavioural problems (OR = 5.06; 95% CI = 2.42-10.58). **Conclusions:** Children from unhealthy family functioning backgrounds have a potential risk factor for emotional and behavioural problems. Mental health interventions aiming at improving the quality of parent-child relationships may reduce this potential risk for emotional and behavioural problems among the children.

## INTRODUCTION

Developmental psychologists have long been interested in how parenting impacts child development. Theorists within the learning psychological model have focused on parental practices, presuming that differences in children's development reflect differences in the learning environment to which they have been exposed [1]. Theorists working within the psychodynamic perspective have focused on the emotional relationship between the parent and child and its influence on child's development [2]. Psychodynamic and learning emotional and behavioural features are integrated within Baumrind's [3] model. In her original study on 100 children using naturalistic observation and parental interviews, she conceptualised parenting practices along two dimensions: parental efforts to manage and monitor children's behaviour and parental efforts to provide emotional support [4]. Parental monitoring and behaviour management involve parental behaviour towards the child that are intended to track the whereabouts of their child, set rules and expectations for behaviour, and supervise or guide

their child to prevent or reduce behavioural problems [5]. Parental support also encompasses the emotional quality of the interactions between a child and parents and includes responsiveness to a child's needs and use of encouragement, praise, and affection [6]. Parents who exhibit high levels of quality emotional interactions are characterised as accepting and nurturing, whereas parents with low levels may be described as cold and rejecting.

Numerous studies suggest that unhealthy parenting, defined as reduced parental monitoring and management of children's behaviour, is associated with worse emotional and behavioural outcomes for a child including more opportunities for conduct problems, peer problems, and externalised problems, such as drug use or criminal activity, and less positive outcomes such as diminished social competence and self-esteem [6, 7, 8, 9, 10]. Likewise, many studies confirm that unhealthy parenting, denoted as reduced parental emotional support, is associated with more emotional and behavioural problems among children and less positive behavioural outcomes, such as diminished

social competence and academic attainment [6, 8, 9, 11, 12].

Despite this mounting evidence, studies on parenting and children's development within psychology are limited to a certain developmental age and are based either on clinical samples or small community samples. In addition, studies based on Baumrind's [3] model were narrowed to the unhealthy-healthy parenting differentiation only in terms of parents' monitoring and emotional support— i.e. the underlying model dimensions. Moreover, studies building on Baumrind's [3] model carry the risk of looking at parent-child relationships as unidirectional — i.e. this model perceives parents as the cause of their children's emotional and behavioural problems — and thus subject parents to self-guilt and blame. While unhealthy parenting can have negative psychological consequences for the children [6, 7, 8, 9, 10, 11, 12], parenting can also be shaped by parent-child relationships happening within the family context. For instance, a population-based Australian study on 4,010 parents with a child under the age of 12 years found that parents who perceived their child's behaviour to be difficult were more likely to perceive parenting as stressful, demanding, and depressing, particularly among mothers without partners [13]. Also, parental perception of parenting as a negative experience is likely to reduce the quality of parent-child relationships and increase a child's behavioural and emotional problems. Given the impact children can have on parenting, some researchers argue that a differentiation between healthy and unhealthy family functioning, rather than healthy and unhealthy parenting, may be more accurate and efficacious in predicting emotional and behavioural developmental outcomes among children [14]. In essence, family functioning addresses the bi-directionality of parent-child relationships and perceives parents and children as active agents within the family climate. Family functioning is conceptualised as encompassing a wide range of parent-child relationship features such as monitoring, problem solving, decision making, communication, clarity of roles, affective responsiveness, affective involvement, and maintaining confidentiality and support [14].

The aim of the present study is to examine the relationship between unhealthy family functioning and emotional and behavioural problems among Australian children. Towards this aim, the study utilised large scale stratified population surveys covering a wide age range (4-15 years). A set of demographic variables were identified in previous research as potentially related to emotional and behavioural problems

among children and adolescents such as child's gender and age and mother's education, socioeconomic status, and income [15, 16, 17, 18]. The present study examines the individual relationships between these variables and emotional and behavioural problems among Australian children, and these demographics (with other demographic variables available in the data) were included as covariates in the model looking at the relationships between unhealthy family functioning and children's problems.

## **METHOD**

The current study utilised large scale stratified surveys conducted by the New South Wales (NSW) Ministry of Health during the years 2005-2006 and 2007-2008 through the employment of computer assisted telephone interviewing (CATI).

## **SAMPLE**

The target population of the surveys was all children aged 0-15 years living in households with private telephones in NSW. The sampling method relied on records from the Australia on Disk electronic white pages (phone book). Records were geo-coded using MapInfo mapping software and the geo-coded telephone numbers were assigned to statistical local areas and areas health services. Finally, numbers were randomly sorted and households were contacted using random digit dialling. For ethics reasons associated with conducting the survey on children in the cited age range, a parent (mother or father) or carer was selected as a proxy respondent. Trained interviewers at the NSW Ministry of Health administered the survey using CATI. Up to seven calls were made to establish initial contact with a household, and 5 calls were made in order to contact a selected respondent.

Data were gathered on a total of 4,578 and 5,171 children aged 0-15 years in 2005-2006 and 2007-2008, respectively. The overall participation rates were 58.4% in the 2005-06 survey and 63.5% in the 2007-08 survey. For the purposes of the current study, only children aged 4-15 years old in each survey were included (n = 7,210), 6,827 of them with usable information on emotional and behavioural problems, and 2,020 of them with usable information on family functioning (family functioning was only collected in 2005 and early 2007). Ethics approval to carry out the surveys was obtained from the NSW Ministry of Health ethics committee.

## **INSTRUMENTS**

Demographic questions were asked to parents (or carers)

about the child's age, sex, whether a language other than English is spoken at the home, family income, and mother's highest education. In addition, a socio-economic disadvantaged quintile according to area of residence was used to classify each participant.

Family functioning was measured using the General Functioning Scale [14], which consists of 12 statements covering areas of problem solving, communication, roles, affective responsiveness, affective involvement, behavioural control, and general functioning. An example item is, "We avoid discussing our fears and concerns". Parents (or carers) had to rate their response on a Likert-Scale from 1 = 'strongly agree' to 4 = 'strongly disagree'. Previous empirical research has suggested that the General Functioning Scale is a reliable and valid measure of family functioning [14]. The measure has a Cronbach's alpha reliability of 0.86 and a split-half coefficient (Gutman) of 0.83 [14]. Ten percent of the sample scored above 2.17, the cutting-off point for families with healthy versus unhealthy functioning in the survey [14].

Emotional and behavioural problems were measured in the surveys using the Strengths and Difficulties Questionnaire (SDQ) [19]. The SDQ consists of 20 items allocated to 4 subscales (5 items each): emotional symptoms, hyperactivity-inattention, peer problems, and conduct problems. An example item of the emotional symptoms subscale is, "Child is often unhappy, depressed, or tearful"; an example item of hyperactivity-inattention is, "Child is restless, overactive, or cannot stay still for long"; an example item of peer problems is, "Child often fights with or bullies other children"; and an example item of conduct problems is, "Child often lies or cheats". Parents (or carers) were asked to state whether the attribute specified in each item was present within the last six months on a 3-point scale from 0 = 'not true', 1 = 'somewhat true', to 2 = 'certainly true'. The 'at risk' score for each subscale is: 5-10 for emotional symptoms, 7-10 for hyperactivity-inattention, 4-10 for peer problems, and 4-10 for conduct problems. The subscales were combined to generate a total difficulties score between 0 and 40. A child with a total difficulties score of 17 or above was considered at risk of developing clinically significant psychological problems [19, 20]. Previous empirical research has suggested that the SDQ is a reliable and valid measure of children's emotional and behavioural problems with Cronbach's alpha reliability for the total scale ranging from 0.73 to 0.82 [19, 20].

## **STATISTICAL ANALYSES**

The survey samples were weighted to adjust for differences in the probabilities of selection among subjects. These differences were due to the varying number of people living in each household, the number of residential telephone connections for the household, and the varying sampling fraction in each health area. Post-stratification weights were used to reduce differing non-response rates among males and females and different age groups on the survey estimates. These weights were adjusted for differences between the age and sex structure of the survey samples and the Australian Bureau of Statistics 2006 mid-year population estimates for each area health service. All statistical analyses were conducted using SAS software version 9.2, which includes a family of procedures for analysing survey data, particularly SURVEYLOGISTIC. Statistical analyses in this study were conducted on the maximum sample size with usable information. Sample sizes are smaller for multivariate analysis due to missing values in related individual variables. Weights of the data were included in all of these analyses. A significance level of 0.05 was used throughout the analyses.

## **RESULTS**

### **SAMPLE PROFILE**

With regard to child age, 38.68% of the children were 4-8 years old, and 61.32% were 9-15 years old. Sex consisted of 51.56% boys and 48.44% girls. Other characteristics include: 16.94% spoke a language other than English at home; 58.18% of the children's mothers had above high school education; 55.79% of the children came from households with annual income above \$60,000; and 40.23% of the children resided within the least socioeconomically disadvantage areas.

### **CORRELATES OF EMOTIONAL & BEHAVIOURAL PROBLEMS**

Table 1 shows results for emotional symptoms. In univariate logistic regression analyses (unadjusted OR), variables significantly associated with greater odds for emotional problems were the two middle categories of mother's education and being from an unhealthy family functioning background. Variables significantly associated with lower odds for emotional problems were younger child age group, not speaking a language other than English at home, all the quintiles above the most socioeconomically disadvantaged, and all the income categories above \$20,000. In multivariate logistic regression analyses (adjusted OR), unhealthy family

functioning remained significantly associated with emotional problems. Children from unhealthy family functioning background had increased odds ratios of 2.53 for emotional problems. Also, the lowest category of mother's education and most income categories above \$20,000 were significantly associated with lower odds for emotional problems.

**Figure 1**

Table 1: Predictors of Emotional Symptoms

Variable	PREV	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Child Age			
4-8 Years	9.4%	0.67 (0.56, 0.81)***	0.68 (0.46, 1.02)
9-15 Years	13.4%	1.00	1.00
Sex			
Boy	11.3%	0.89 (0.75, 1.05)	0.80 (0.55, 1.19)
Girl	12.6%	1.00	1.00
Mother's Education			
<High school	13.0%	1.06 (0.80, 1.41)	0.45 (0.22, 0.91)***
High school	10.0%	1.43 (1.12, 1.82)**	1.21 (0.65, 2.26)
TAFE certificate/diploma	12.8%	1.40 (1.11, 1.76)**	1.23 (0.73, 2.06)
Tertiary institute degree	9.5%	1.00	1.00
Speaking a language other than English at home			
Yes	13.9%	1.00	1.00
No	11.4%	0.80 (0.63, 0.99)*	1.01 (0.54, 1.96)
Socioeconomic disadvantaged quintile (SEIFA)			
1 <sup>st</sup> quintile least disadvantaged	11.0%	0.67 (0.51, 0.88)**	1.15 (0.62, 2.16)
2 <sup>nd</sup> quintile	10.5%	0.64 (0.48, 0.83)**	0.68 (0.37, 1.26)
3 <sup>rd</sup> quintile	11.3%	0.69 (0.54, 0.89)**	0.67 (0.39, 1.17)
4 <sup>th</sup> quintile	11.7%	0.72 (0.56, 0.93)**	0.72 (0.41, 1.27)
5 <sup>th</sup> quintile most disadvantaged	15.6%	1.00	1.00
Income			
<\$20,000	19.7%	1.00	1.00
\$20,000-\$40,000	14.0%	0.66 (0.49, 0.90)*	0.34 (0.17, 0.68)*
\$40,000-\$60,000	13.2%	0.62 (0.46, 0.84)**	0.69 (0.36, 1.32)
\$60,000-\$80,000	10.5%	0.47 (0.35, 0.65)**	0.52 (0.27, 0.98)*
>\$80,000	8.8%	0.39 (0.29, 0.52)***	0.38 (0.19, 0.76)*
Healthy family functioning			
Yes	10.4%	1.00	1.00
No	23.0%	2.55 (1.52, 4.28)***	2.53 (1.36, 4.69)***

Note: PREV=prevalence for weighted data, OR=odds ratio, CI=confidence interval  
\**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001.

Table 2 shows results for hyperactivity-inattention. In univariate logistic regression analyses (unadjusted OR), variables significantly associated with greater odds for hyperactivity-inattention were younger child age group, being a boy, the middle categories of mother's education, not speaking a language other than English at home, and being from unhealthy family functioning background. Variables significantly associated with lower odds for hyperactivity-inattention were most of the quintiles above the most socioeconomically disadvantaged, and all the income categories above \$20,000. In multivariate logistic regression analyses (adjusted OR), unhealthy family functioning was no longer significantly associated with hyperactivity-inattention while boys and high school level of mother's education remained as significant predictors.

**Figure 2**

Table 2: Predictors of Hyperactivity-inattention

Variable	PREV	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Child Age			
4-8 Years	12.2%	1.21 (1.02, 1.45)*	1.28 (0.86, 1.92)
9-15 Years	10.3%	1.00	1.00
Sex			
Boy	14.8%	2.32 (1.92, 2.77)***	2.94 (1.85, 4.54)***
Girl	7.0%	1.00	1.00
Mother's Education			
<High school	12.1%	1.17 (0.87, 1.57)	1.73 (0.89, 3.51)
High school	9.3%	1.57 (1.21, 2.03)**	2.06 (1.08, 3.95)*
TAFE certificate/diploma	12.8%	1.67 (1.30, 2.14)***	1.67 (0.90, 3.19)
Tertiary institute degree	8.0%	1.00	1.00
Speaking a language other than English at home			
Yes	7.4%	1.00	1.00
No	11.6%	1.63 (1.23, 2.16)**	1.32 (0.65, 2.70)
Socioeconomic disadvantaged quintile (SEIFA)			
1 <sup>st</sup> quintile least disadvantaged	9.4%	0.65 (0.48, 0.87)**	0.56 (0.26, 1.20)
2 <sup>nd</sup> quintile	10.5%	0.73 (0.56, 0.97)*	0.78 (0.43, 1.42)
3 <sup>rd</sup> quintile	9.9%	0.69 (0.53, 0.89)**	0.69 (0.38, 1.25)
4 <sup>th</sup> quintile	11.5%	0.81 (0.62, 1.06)	0.79 (0.45, 1.41)
5 <sup>th</sup> quintile most disadvantaged	13.8%	1.00	1.00
Income			
<\$20,000	19.7%	1.00	1.00
\$20,000-\$40,000	12.4%	0.58 (0.42, 0.79)**	0.67 (0.32, 1.43)
\$40,000-\$60,000	10.3%	0.47 (0.34, 0.65)***	0.89 (0.43, 1.85)
\$60,000-\$80,000	10.7%	0.49 (0.35, 0.67)***	0.91 (0.43, 1.93)
>\$80,000	8.2%	0.36 (0.27, 0.48)***	0.82 (0.38, 1.74)
Healthy family functioning			
Yes	11.7%	1.00	1.00
No	19.6%	1.82 (1.10, 3.03)*	1.83 (0.89, 3.78)

Note: PREV=prevalence for weighted data, OR=odds ratio, CI=confidence interval  
\**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001.

Table 3 shows results for peer problems. In univariate logistic regression analyses (unadjusted OR), variables significantly associated with greater odds for peer problems were being a boy, high school mother's education, and being from an unhealthy family functioning background. Variables significantly associated with lower odds for peer problems were not speaking a language other than English at home, most quintiles above the most socioeconomically disadvantaged, and all the income categories above \$40,000. In multivariate logistic regression analyses (adjusted OR), unhealthy family functioning remained significantly associated with peer problems. Children from unhealthy family functioning background had increased odds ratios of 6.26 for peer problems. Also, the income category above \$80,000 was significantly associated with lower odds for peer problems.

**Figure 3**

Table 3: Predictors of Peer Problems

Variable	PREV	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Child Age			
4-8 Years	7.1%	1.11 (0.88, 1.38)	1.04 (0.57, 1.92)
9-15 Years	6.4%	1.00	1.00
Sex			
Boy	7.7%	1.39 (1.12, 1.72)*	1.20 (0.69, 2.22)
Girl	5.6%	1.00	1.00
Mother's Education			
<High school	8.4%	1.26 (0.89, 1.78)	1.31 (0.53, 3.26)
High school	6.7%	1.63 (1.20, 2.21)**	1.06 (0.44, 2.54)
TAFE certificate/diploma	5.4%	1.01 (0.73, 1.38)	1.08 (0.46, 2.52)
Tertiary institute degree	5.3%	1.00	1.00
Speaking a language other than English at home			
Yes	8.4%	1.00	1.00
No	6.2%	0.72 (0.54, 0.96)*	1.43 (0.50, 4.14)
Socioeconomic disadvantaged quintile (SEIFA)			
1 <sup>st</sup> quintile least disadvantaged	5.0%	0.53 (0.36, 0.77)**	1.77 (0.61, 5.11)
2 <sup>nd</sup> quintile	5.2%	0.56 (0.39, 0.80)**	1.08 (0.41, 2.81)
3 <sup>rd</sup> quintile	6.6%	0.71 (0.52, 0.97)*	0.65 (0.28, 1.51)
4 <sup>th</sup> quintile	7.9%	0.86 (0.63, 1.18)	1.51 (0.62, 3.67)
5 <sup>th</sup> quintile most disadvantaged	9.1%	1.00	1.00
Income			
<\$20,000	12.4%	1.00	1.00
\$20,000-\$40,000	9.3%	0.72 (0.50, 1.03)	0.58 (0.21, 1.50)
\$40,000-\$60,000	7.1%	0.54 (0.37, 0.80)**	0.88 (0.33, 2.37)
\$60,000-\$80,000	5.2%	0.38 (0.26, 0.57)**	0.46 (0.17, 1.24)
>\$80,000	4.6%	0.34 (0.23, 0.48)***	0.36 (0.14, 0.94)*
Healthy family functioning			
Yes	4.3%	1.00	1.00
No	19.6%	5.34 (3.02, 9.61)***	6.26 (4.43, 11.42)***

Note: PREV=prevalence for weighted data, OR=odds ratio, CI=confidence interval  
\**sup*<0.05, \*\**sup*<0.01, \*\*\**sup*<0.001.

Table 4 shows results for conduct problems. In univariate logistic regression analyses (unadjusted OR), variables significantly associated with greater odds for conduct problems were being a boy, all mother's education categories less than tertiary, and being from an unhealthy family functioning background. Variables significantly associated with lower odds for conduct problems were all quintiles above the most socioeconomically disadvantaged, and all the income categories above \$20,000. In multivariate logistic regression analyses (adjusted OR), unhealthy family functioning remained significantly associated with conduct problems. Children from unhealthy family functioning background had increased odds ratios of 3.83 for conduct problems. Also, all income categories above \$40,000 were significantly associated with lower odds for conduct problems.

**Figure 4**

Table 4: Predictors of Conduct Problems

Variable	PREV	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Child Age			
4-8 Years	9.6%	1.06 (0.87, 1.29)	1.31 (0.82, 2.13)
9-15 Years	9.1%	1.00	1.00
Sex			
Boy	10.3%	1.25 (1.04, 1.51)*	1.07 (0.67, 1.72)
Girl	8.3%	1.00	1.00
Mother's Education			
<High school	11.1%	1.60 (1.17, 2.20)**	0.85 (0.37, 1.99)
High school	9.6%	1.88 (1.41, 2.50)**	1.48 (0.71, 3.10)
TAFE certificate/diploma	8.9%	1.48 (1.10, 1.98)*	1.29 (0.61, 2.70)
Tertiary institute degree	6.2%	1.00	1.00
Speaking a language other than English at home			
Yes	8.3%	1.00	1.00
No	9.4%	1.15 (0.86, 1.52)	1.52 (0.64, 3.62)
Socioeconomic disadvantaged quintile (SEIFA)			
1 <sup>st</sup> quintile least disadvantaged	6.8%	0.52 (0.37, 0.73)**	1.05 (0.45, 2.42)
2 <sup>nd</sup> quintile	9.4%	0.73 (0.54, 0.99)*	1.26 (0.63, 2.53)
3 <sup>rd</sup> quintile	9.5%	0.75 (0.56, 0.99)*	0.84 (0.41, 1.71)
4 <sup>th</sup> quintile	8.5%	0.66 (0.50, 0.88)**	0.62 (0.31, 1.26)
5 <sup>th</sup> quintile most disadvantaged	12.4%	1.00	1.00
Income			
<\$20,000	17.9%	1.00	1.00
\$20,000-\$40,000	12.5%	0.66 (0.47, 0.90)**	0.53 (0.26, 1.08)
\$40,000-\$60,000	8.8%	0.44 (0.32, 0.62)**	0.35 (0.17, 0.73)**
\$60,000-\$80,000	8.1%	0.40 (0.28, 0.57)**	0.40 (0.19, 0.87)**
>\$80,000	6.1%	0.30 (0.22, 0.41)**	0.23 (0.10, 0.51)**
Healthy family functioning			
Yes	8.3%	1.00	1.00
No	33.0%	5.40 (3.26, 8.93)***	3.83 (1.88, 7.84)***

Note: PREV=prevalence for weighted data, OR=odds ratio, CI=confidence interval  
\**sup*<0.05, \*\**sup*<0.01, \*\*\**sup*<0.001.

Table 5 shows results for substantial risk for overall emotional and behavioural problems (the summary of all items from all the scales in the Strengths and Difficulties Questionnaire). In univariate logistic regression analyses (unadjusted OR), variables significantly associated with greater odds for overall emotional and behavioural problems were being a boy, the two middle categories of mother's education, and being from an unhealthy family functioning background. Variables significantly associated with lower odds for overall emotional and behavioural problems were the least socioeconomically disadvantaged quintile, and all the income categories above \$20,000. In multivariate logistic regression analyses (adjusted OR), unhealthy family functioning remained significantly associated with overall emotional and behavioural problems. Children from unhealthy family functioning background had increased odds ratios of 5.06 for overall emotional and behavioural problems. Also, all income categories above \$20,000 were significantly associated with lower odds for overall emotional and behavioural problems.

**Figure 5**

Table 5: Predictors of Substantial Risk for Overall Emotional and Behavioural Problems

Variable	PREV	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Child Age			
4-8 Years	7.1%	0.91 (0.73, 1.13)	1.07 (0.64, 1.79)
9-15 Years	7.8%	1.00	1.00
Sex			
Boy	8.7%	1.43 (1.16, 1.78)*	1.54 (0.92, 2.56)
Girl	6.2%	1.00	1.00
Mother's Education			
<High school	8.3%	1.27 (0.89, 1.81)	0.80 (0.35, 1.82)
High school	6.7%	1.59 (1.16, 2.16)**	0.76 (0.37, 1.52)
TAFE certificate/diploma	7.4%	1.41 (1.04, 1.91)*	0.87 (0.43, 1.76)
Tertiary institute degree	5.4%	1.00	1.00
Speaking a language other than English at home			
Yes	6.2%	1.00	1.00
No	7.7%	1.25 (0.91, 1.71)	1.24 (0.52, 2.92)
Socioeconomic disadvantaged quintile (SEIFA)			
1 <sup>st</sup> quintile least disadvantaged	5.1%	0.53 (0.36, 0.77)**	0.66 (0.26, 1.67)
2 <sup>nd</sup> quintile	7.1%	0.76 (0.54, 1.05)	1.15 (0.57, 2.33)
3 <sup>rd</sup> quintile	7.8%	0.83 (0.61, 1.13)	0.76 (0.37, 1.56)
4 <sup>th</sup> quintile	8.5%	0.92 (0.67, 1.25)	1.01 (0.50, 2.03)
5 <sup>th</sup> quintile most disadvantaged	9.2%	1.00	1.00
Income			
<\$20,000	16.1%	1.00	1.00
\$20,000-\$40,000	9.8%	0.57 (0.40, 0.80)**	0.29 (0.13, 0.64)***
\$40,000-\$60,000	7.1%	0.40 (0.28, 0.57)***	0.41 (0.19, 0.86)**
\$60,000-\$80,000	5.6%	0.31 (0.21, 0.46)***	0.32 (0.15, 0.70)***
>\$80,000	4.8%	0.26 (0.19, 0.37)***	0.25 (0.11, 0.55)****
Healthy family functioning			
Yes	6.6%	1.00	1.00
No	23.8%	4.39 (2.57, 7.49)***	5.06 (2.42, 10.58)***

Note: PREV=prevalence for weighted data, OR=odds ratio, CI=confidence interval  
\**p*<0.05, \*\**p*<0.01, \*\*\**p*<0.001.

**DISCUSSION**

The aim of the present study was to examine the relationship between unhealthy family functioning and emotional and behavioural problems among Australian children adjusting for demographic factors in multivariate logistic analyses. The adjusted analyses revealed that unhealthy family functioning increases significantly the risks for emotional problems, peer-problems, conduct problems, and substantial risk for overall emotional and behavioural problems among Australian children aged 4-15 years. Only children's hyperactivity-inattention problems were not related to unhealthy family functioning. These findings are in line with previous psychological research addressing the negative consequences of dysfunctional parent-child relationships for the child's emotional and behavioural development [6, 8, 11]. The present study, however, has provided a stronger evidence of this relationship by analysing large scale stratified population surveys, as indeed was also achieved in other epidemiological research [13].

These findings suggest clinicians should consider assessing the level of family functioning when working with children referred for emotional or behaviour problems. In addition, the inclusion of family functioning as an intervention target may be beneficial in reducing children's risk of ongoing problems. Future research is needed to confirm these

findings longitudinally.

Multivariate logistic analyses revealed also that higher household income was associated with lower odds for four out of five emotional and behavioural outcomes. Specifically, it predicted emotional problems, peer problems, conduct problems, and overall emotional and behavioural problems. Comparatively, lower mother's education was associated in multivariate logistic analyses with fewer emotional and behavioural outcomes. Lower mother's education predicted only emotional problems and hyperactivity-inattention problems. Lastly, the analyses revealed that gender was associated with only hyperactivity-inattention problems. Boys seem to have a higher risk for hyperactivity-inattention problems. These study findings are generally in line with previous research confirming an association between these demographic factors and emotional and behavioural problems among children [10, 15, 17, 18]. However, the present study indicates that income seems to be more substantial in determining emotional and behavioural problems among children than mother's education and child's gender.

**LIMITATIONS**

Two caveats must be noted. First, the study mainly relied on parents' (and carers') self-reports of family functioning and their children's emotional and behavioural problems. Second, despite reliance on large scale stratified population surveys that aimed to be representative of the general study population, the response rates were about 60%. Therefore, generalisation from this sample must be done with caution.

**CONCLUSIONS**

Developmental psychologists have theorised that the quality of parent-child relationship carries serious psychological implications for the child's development. Mounting evidence within psychology has indeed confirmed that dysfunctional parenting contributes to negative psychological outcomes among the children. The present study contributed to this field and it strongly shows that unhealthy family functioning increases substantially the risks for a range of emotional and behavioural problems among the children. The adverse effects of unhealthy family functioning on children's emotional and behavioural health need therefore to be recognised as a psychosocial context and improved.

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